Random Jottings

Why Everything We Think Is WRONG!

Random Jottings 6

Random Jottings is an irregular personal magazine (fanzine) produced by Michael Dobson, Dobson Soliutions and the Institute for SideWise Thinking.

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Table of Contents

Everything We Think Is Wrong!

by Michael Dobson

Editorial Notes

Welcome to the 6th issue of <u>Random Jottings</u>. So far, we've had:

1. The Genzine Issue
2. The Name-Dropping Issue
3. The Samaritan Issue
4. The AltHistory Issue
5. The Odell Dobson Memorial Issue

Welcome now to the Cognitive Biases Issue, a mini-encyclopedia about the various ways our mental processes are distorted, biased, and just plain wrong.

The 87 different biases (from actor-observer to zero-risk) cover psychology, sociology, market research, economics, and a host of other disciplines. Everywhere we look, it seems, cognitive biases are at work.

My Bias for Cognitive Bias

The best way to learn something is to teach it, I've always thought, so rather than buy one of several fine collections of cognitive biases (mostly college textbooks), I decided to write my own, first as a blog series[1] and now as an issue of Random Jottings.

The project began as an outgrowth of several Facebook arguments on religion and politics. What bizarre psychological impediments made my opponents so immune to the clear, sweet call of reason?

The first cognitive bias I encountered was the bias blind spot: the belief that indeed, we ourselves are less biased than other people. It was not by any means the last time I found myself staring uncomfortably into the mirror of my own bias.

It's not like I didn't already know about my perceptual limitations. As chronicled in "Eyewitness to Murder,"[2] I once drove through the middle of a mass murder in progress, saw the killer, and had no idea what I was really seeing.

We cannot avoid being biased. Bias is hard-wired into our basic brain structure. If we can't be unbiased, the next best thing is to struggle against the filters our minds want to impose on reality, the simplifications and abstractions that are all too easily confused with reality.

Being aware of our biases helps us see where our decisions and choices are being influenced. Biased thinking is not automatically wrong. Some biases aid survival...most of the time. The purpose of being aware of biases is to help us make better decisions and more self-aware choices.

What's Wrong With What You're Reading

My late uncle Jack Killheffer was the science editor of the Encylopedia Britannica in the 1970s and 80s; our set, with his name in the credits of the first volume, was one of my favorite things in the house.

Uncle Jack taught me how messy the process of establishing facts can be, and later when I worked at the Smithsonian's National Air and Space Museum, I got a first-hand introduction to the process. I learned not to mind messy when it comes to facts. When

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[1] http://sidewiseinsights.blogspot.com/

[2] http://sidewiseinsights.blogspot.com/2010/04/eyewitness-to-murder.html. A different version appeared in Nic Farey's BEAM 3, available at http://efanzines.com/Beam/index.htm.

you're trying to get yourself acquainted with a topic, I discovered, it's often very useful to start with popular sources, at least for the big picture.

I started with a list of cognitive biases in Wikipedia and branched out from there. The Wikipedia list, interestingly, shows up unedited on a lot of websites purporting to cover cognitive biases, and for a number of biases, I saw the identical Wikipedia pieces (sometimes with credit, sometimes without) over and over again.

There is some of that in these pages: fair warning. At best, Wikipedia is uneven; some entries were incoherent, oversimplified, and useless. However, some of them were well-researched and well-written, and I saw no reason to rewrite merely for the sake of rewriting.

In that spirit, I've put a creative commons license on this. If any of this is useful, please feel free to use it as you see fit.

You'll also find a lot of original work. My reinterpretation of the Semmelweis effect argues that everyone else's view is wrong; you may or may not agree.

The Past is Prologue

This is a reference I've wanted for myself for a long time, but that's not much of a motivator to do it. I had to think of an audience, some larger purpose to be served, to trigger its creation. It started life as a blog series, and has grown from there.

I hope you find it useful as well…though I really did it for me. I expect eventually to turn this into a more professionally publishable piece of work, but you've got to start somewhere.

This material appeared in slightly different form on my SideWise Thinking project management and business creativity blog in a 22-part series.

I reprinted some of the biases as an appendix in my recent book with Ted Leemann, Creative Project Management (McGraw-Hill, 2010).

More on Management

If you're interested in participating in my ongoing conversation about project management, risk management, cognitive biases, and other topics, join me on Twitter (SideWiseThinker), on Facebook, or on LinkedIn, the latter two under my own name.

An Encyclopedia of Cognitive Biases

A

Actor-Observer Bias

This cognitive bias make us assume other people act the way they do because of their personality and not because of their situation. Do people steal food because they are immoral, or because they are hungry? The real answer may vary; the bias is to assume the first.

Of course, when it comes to ourselves, the bias is reversed. We excuse our own behavior by citing our circumstances. Fight this bias in judging other people by focusing extra attention on their circumstances; fight this bias in yourself by being aware of your own ethical choices.

Ambiguity Aversion Effect

Daniel Ellsberg, best known for releasing the Pentagon Papers in 1971, is also known for the 1962 discovery of the Ellsberg paradox, in which people make decisions not because they are best, but because they seem less ambiguous.

In the Ellsberg paradox experiment, you have an urn with 30 red balls and 60 other balls that are either black or yellow. You don't know the ratio of black to yellow, only that the total of black and yellow is 60. You can make the following wagers:

Gamble A: You get $100 if you draw a red ball
Gamble B: You get $100 if you draw a black ball.
You can also choose either of the following wagers (for another draw):

Gamble C: You get $100 if you draw a red or a yellow ball

Gamble D: You get $100 if you draw a black or yellow ball.

If you prefer Gamble A to Gamble B, it's rational you should prefer Gamble C to Gamble D — the number of yellow balls is the same. If you prefer Gamble B to Gamble A, by similar logic you should prefer Gamble D to Gamble C.

But in actual surveys, most people strictly prefer Gamble A to Gamble B, and Gamble D to Gamble C. The logic that informs one decision breaks down for the other.

The idea of the ambiguity effect is that people prefer known risks over unknown risks, regardless of other factors. Choosing Gamble A over Gamble B is a preference for knowing the number of red balls, even though the number of black balls might be greater. Choosing Gamble D over Gamble C is a preference for knowing that the sum of black and yellow balls is 60, even if the sum of red and yellow might be greater.

Anchoring Effect

When an audience was asked first to write down the last two digits of their Social Security numbers, and then to submit mock bids in an auction, the half with the higher two-digit numbers submitted bids between 60% and 120% higher than those of the other half!

This is the anchoring effect. In negotiation, if you can plant a number — any number — in your opponent's head, you move the reference price in the same direction. Obviously, it's better that it skews in your favor.

In return, be aware of numbers casually tossed out by the other side in a negotiation. Whether it's a conscious act on their part or not, those numbers may turn into anchors unless you clearly fix your own anchors early.
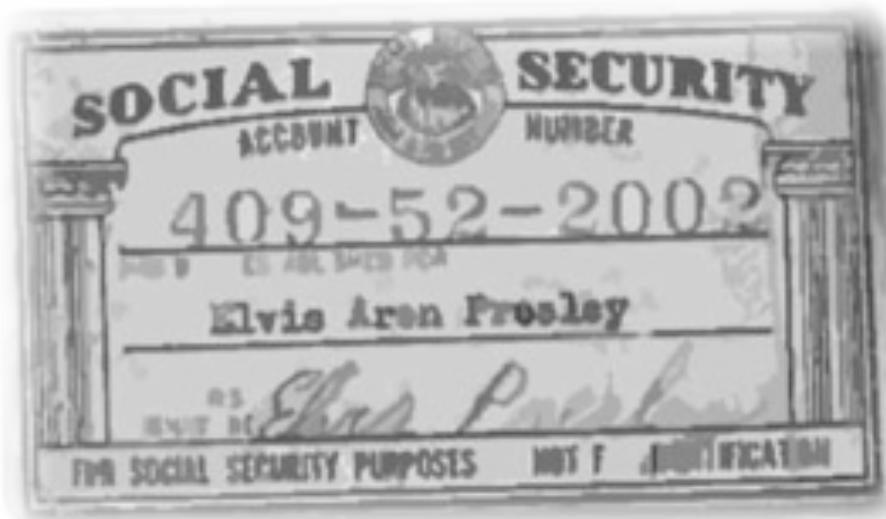
Attentional Bias

If someone with cancer drinks green tea, and the cancer goes away, attentional bias might make someone

conclude that drinking green tea cures cancer. After doing some research, it turns out that there are many cases in which someone who drank green tea also had a remission of cancer.

But that leaves out three other ideas that need to be tested: Have there been green tea drinkers whose cancer wasn't cured? Have there been people who didn't drink green tea whose cancer went into remission anyway? Is it the case that non-green tea drinkers always suffer fatal cancers?

Attentional bias happens when you focus on one piece of evidence and fail to examine different possible causes and effects. To fight attentional bias, consciously list the various possibilities and make sure you analyze each one.

Availability Cascade

"Repeat something long enough and it will become true." Political operatives, especially on the American right, take advantage of the availability cascade. Start with an idea that summarizes a complex situation in a simple, straightforward manner, and you can start a chain reaction. The availability cascade is one of the processes that make up groupthink.

A variation on the availability cascade is to accuse others of falling victim to it to give the illusion that a minority position is in fact true. Both those who agree with the consensus on global warning and those who disagree with it accuse the other side of influencing the debate through this technique. However, it's important to distinguish between a consensus of popular opinion, which is heavily influenced by repetition, and a consensus of scientific opinion, which rests on a body of evidence. (One can challenge the evidence, of course, but that's a different kind of debate altogether.)

Availability Heuristic

If something's accessible in your memory, this cognitive bias causes you to think it's also more probable. In surveys, people think dying in a plane crash is more common than dying in a car crash, when it's the other way around. Plane crashes, of course, get more publicity.

A lot of racial or cultural stereotyping relies on the availability heuristic. "[Fill in the blanks] steal a lot. I know, because a [fill in the blank] robbed my neighbor." Because a single close example stands out in memory, it seems probable that the characteristic is widespread, when of course a single case proves nothing one way or another.

B

Base Rate Fallacy

A certain terrible disease strikes one person in a thousand, but fortunately, there's a test to see if you have it. The test has a 95% accuracy rate and a 3% false positive rate. You take the test, and a few weeks later, you get a letter from the lab: your test came out positive. Devastating news, right?

Surprisingly, no. In fact, the probability you have the disease is less than one chance in four! Here's the reasoning.

Let's take a population of 100,000 people and give them the test. If one person in a thousand has the disease, that means there are 100 victims in our population. Our 95% accurate test will catch 95 of them. Five people get a clean bill of health, even though they really do have the disease, so if you don't get that letter you still have a 1/20,000 chance of having it.

A 3% false positive rate means that of the 100,000 people who take the test, 300 people who don't have the disease get the same letter as you did. Your chance of having the disease is therefore only 95 (the number of correct diagnoses) in 395 (the sum of correct diagnoses and false positive). Th probability is 95/395 , or about 24%.

The mistake that leads you to think you're almost certainly is called the base rate fallacy. It occurs when you don't notice that the failure rate (5 in 100 sufferers) is the not the same as the false positive rate (3 in 100 non-sufferers). The false alarm rate is completely different, because there are, after all, far more people without the disease than with it.

This does not argue against the value of screening. Screening is often perfectly reasonable. Overreaction, however, is not. Imagine that the treatment for the disease is radical surgery that kills 25% of the people who undergo it. If you think you're reducing your risk from 95% to 25%, that might seem a worthwhile bet. In fact, in this case you'd be increasing your risk by 1%.

To avoid the base rate fallacy, look at the "prior probability." If there were no people suffering from the disease at all, what would the test produce? With a 3% false positive

rate, it would send out 300 letters even though no one (by definition) has the disease. And now you've found the missing fact.

Notice that the base rate fallacy only produces incorrect analysis when the scale is unbalanced, as is our case with 1 in 1000 being subject to the 95% accuracy figure and 999 in 1000 being subject to the 3% false positive figure. As the populations approach 50/50, the failure rate and false positive rate converge.

Belief Bias

Why is it so hard for our logical, well-reasoned arguments to penetrate other people's thick skulls? And, of course, why is it that people so seldom give logical, well-reasoned arguments to support their idiot ideas? Belief bias is the tendency for all of us to evaluate the logical strength of someone's argument based on whether we believe in the truth or falsity of the conclusion. We're all subject to this one; susceptibility to belief bias is independent of reasoning ability.

The Red Queen in Through The Looking Glass practiced believing five impossible things before breakfast, and it's not a bad exercise. Make sure you look at a diversity of information, and spend effort imagining how a reasonable person could reach a conclusion so different from your own. This isn't an argument that you should necessarily change your belief; of course. But make sure your beliefs don't suffer from hardening of the mental arteries.

Bias Blind Spot

"Bias blind spot" is a recursive bias, the bias of failing to compensate for one's own cognitive biases. Some 80% of drivers think they are substantially better than the average driver. That's called the "better than average effect." Here, the vast majority of people think they are less subject to bias than the average person.

You and I, dear reader, are clearly among the exceptions.

C

Choice-Supportive Bias

On a business trip to St. Thomas many years ago, the cab driver taking me back to the airport suddenly honked his horn at a car trying to pull out into traffic.

"Women drivers!" he said in disgust.

I looked over at the offending car. "Looks like the driver is male," I observed.

"Yeah, well, he drives like a woman," the cabbie replied.

Choice-supportive bias is the tendency to remember your choices as better than they are, to look for information that supports them, and reject information that does not. In the case of the St. Thomas cab driver, he's decided that women are bad drivers. Any time he sees a woman driving badly, he notices. When it's a man, he doesn't notice it's a man, or forgets about it as an anomaly ("Drives like a woman.")

This man doesn't think of himself as prejudiced, because he thinks the observed facts confirm his opinion. What he fails to see is that the key word is "observed." He's blind to any facts that would challenge his opinion.

Choice-supportive bias is related to confirmation bias, the tendency to search for or interpret information to confirm one's own perceptions, and thus to experimenter's bias.

To fight choice-supportive bias in yourself, be skeptical of general beliefs you hold about people, groups, or the nature of life. There's probably important stuff you're overlooking.

Clustering Illusion

Is the sequence below random or non-random?

<div align="center">

O X X X O X X X O X X O O O X O O X X O O

</div>

If you thing the sequence looks non-random, you're with the majority…but you're wrong. The sequence has several characteristics of a random stream, an equal number of each result and an equal number of adjacent results. But people seem to expect a "random" sequence to have a greater number of alternations (O to X or vice-versa) than statistics would predict. The chance of an alternation in a sequence of independent random binary events (flips of heads or tails) is 50%, but people seem to expect an alternation rate of about 70%.

The clustering illusion is a cognitive bias that creates a tendency to see patterns where actually none exist. This is why most people believe in "streaks." When you expect greater variation in a sequence than a random process actually would produce, you tend see trends where they don't exist.

Confirmation Bias

Evidence is seldom completely clean and clear. If a mass of facts argue against our position and one fact supports it, guess which fact we focus on? When confronted by a mass of data, we tend to be selective in the evidence we collect; we tend to interpret the evidence in a biased way; and when we recall evidence, we often do so selectively. This is why a search for facts isn't as persuasive as logic might suggest.

Congruence Bias

In congruence bias, you only test your hypothesis directly, potentially missing alternative explanations. In the famous Hawthorne experiment (see Hawthorne effect for a fuller explanation and commentary), Frederick W. Taylor, father of Scientific Management, wanted to test whether improved lighting in factories would increase worker productivity. He performed a direct test: he measured productivity, installed better lighting, and measured productivity again. Productivity went up. If you are falling into congruence bias, you're done. Experiment confirmed; case closed.

But Taylor avoided the trap. He tested his hypothesis indirectly. If improved lighting increased productivity, he reasoned that worse lighting should lower it. So he tested that proposition as well. He took out a lot of lights and measured again: and to everyone's surprise, productivity went up! A deeper analysis revealed what is now known as the Hawthorne Effect: when people feel others are paying attention to them, their productivity tends to go up, at least temporarily. (It's a huge benefit of management consultants; just by showing up, we're likely to make things better.)

To avoid congruence bias, don't be satisfied with direct reasoning alone. Direct confirmation asks, "If I behaved in accordance with my hypothesis, what would I expect to occur?" Indirect confirmation asks, "If I acted in conflict with my hypothesis, what would I expect to occur?" If Taylor had stopped with the first question, we'd all be fiddling with the lights. Only the second question allowed him to discover the deeper truth.

Conjunction Fallacy

Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations.

Which statement is more probable?

1. Linda is a bank teller.
2. Linda is a bank teller and is active in the feminist movement.

In a 1982 study by Amos Tversky and Daniel Kahneman, 85% thought statement 2 was more probable than statement 1, but that's wrong. The probability of two events occurring together is always less than or equal to the probability of either one occurring alone. Even if there's a very low probability Linda is a bank teller (let's make it 5%) and a very high probability that Linda is active in the feminist movement (95%), the chance that Linda is a bank teller AND active in the feminist movement is 5% x 95%, or 4.75%, lower than the first statement.

The conjunction fallacy happens when you assume that specific conditions are more probable than a single general one, which is a violation of basic logic. Now, one possibility is that because most people aren't familiar with the rules of formal logic, they may assume that statement 1 (Linda is a bank teller) implies that she isn't active in the feminist movement.

But the fallacy has been demonstrated with very educated audiences.

Another Tversky/Kahneman experiment in the early 1980s surveyed a group of foreign policy experts to determine the probability that the Soviet Union would invade Poland and the US would break off diplomatic relations in the following year. The consensus estimate was about a 4% chance. Next, another group of experts was asked the probability that the United States would break off relations with the Soviet Union the following year. They estimated only a 1% chance. This implies that the detailed, specific scenario of the first scenario all by itself made it seem more likely.

Contrast Effect

The contrast effect changes your normal perception as a result of exposure to a stimulus in the same dimension. A number of optical illusions work by exploiting the contrast effect.

In the image to your right, the two inner rectangles are the same shade of gray, but the top one looks lighter because of the contrast with the background.

In interpersonal relationships, the contrast effect means that we judge the current state of the relationship by its contrast to an earlier state. If someone has been enormously attentive and is now less so (even if much more so than the average person), this is perceived negatively. If someone's been cold or distant and warms up even slightly (but less so than the first person), that's perceived positively.
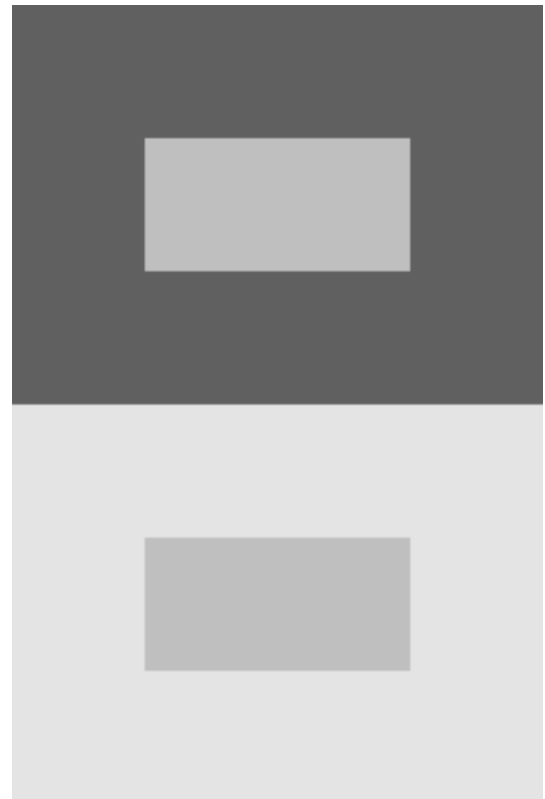
Cryptoamnesia

Robert Louis Stevenson refers to an incident of cryptoamnesia that took place during the writing of Treasure Island, and that he discovered to his embarrassment several years afterward:

> "I am now upon a painful chapter. No doubt the parrot once belonged to Robinson Crusoe. No doubt the skeleton is conveyed from Poe. I think little of these, they are trifles and details; and no man can hope to have a monopoly of skeletons or make a corner in talking birds. The stockade, I am told, is from Masterman Ready. It may be, I care not a jot. These useful writers had fulfilled the poet's saying: departing, they had left behind them Footprints on the sands of time, Footprints

which perhaps another — and I was the other! It is my debt to Washington Irving that exercises my conscience, and justly so, for I believe plagiarism was rarely carried farther. I chanced to pick up the Tales of a Traveller some years ago with a view to an anthology of prose narrative, and the book flew up and struck me: Billy Bones, his chest, the company in the parlour, the whole inner spirit, and a good deal of the material detail of my first chapters — all were there, all were the property of Washington Irving. But I had no guess of it then as I sat writing by the fireside, in what seemed the spring-tides of a somewhat pedestrian inspiration; nor yet day by day, after lunch, as I read aloud my morning's work to the family. It seemed to me original as sin; it seemed to belong to me like my right eye."

Sometimes what seems like inspiration turns out to be memory, and you've committed inadvertent plagiarism, or cryptoamnesia. In a 1989 study, people generated examples (such as kinds of birds), and later were asked to create new examples and to recall which answers they had previously personally given. Between 3-9% of the time, people either listed examples previously given, or recalled as their own someone else's thought.

Few writers would risk committing deliberate plagiarism, but the dangers of cryptoamnesia are real. It's most likely to occur when you don't have the ability to monitor your sources properly, when you're away from the original source of the idea, or when the idea was originally suggested by a person of the same sex (!). It's also likely to happen in a brainstorming session, in which you recall as yours an idea that came up immediately before your idea.

Of course, not all claims of cryptoamnesia are necessarily valid; sometimes the plagiarism was all too deliberate. But nothing else explains certain situations in which people with an awful lot to lose commit what appears to be blatant plagiarism with no upside whatsoever.

The courts have ruled that the unconsciousness of the plagiarism doesn't excuse it; the classic (rock) case is Bright Tunes Music v. Harrisongs Music involving the similarities between "He's So Fine" and "My Sweet Lord."

That cost George Harrison $587,000. Cognitive biases can be expensive.

D/E

Déformation Professionelle

Your training as a professional carries with it an intrinsic bias that's often expressed by the phrase "When the only tool you have is a hammer, all problems look like nails." We probably know IT professionals who think every problem can be best solved with software, HR professionals who think every problem yields to training and human capital development, and project managers who think all problems lie inside the confines of the triple constraints. Each profession, of course, provides enormous value, but no single profession has all the answers.

Denomination Effect

One way to limit your daily spending is to carry only large denomination bills. Research shows that people are less likely to spend larger bills than their equivalent value in smaller ones.

Distinction Bias

In sales, it's well known that if you present the customer with the higher-priced option first, the customer will be happier with his or her final decision, regardless of which choice he or she finally makes.

The distinction bias is the observed difference between how people evaluate options side-by-side and how people evaluate the same options when presented separately. If you look at two 52" HDTV sets side by side, any quality difference between them looms large indeed, and paying the money for the "better" one seems sensible.

But if you evaluate the sets separately, you may not notice any material quality difference at all. If so, and if both sets are good enough, you're more likely to buy the cheaper one. So before buying a big ticket item, make sure you evaluate your options separately. You may make a very different decision.

Egocentric Bias

There are two different types of egocentric bias — social and memory.

The social egocentric bias makes people tend to take more credit for their own part of a joint action than an outside observer would give them. What's interesting about the egocentric bias is that not only do people claim more credit for positive outcomes (which would make this the same as "self-serving bias") but also claim more responsibility for negative outcomes.

The memory egocentric bias is a self-serving tendency to remember our own past in a way that makes us look better. Like most memory biases, this isn't the same thing as lying about our past; it's a form of self-deception in which we really do recall things that way, facts notwithstanding.

Endowment Effect

The endowment effect is also found in behavioral economics, where it's also called "divestiture aversion." In one test, people demanded a much higher price to sell a coffee mug they'd been given than they were willing to pay for a coffee mug they didn't yet own. This contradicts a standard principle of economic theory that a person's willingness to pay (WTP) should be equal to their willingness to accept payment (WTA).

There are arguments about why this is so. One possibility is that emotional attachments to things you already own may make them seem more valuable to you. It's also been linked to a form of status quo bias, a general dislike of change. Some other experiments have not detected this effect.

Experimenter's Bias

This bias is well known to anyone in scientific fields. It's the tendency for experimenters to believe and trust data that agrees with their hypothesis, and to disbelieve and distrust data that doesn't. It's a natural enough feeling; there's a price to pay if we're wrong, even if it's only a hit to our egos. It's impossible for any human being to be completely

objective. Our perceptions and intelligence are constrained, and we are looking from the inside, not the outside.

Experimenter's bias can't be avoided; it has to be managed instead. We previously discussed the bias blind spot, the recursive bias of failing to recognize that you have biases. Self-awareness helps. Another good technique is the "buddy system." I frequently work with co-authors so I have someone to challenge my thinking. That reduces the problem, though it doesn't eliminate it — wherever my co-author and I see it the same way, the risk remains.

The best technique is to understand the components of the bias. A 1979 study of sampling and measurement biases listed 56 different experimenter's biases: the "all's well" literature bias, the referral filter bias, the volunteer bias, the insensitive measure bias, the end-digit preference bias, and my favorite, the data dredging bias, also known as "looking for the pony."

Extraordinarity Bias

A cheese sandwich that appears to have the image of the Virgin Mary on it isn't tastier than one without, but a normal cheese sandwich costs a couple of bucks while the one with the Virgin sold for $28,000. A guitar once owned by Elvis Presley might not play better (or possibly even as well) as a new one, but people are willing to pay much more for it.

That's not wrong, it's simply a bias. The extraordinarity bias is the measure of your willingness to pay more (sometimes much more) for an "extraordinarity" of an object that doesn't in itself change the intrinsic value of the object. The extraordinarity can be personal as well as external: a present from a loved one, for example, could have far more value to you than the intrinsic object is worth.

We collectors know there's nothing inherently wrong with the extraordinarity bias; the only thing you need to do is to be conscious of it.
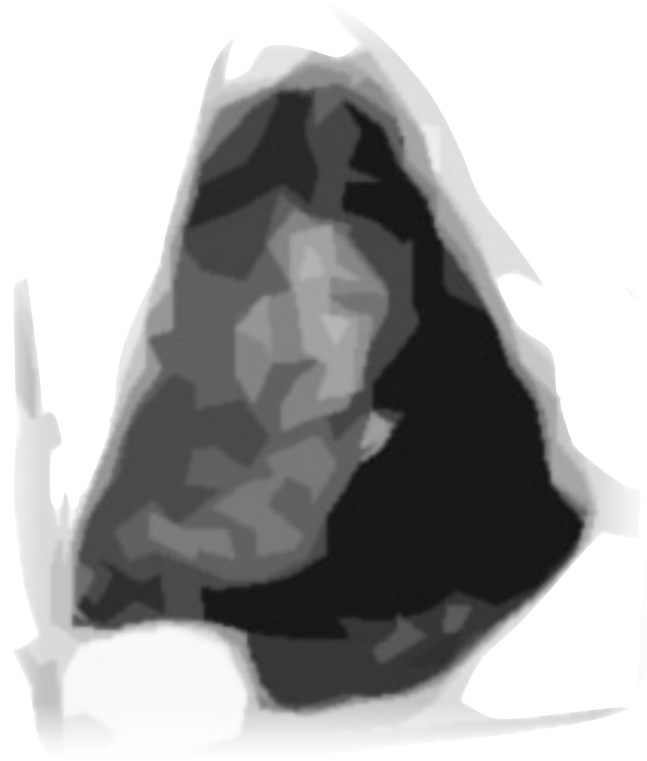
F

False Consensus Effect

I spent my teenage years deep in the heart of Red America: Decatur, Alabama. As late as the 1960s, it was the largest American community that still practiced prohibition. It wasn't until several years after I left high school that the possession of alcoholic beverages in your own home was decriminalized. Decatur schools did not desegregate until my junior year. Just about everyone around me was extremely conservative and held some version of fundamentalist or evangelical Christian faith. Today, I live in Bethesda, Maryland, made famous in <u>Bobos in America</u> as the spiritual capital of Blue (liberal) America. Montgomery County, Maryland, went 3-1 for Obama in 2008. And we're in the more liberal part of the county.

In both settings, I've noticed the same phenomenon: a presumption on most peoples' parts that all normal, right-thinking people share the same basic outlook on life. In Alabama, where I was very much the exception, I noticed it very clearly. Here, where my personal and political values are comparatively mainstream, I notice it as well.

The false consensus effect is the degree to which you overestimate how much other people agree with you and see the world the same way. Whether your information sources tend toward NPR or toward Fox, it's easier today than ever before to get all the news that fits your perspective. The more you see your own values front and center, the more they're validated as normal — and the more out of touch and fringe-extremist people on the other side appear.

But that's an illusion.

Although according to the Gallup organization, self-identified conservatives outnumber self-identified liberals by 40% to 21%, the combination of moderates and liberals tips the balance to 51% the other way. (As liberals know, there is no actual liberal party in the United States; in the Democratic Party, self-identified moderates outnumber self-identified liberals. Fully 22% of Democrats call themselves conservative, as opposed to 3% of Republicans who self-identify as liberal.)

In other words, no matter what you believe, at least half the nation disagrees with you. Although very conservative and very liberal perspectives both get a lot of press (often generated by the other side), only 9% of the American public self-identifies as "very conservative" and 5% as "very liberal."

False consensus accelerates because people tend to live near and associate with those who agree with them on core issues, leading people to conclude that the universal attitude around them (whether it's Bethesda or Decatur) must extend beyond the city borders. But there are a significant number of conservatives in Bethesda, and more liberals in Decatur than you'd think. (Several Alabama counties — not Decatur's, mind you — consistently vote blue, though the state as a whole is clearly red.)

The false consensus effect dramatically complicates communication. People talk past one another, each unaware the other operates from a different paradigm. When people are confronted with evidence that the consensus is indeed false, the normal reaction is to conclude that those who do not agree are defective — blind, immoral, corrupt, under undue influence. Ad hominem abuse seems reasonable enough under such circumstances, and the cycle of viciousness rolls forward.

There's a related bias known as pluralistic ignorance, in which people openly support a norm or belief they privately reject, for reasons ranging from the desire to fit in to fear of negative consequences for violating the norm. This, of course, provides even more reinforcement for false consensus. Over the last 40 years, I've had more than one classmate tell me that they agreed with far more of my political positions than they ever let on. That may be pluralistic ignorance, or it could be...

False Memory (Confabulation)

There's lying, and then there's confabulation. In confabulation, your mind has created false memories about yourself or your environment. Sometimes imagination has been confused with memory, and sometimes one memory is confused with another. A person with a false memory isn't telling the truth, but has no intent to lie.

Obviously, in significant degrees this can be a sign of psychological or neurological impairment, but most of us star in our own private Rashomon.

A number of cognitive biases affect your memory.

- **Consistency bias** (remembering your past attitudes and behavior as resembling your present ones)
- **Cryptoamnesia** (mistaking imagination for memory)
- **Rosy retrospection** (rating past events as better than they appeared at the time)
- **Suggestibility** (ideas suggested by a questioner are mistaken for memory)

Cognitive biases also adjust the memory to fit preconceptions or other fixed ideas. Treat your memory with skepticism. Interrogators of all stripes know that eyewitness accounts are hugely unreliable, confessions often meaningless, and detailed descriptions are frequently distorted and confused.

If it's important, you need to confirm your memory with other sources. Just because you remember it clearly doesn't mean it's true.

Forer Effect (Barnum Effect)

One year at a SkillPath trainer's conference, there was a speaker who could communicate with departed loved ones, and he put on quite an impressive show involving one member of the audience, who was blown away by how accurate the speaker was.

Even skeptics have moments in which a random astrology squib in the daily newspaper seems accurate, and I've had a few fortune cookie experiences that are nothing short of amazing. (My favorite: "You have great power and influence over women. Use it wisely.")

Meet the Forer effect.

The Forer effect explains why mass-market astrology, personality tests, and fortune telling have such an avid audience of true believers. This cognitive bias makes people tend to give high accuracy ratings to descriptions of their personality that are supposedly tailored specifically for them, but are in fact vague and general enough to apply to a wide range of people.

In 1948, psychologist Bertram R. Forer gave a personality test to his students, then gave each one a "unique" analysis based on the test results. Each student got the same thing, which read:

> "You have a great need for other people to like and admire you. You have a tendency to be critical of yourself. You have a great deal of unused capacity that you have not turned to your advantage. While you have some personality weaknesses, you are generally able to compensate for them. Disciplined and self-controlled outside, you tend to be worrisome and insecure inside. At times you have serious doubts as to whether you have made the right decision or done the right thing. You prefer a certain amount of change and variety and become dissatisfied when hemmed in by restrictions and limitations. You pride yourself as an independent thinker and do not accept others' statements without satisfactory proof. You have found it unwise to be too frank in revealing yourself to others. At times you are extroverted, affable, sociable, while at other times you are introverted, wary, reserved. Some of your aspirations tend to be pretty

unrealistic. Security is one of your major goals in life."

When asked to rate how well this described them, the average rating was 4.26 out of 5.0.

These kinds of generic statements that appear to have insight are known as Barnum statements, after P. T. Barnum. Further research has shown you can improve the accuracy rating people give by making sure the following three things are true:

Phineas Taylor Barnum

- The subject believes that the analysis applies only to him or her
- The subject believes in the authority of the evaluator
- The analysis lists mainly positive traits

Fundamental Attribution Error (Correspondence Bias, Attribution Effect)

People on the left experienced the joys of schadenfreude when Rush Limbaugh was accused of illegally obtaining prescription drugs after having himself spent years arguing that those convicted of drug crimes should be sent to jail.

How did he and his supporters rationalize the different treatment for himself? Well, Rush Limbaugh is a fine citizen. He simply suffered from severe back pain and became addicted to prescription painkillers. It was the situation, not the man himself.

But all these other drug users whom we don't know, well, their problem is more likely to be a moral defect. Their personalities and characters lead them into terrible behavior, and we as a society have no choice but to make them pay for their crimes.

The cognitive bias known as fundamental attribution error is our tendency to ascribe our own bad behavior, or bad behavior in those we like, to the circumstances or situation. We tend to believe, however, that bad behavior on the part of those we dislike or don't know is related to some attribute of personality or character. This creates circular logic loops that are difficult to break. "The reason so many [group] are unemployed is that they're lazy. That's why I don't hire them."

When the unemployed Alfred Doolittle in Pygmalion talks about the difference between the "deserving poor" and the "undeserving poor," he adds:

> "I'm one of the undeserving poor: that's what I am. Think of what that means to a man. It means that he's up agen middle class morality all the time. If there's anything going, and I put in for a bit of it, it's always the same story: 'You're undeserving; so you can't have it.' But my needs is as great as the most deserving widows that ever got money out of six different charities in one week for the death of the same husband. I don't need less than a deserving man: I need more. I don't eat less hearty than him; and I drink a lot more. I want a bit of amusement, cause I'm a thinking man. I want cheerfulness and a song and a band when I feel low. Well, they charge me just the same for everything as they charge the deserving. What is middle class morality? Just an excuse for never giving me anything."

Real people are complex mixtures of character and environment. Attributing 100% of behavior to one or the other, except in the most extreme of circumstances, is a dangerous and hurtful mistake. Error is often unavoidable, so my own goal is to err on the side of generosity.

G/H

Gambler's Fallacy

The gambler's fallacy is a cognitive bias that promotes the belief that if a random sequence shows a deviation from expected behavior, then it should be evened out by an opposite deviation in the future. But as anyone who's thought their number was "due" knows, it ain't necessarily so.

If you've flipped 5 heads in a row, the gambler's fallacy suggests that the next coin flip is more likely to be tails than heads. And indeed, the chance of flipping 5 heads in a row is only 1/32. But the chance of flipping 4 heads and 1 tail (or any other combination of 5 heads and tails) is the same 1/32. Once four heads have been flipped, the next toss of the coin is the same 50%/50% as the others.

So far, obvious enough, but there are two related fallacies and a couple of exceptions. The reverse gambler's fallacy is the belief that if the universe is showing a predisposition toward heads, then heads are cosmologically more likely. Assuming the coin is fair (not one of those double-headed types), that's equally false.

The inverse gambler's fallacy (term coined by philosopher Ian Hacking), is the fallacy of seeing an unlikely outcome of a random process and concluding that the process must therefore have occurred many times before. If you roll a pair of fair six-sided dice and get 12, it's wrong to suppose there's any support for the hypothesis that these dice have been rolled before.

The gambler's fallacy doesn't apply when the probability of different events is not independent. If you draw a card from a deck (let's make it a 4), then the chance of drawing another 4 is reduced, and the chance of drawing a card of another rank is increased. It also doesn't apply if the outcomes aren't equally probable. If those six-sided dice keep rolling boxcars, after a while it's reasonable to suspect they may be loaded.

The gambler's fallacy is related to two other cognitive biases, the <u>clustering illusion</u> and the <u>representativeness heuristic</u>. The latter bias is the belief that a short run of random outcomes should share the properties of a longer run. Out of 500 tosses of a fair coin, the number of heads and tails are very likely to balance out, but that doesn't mean the same thing will hold true in a sequence of 5 or 10 tosses.

But see the **Ludic Fallacy** for the opposite side of the coin.

Halo Effect

Some years back, I was on a seminar trip in Texas and Louisiana. A huge storm shut down air traffic, and in the process I got separated from my luggage. The next day, I had to teach a seminar in blue jeans and a day-old dress shirt. The audience was very sympathetic — there was major flooding in Baton Rouge and several of the attendees had disaster stories of their own to tell — and the seminar went well.

When I received my evaluation statistics a couple of weeks later, I was fascinated to find that my scores had dropped nearly 25% below my averages. It was certainly understandable that my scores for "Instructor's appearance was professional" would drop, but there were drops in "Instructor had a good command of the material" and "The workbook contained information that will be of use to me after the seminar."

That's the halo effect, the tendency for people to extend their assessment of a single trait so that it influences assessment of all other traits.

There are other examples. In the 46 US presidential elections where the height of both candidates are known, the taller candidate won the popular vote 61% of the time and the shorter 33% of the time. (In three cases, the candidates were of the same height, and in three other cases, the taller candidate won the popular vote but lost to the shorter candidate in the Electoral College — most recently in 2000.)

In 1977, psychologist Richard Nisbett ran a series of experiments on how students made judgments about professors, demonstrating not only how strong the effect is, but also how much people are unaware when they're affected by it. At least five people at that seminar in Baton Rouge assured me they didn't mind my jeans at all. Two even said they preferred a more casual look for the instructor.

But the numbers told the truth.

Hawthorne Effect

The Hawthorne effect is often portrayed as sort of a Heisenberg uncertainty principle for the social sciences: observer interacts with observed through the process of observation. In practice, almost any sort of internal improvement effort will have a short-term

positive effect on performance, a placebo effect that benefits all of us in the management consulting world.

The original experiments on which the Hawthorne effect is based took place from 1924 to 1932 at the Hawthorne Works, a Western Electric plant outside of Chicago. A group of six women worked in a special room assembling telephone relays and dropping them down a chute. The most famous and oft-cited of those experiments involves a study of how illumination levels affected the rate with which these women dropped finished relays down the chute. Over a five year period the researchers also changed pay rules, varied break frequency and duration, and shortened and lengthened the workday, all to the tune of the drip-drip-drip of falling relays.

There was, interestingly, no double blind in the experiments. The women were fully aware they were being studied, and even suggested some of the experiments themselves. The lack of control over the numerous variables has led to a wide range of interpretation about what — if, indeed, anything — the studies really mean.

Herd Instinct

Herd behavior was well-known to exist in animals, but Friedrich Nietzche was the first to use the concept of "herd instinct" as one more reason to have contempt for the human species. There's nothing inherently wrong, however, with acting as part of a group. In many circumstances, the natural tendency of a group to move in the same direction can increase safety. Of course, sometimes herds head over the edge of the cliff.

As noted earlier, calling something a cognitive bias isn't the same as calling a biased decision wrong or stupid. If a crowd is fleeing in a particular direction, it may be a false alarm, but then again, they may know something you don't. If danger doesn't appear imminent, taking a few minutes to look around is a better way to balance your risks.

Hindsight Bias

Once you know how it turned out, a certain sense of inevitability creeps in. The signs were always there, and the people in charge should have known the truth all along.

The frequently repeated libel that FDR, for example, knew in advance about the impending Pearl Harbor attack and remained silent for political reasons is a case in point. (I won't rehash the argument in detail, but I'm always appreciative of the Straight Dope's[3] accuracy and balance on almost any topic.) The argument relies on the idea that in the mass of raw data, decision-makers could have recognized in advance exactly which bits of information were salient. This is nonsense. Reading the future forward is orders of magnitude more difficult than reading it backward.

This particular bias is aided by our own tendency to believe that when we turn out to have been right that we "knew it all along." Before-and-after measures of certainty tend to vary a lot.

Hyperbolic Discounting

"I would gladly pay you Tuesday for a hamburger today." Wimpy, the hamburglar pal of Popeye the Sailor Man, liked his rewards up front and his penalties delayed. People in general tend to prefer the bird in the hand to a flock in the bush. That's a fairly well-known cognitive bias.

What's not so well known is the amount of the discount — how much will you give up in the future to receive the benefit today? Behavioral economists believe the relationship is hyperbolic. We'll take a dollar today in preference to three dollars tomorrow.

But given a choice between a dollar 365 days from now and three dollars 366 days from now, we'll gladly wait the same extra day for three times the payoff. Our choices are inconsistent over time: we'll commit our future self to a course of action (waiting a day) that we aren't willing to follow today.

This is often irrational, but not always. Depending on the uncertainty of the reward, a definite dollar today may be preferable to the possibility of three dollars tomorrow.

This particular cognitive bias shows up in studies of how people save for retirement, borrow on their credit cards, procrastinate on important tasks, and deal with the consequences of addiction.

Especially where hamburgers are concerned.

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[3] http://www.straightdope.com/columns/read/1889/did-roosevelt-know-in-advance-about-the-attack-on-pearl-harbor-yet-say-nothing

I

Illusion of Asymmetric Insight

Think about the people you know. How well do you know them? How much insight do you have into the way they think, their strengths and weaknesses, and the reasons they behave the way they do?

Now think about how well they know and understand you. Do they understand you as well as you understand them, or are their insights about you more likely to be wrong, shallow, or incomplete?

The illusion of asymmetric insight is the common belief that we understand other people better than they understand us. It happens both with individuals and with groups — do you think you understand, say, the culture of the Middle East better than Middle Easterners understand the culture of the United States?

A 2001 report in the Journal of Personality and Social Psychology on the illusion of asymmetric insight cited six different studies that confirm the widespread cognitive bias. Like most cognitive biases, your best strategy is self-awareness. Be more modest about your knowledge about others, and assume you're more transparent than you appear.

The Johari Window[4] is a good tool to help you. It's a model for mapping how well you understand yourself, how well other people understand you, and how to be more self-aware. By taking the test (and asking others to take your test as well), you'll learn about your four selves: a public arena known to you and to others), a blind spot known to others and not to you, a
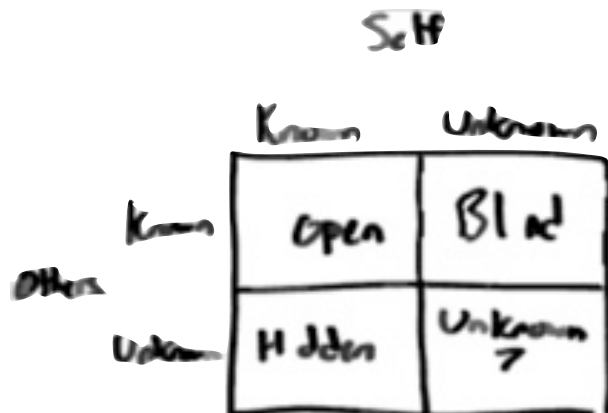
The Johari Window

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4 You can take an online version at http://kevan.org/johari.

façade known to you and not to others, and an unknown self hidden to all.

Related to the illusion of asymmetric insight is the illusion of transparency, the extent to which people overestimate the degree their personal mental state is known by others: "Can't you tell I'm really upset?" This tends to be most pronounced when people are in a personal relationship.

Illusion of Control

When rolling dice in craps (or, presumably, in role-playing games), studies have shown that people tend to throw harder when they want high numbers and throw softer for low ones. That's the illusion of control, the tendency of people to believe they can control (or at least influence) outcomes even when it's clear they cannot.

Like a lot of cognitive biases, this particular one has advantages as well as disadvantages. It's been argued that the illusion of control is an adaptive behavior because it tends to increase motivation and persistence, and in fact the illusion of control bias is found more commonly in people with normal mental health than in those suffering from depression.

But it's not all good news. In a 2005 study of stock traders, those who were prone to high illusion of control had significantly worse performance in analysis, risk management, and profitability, and earned less as well.

Illusory Superiority

"The trouble with the world is that the stupid are cocksure and the intelligent are full of doubt," wrote Bertrand Russell. The cognitive bias he describes is known as illusory superiority.

In a 1981 survey, students were asked to compare their driving safety and skill to other students in the same experiment. For driving skill, 93% of the students put themselves in the top 50%. For safety, 88% put themselves in the top 50%.

In intelligence, illusory superiority shows up in the **Downing effect**, the tendency of people with below-average IQs to overestimate their intelligence, and for people with above-average intelligence to underestimate.

Incompetence and stupidity also play into the **Dunning-Kruger effect**, a series of demonstrations that incompetents tend to overestimate their own skill, fail to recognize genuine skill and others, and fail to recognize their own inadequacies. As in the Downing effect, people of much higher competency levels are perversely much more self-critical.

The danger, alas, is that people tend to judge the competence of others by their degree of self-esteem, leading to situations in which incompetence can actually increase someone's ability to get a good job.

Impact Bias

Imagine that you've just learned your lotto ticket is the big winner, and you've just become a multi-millionaire. How would you feel, and how long would you feel that way?

Now imagine that instead of winning the lotto, you've just lost your job. How would you feel, and how long would you feel that way?

According to studies of impact bias, you've probably overestimated how long you'd be elated at the lotto win, and how long it'll take you to recover emotionally from getting laid off.

People tend to have a basic "happiness set-point." Although good and bad events can dramatically change your level of happiness, most people tend to return fairly rapidly to their emotional base states.

Information Bias

"We need more study before we make a decision." Well, sometimes we do, but the big question is what good the information will do us. In an experiment involving medical students and fictitious diseases, the students looked at a diagnostic problem:

> A patient's presenting symptoms and history suggest a diagnosis of globoma, with about an 80% probability. If it isn't globoma, it's either popitis or flapemia. Each disease has its own treatment, which is ineffective against the other two diseases. A test called the ET scan would certainly yield a positive result if the patient had popitis, and a negative result if she has flapemia. If the patient has globoma, a positive and negative result are equally likely.

If the ET scan was the only test you could do, should you do it? Why or why not?

The majority of students opted for the ET scan, even when they were told it was costly, but the truth is that the result of the scan doesn't matter. Here's why:

Out of 100 patients, a total of 80 people will have globoma regardless of whether the ET scan is positive or negative. Since it is equally likely for a patient with globoma to have a positive or negative ET scan result, 40 people will have a positive ET scan and 40 people will have a negative ET scan, which totals to 80 people having globoma.

This means that a total of 20 people will have either popitis or flapemia regardless of the result of the ET scan. The number of patients with globoma will always be greater than the number of patients with popitis or flapemia no matter what the ET scan happens to show.

More information doesn't always make a better decision. If the information isn't relevant, more of it doesn't help.

Ingroup Bias

Most of us recognize the tendency to give preferential treatment to people we perceive to be members of our own groups. What's interesting is the extent to which ingroup bias works even when the groups that link us are random and arbitrary: having the same birthday, having the same last digit in a Social Security number, or being assigned to a group based on the same flip of a coin.

Ingroup bias is one of the root causes of racism and other forms of prejudice, so it's dangerous indeed. However, like with most cognitive biases, there's an upside as well. We're not part of a single group (black/white, American/Chinese, rich/poor) but of many different ones. That means we're almost always able to define each other as members of at least one of our ingroups. That builds connections.

Irrational Escalation

There's the old joke about the man who accidentally dropped a quarter in the outhouse, and immediately took out a $20 bill and threw it down the hole as well. When asked why, he replied, "If I gotta go in after it, it had better be worth my while."

An example of irrational escalation is the dollar auction experiment. The setup involves an auctioneer who volunteers to auction off a dollar bill with the following rule: the dollar goes to the highest bidder, who pays the amount he bids. The second-highest bidder also must pay the highest amount that he bid, but gets nothing in return.

Suppose that the game begins with one of the players bidding 1 cent, hoping to make a 99 cent profit. He or she will quickly be outbid by another player bidding 2 cents, as a 98 cent profit is still

desirable. Three cents, same thing. And so the bidding goes forward.

As soon as the bidding reaches 99 cents, there's a problem. If the other player bid 98 cents, he or she now has the choice of losing the 98 cents or bidding $1.00, for a profit of zero. Now the other player is faced with a choice of either losing 99 cents or bidding $1.01, and only losing one cent. After this point the two players continue to bid the value up well beyond the dollar, and neither stands to profit.

The dollar auction is often used as a simple illustration of the irrational escalation of commitment. By the end of the game, though both players stand to lose money, they continue bidding the value up well beyond the point that the dollar difference between the winner's and loser's loss is negligible; they are fueled to bid further by their past investment.
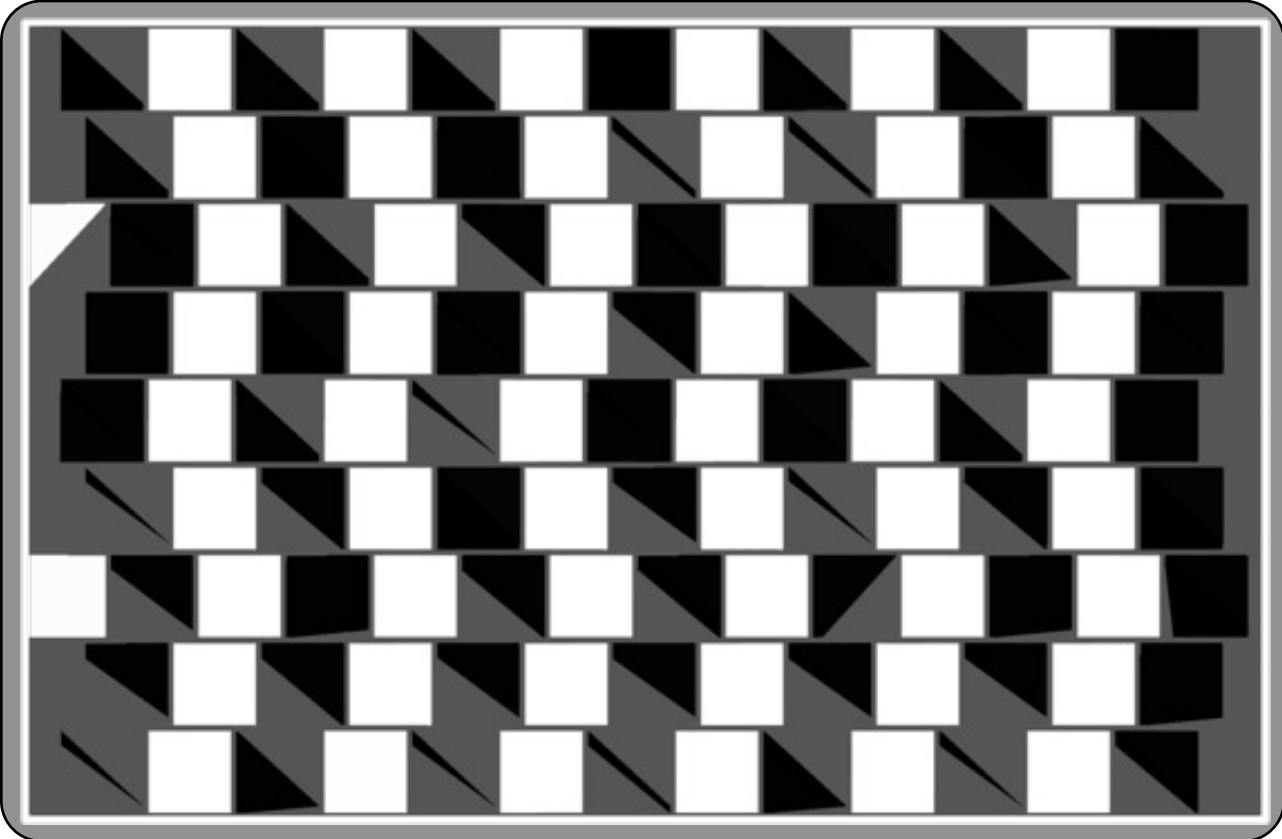
The horizontal lines are parallel.

J/K/L

Job & Friends

Just-World Phenomenon

"He must be wicked to deserve such pain," wrote Robert Browning in "Childe Roland to the Dark Tower Came," and indeed the idea that people get what they deserve, both for good and evil goes back through history. When Job was suffering, his friends Bildad, Zophar, and Eliphaz each argued that Job must have done something wrong, because God would not visit such terrible punishments on an innocent.

The cognitive bias known as the just-world phenomenon refers to the tendency of people witnessing an otherwise inexplicable injustice to look for reasons the victim might have deserved it. In theology, the problem of evil falling on the apparently innocent is known by the all-too-apt name of theodicy.

It's been demonstrated scientifically as well. In one study, researchers gave women what appeared to be painful electric shocks while working on a difficult memory problem. Other women of broadly the same age and social group who observed the experiment appeared to blame the victim for her fate, praised the experiment, and rated her as being less physically attractive than did those who had seen her but not the experiment.

In another study, female and male subjects were told two versions of a story about an interaction between a woman and a man. Both variations were exactly the same, except

at the very end the man raped the woman in one and in the other he proposed marriage. In both conditions, both female and male subjects viewed the woman's (identical) actions as inevitably leading to the (very different) results.

The rain, it is said, falls on the just and unjust alike. Don't make negative assumptions about people you don't even know.

Loss Aversion

Would you sooner get a $5 discount, or avoid a $5 surcharge? It's the same $5 either way, but depending on the frame, there's a dramatic difference in consumer behavior. Some studies suggest that the value of avoiding a loss is psychologically twice as powerful as the value of a gain. In one study of consumer reaction to price changes to an insurance policy, a price increase had twice the effect on customer switching as did a price decrease.

Loss aversion also plays into "sunk cost" bias. If you've been gambling and you're in the hole, it's the tendency to keep playing in hopes of recovering the lost money. The refusal to admit mistakes is part of loss aversion. The more time and energy you've committed to a particular course of action, the harder it is to walk away from it, regardless of the evidence.

Ludic Fallacy

If you've flipped a coin 99 times and gotten heads each time, what are the odds of getting heads on the next flip of the coin? We've already learned about the gambler's fallacy, so we know the odds are still 50/50.

But wait a minute. If you've flipped a coin 99 times and gotten heads each time, wouldn't you start to suspect there was something wrong with the coin? The ludic fallacy (a term coined by Nassim Nicholas Taleb in his 2007 book The Black Swan) is the assumption that messy situations in the real world fall neatly into the models of games and dice.

There's a lot of value in simplifying a complex problem to identify core principles, but there's a strong risk of believing the simple model is identical to the messy real world, and that's wrong. Theory and models are subordinate to reality, not superior to it.

M

Mere Exposure Effect

People tend to develop a preference for things merely because they are familiar with them. In studies of interpersonal attraction, the more often a person is seen by someone, the more pleasing and likeable that person appears to be.

When subjects were exposed to an unfamiliar stimulus in laboratory experiments, they reacted to it more positively than other, similar stimuli which had not been presented. In one variation, subjects were shown an image on a tachistoscope for a very brief duration that could not be perceived consciously. This subliminal exposure produced the same effect, though it is important to note that subliminal effects are generally weak and unlikely to occur without controlled laboratory conditions.

The effect is strongest when unfamiliar stimuli are presented briefly. Mere exposure typically reaches its maximum effect within 10-20 presentations, and some studies even show that liking may decline after a longer series of exposures. For example, people generally like a song more after they have heard it a few times, but many repetitions can reduce this preference. A delay between exposure and the measurement of liking actually tends to increase the strength of the effect. Curiously, the effect is weaker on children, and for drawings and paintings as compared to other types of stimuli. One social psychology experiment showed that exposure to people we initially dislike makes us dislike them even more.

Money Illusion

"I asked for a three-penny loaf," wrote Benjamin Franklin about his first day in Philadelphia in 1723, "and was told they had none such. So not considering or knowing the difference of money, and the greater cheapness nor the names of his bread, I made him give me three-penny worth of any sort. He gave me, accordingly, three great puffy rolls. I was surpriz'd at the quantity, but took it, and, having no room in my pockets, walk'd off with a roll under each arm, and eating the other."

When this story was first presented to me in school, the teacher observed how cheap bread was in those days. Three loaves of bread for a penny!

But, of course, that's not correct. The average weekly wage at the time was about a dollar, meaning a penny represented about half an hour's worth of work. Today, the median personal income for a 25 year old with a bachelor's degree is about $50,000, and (I just checked) you can buy a loaf of white bread for $1.00 at the local store. That means bread costs about 3 minutes worth of work, or a tenth as much as Benjamin Franklin paid. Even for the poor, bread today is still cheaper.

Has gas gotten more expensive? In 1958, gas cost 24¢ a gallon, but that's $2.24 in current terms. How about postage? In real terms, a first class stamp today costs less than it did in the 1940s, when it hit an inflation-adjusted spike of 51¢ (4¢).

The face value of money isn't as important as its purchasing power, but psychologically, people don't believe it. If you get a 2% pay cut, it's unfair and hugely damaging to morale. But if inflation is 4% and you get a 2% raise, you're in exactly the same position, but you're more likely to think you're being treated well.

Moral Credential Effect

If you develop a track record as a moral and ethical person, you can actually increase your likelihood of making less ethical decisions in the future, as if you have given yourself a "Get out of jail free" card. For example, in a 2001 study, individuals who have had the opportunity to recruit a woman or an African-American in one setting were more likely to say later that a different particular job would be better suited for a man or a Caucasian.

N

Need for Closure

On a scale of 1 (strongly disagree) to 6 (strongly agree), how would you rate yourself on the following statements?

1. I don't like to go into a situation without knowing what I can expect from it.
2. I think that having clear rules and order at work is essential for success.
3. I'd rather know bad news than stay in a state of uncertainty.
4. I usually make important decisions quickly and confidently.
5. I do not usually consult many different opinions before forming my own view.

These questions are part of the 42-item Need for Closure Scale (NFCS), a way to measure the extent of your need for cognitive closure, your desire for an answer to settle the matter, even if the answer isn't the correct one or the best one.

There are five different types of the closure bias. The first statement above tests your desire for predictability. In order, the others test your preference for order and structure, your degree of discomfort with ambiguity, your decisiveness, and your degree of closed-mindedness.

If you have a high need for closure, you tend to rely more on information received earlier, and prefer the first workable answer you come across. You tend to search for information more narrowly, and apply rules and shortcuts to aid quick decision-making. A low need for closure is, unsurprisingly, associated with creativity, especially the process of coming up with a large number of potential solutions.

Need for closure is affected by outside circumstances as well as by basic temperament. Time pressure, in particular, plays a significant role. The need for closure is attributed not only to individuals, but also to cultures as a whole, illustrated by the argument that the "need for national closure" warranted stopping the process of recounting votes in the Florida 2000 presidential election.

Neglect of Probability

Several of our cognitive biases involve misapplication or misunderstanding of probability in a given situation. So far, we've covered the base rate effect, the gambler's fallacy, the hindsight bias, and the ludic fallacy.

Neglect of probability is something different. It's the complete disregard of probability rather than its incorrect use. Children are particularly subject to this bias. In a 1993 study, children were asked the following question:

Susan and Jennifer are arguing about whether they should wear seat belts when they ride in a car. Susan says that you should. Jennifer says you shouldn't. . . . Jennifer says that she heard of an accident where a car fell into a lake and a woman was kept from getting out in time because of wearing her seat belt, and another accident where a seat belt kept someone from getting out of the car in time when there was a fire. What do you think about this?

Here's how one subject responded:

> A: Well, in that case I don't think you should wear a seat belt.
> Q (interviewer): How do you know when that's gonna happen?
> A: Like, just hope it doesn't!
> Q: So, should you or shouldn't you wear seat belts?
> A: Well, tell-you-the-truth we should wear seat belts.
> Q: How come?
> A: Just in case of an accident. You won't get hurt as much as you will if you didn't wear a   seat belt.
> Q: OK, well what about these kinds of things, when people get trapped?
> A: I don't think you should, in that case.

Another subject replied, "If you have a long trip, you wear seat belts half way." Notice that the comparative probability of the two events doesn't come into the discussion at all.

For adults, a 2001 study found that a typical subject was willing to pay $7 to avoid a 1% chance of a painful electric shock, but only $10 to avoid a 99% chance of the same shock, suggesting that probability is more likely to be neglected when the outcomes produce anxiety.

"Not Invented Here" Syndrome (NIH)

It doesn't take a lot of experience in the world of work before you begin to encounter the "Not Invented Here" syndrome. Although mostly intended as a somewhat cynical joke, the behavior is quite real and has a significant effect on organizations. Interestingly, it's

not always negative, and not always antithetical to creativity and innovation. Like many cognitive biases, the trick is to be conscious of how it works in your life and in your organization.

Numerous factors can trigger an NIH response. Personal and organizational egotism plays a large role: we are inherently superior or unique, therefore what may work elsewhere is inferior or inapplicable. Loyalty matters. In the early days of personal computing, the British-made Timex Sinclair was hugely popular in Britain but hardly known in the United States, and the Japanese/Dutch MSX computer was successful in Japan and much of Europe, but not in either Britain or the United States.

There can be economic advantages to NIH behavior. Television networks more commonly buy programs from suppliers in which they have a financial interest. Such shows are more profitable to the network than a show from a non-affiliated supplier that drew higher ratings. Economic advantages can also accrue to individuals at the same time they penalize organizations. In one case, a department refused to help another group in the same company because doing so would perversely lower bonuses to those doing the helping.

NIH can also form the basis of corporate strategy, and as such can be a vehicle to promote innovation rather than retard it. Apple, for example, commonly ignores or actively denigrates trends in the computer industry and invents its own. "Netbooks aren't better than anything," argued Steve Jobs. "They're just cheap laptops." Accordingly, Apple ignored the netbook model and invented its own: the iPad.

Notational Bias

> BRITANNUS (shocked).
> Caesar: this is not proper.
>
> THEODOTUS (outraged).
> How!
>
> CAESAR (recovering his self-possession).
> Pardon him. Theodotus: he is a barbarian, and thinks that the customs of his tribe and island are the laws of nature.

This famous moment from George Bernard Shaw's Caesar and Cleopatra illustrates notational bias, the assumption that conventions of one's own society are equivalent to laws of logic or of nature. Examples abound. If you read most European languages, you read from left to right. It's "natural." But if you read Hebrew, it's the other way around.

It's "natural" for Americans to drive on the right. But of course these are ultimately arbitrary choices that become the norm for a particular culture.

When you fall into notational bias, it's not about whether you prefer your culture's choice, or even whether your culture's choice is arguably better. Instead, notational bias blinds you to the idea that there's even a choice to be made.

O

Observer-Expectancy Effect

In September 1969, Tim Harper, a student at Drake University in Des Moines, Iowa, published a humorously intended article in the campus newspaper, titled "Is Paul McCartney Dead?" The article listed a number of supposed reasons, including the claim that the surviving Beatles had planted backward messages in various songs.

About a month later, a caller to WKNR-FM in Detroit asked radio dj Russ Gibb about the rumor, asking him to play "Revolution 9" backwards. Gibb did, and heard the phrase "Turn me on, dead man."

Or so he thought.

The "Paul is dead" story quickly got out of control, and any number of people (some not even stoned) started to pick up clues. Even statements from Paul himself were not enough to stop the story. There are still claims today that photographs of Paul pre-1966 and post-1966 show significant differences in facial structure.

We see what we expect to see. If we're looking for a particular answer, the cognitive bias known as the observer-expectancy effect results in unconscious manipulation of experiments and data so that yes, indeed, we find what we were looking for.

The use of double-blind methodology in performing experiments is one way to control for the observer-expectancy effect. Try this thought experiment: if you are wrong, what would you expect to see differently?

Omission Bias

You know an opponent of yours is allergic to a certain food. Before a big competition, you have an opportunity to do one of two things. Which, in your judgment, is less immoral?

1. Slip some of the allergen in his or her food.
2. Notice that the opponent has accidentally ordered food containing the allergen, and choose to say nothing.

A clear majority say the harmful action (1) is worse than the harmful inaction (2). The net result for the opponent is the same, of course. The reason is omission bias, the belief that harmful inaction is ethically superior to harmful action.

Part of the reinforcement of the bias is that it's harder to judge motive in cases of omission. "I didn't know he was allergic!" you might argue, and there's a good chance you'll get away with it. Every employee knows the technique of "malicious compliance," whether or not we personally use it — that's the tactic of applying an order or directive with such appalling literal-mindedness that you guarantee a disastrous result.

Even if no one else can judge your intent, you can. Don't let the omission bias lead you into ethical choices you'll later regret.

Optimism Bias

Optimism bias is the tendency for people to be over-optimistic about the outcome of planned actions. Excessive optimism can result in cost overruns, benefit shortfalls, and delays when plans are implemented or expensive projects are built. In extreme cases these can result in defeats in military conflicts, ultimate failure of a project or economic bubbles such as market crashes.

A number of studies have found optimism bias in different kinds of judgment. These include:

- Second-year MBA students overestimated the number of job offers they would receive and their starting salary.

- Students overestimated the scores they would achieve on exams.
- Almost all newlyweds in a US study expected their marriage to last a lifetime, even while aware of the divorce statistics.
- Most smokers believe they are less at risk of developing smoking-related diseases than others who smoke.

Optimism bias can induce people to underinvest in primary and preventive care and other risk-reducing behaviors. Optimism bias affects criminals, who tend to misjudge the likelihood of experiencing legal consequences.

Optimism bias causes many people to grossly underestimate their odds of making a payment late. Companies have exploited this bias by increasing interest rates to punitive rates for any late payment, even if it is to another creditor. People subject to optimism bias think this won't happen to them — but eventually it happens to almost everbody.

Optimism bias also causes many people to substantially underestimate the probability of having serious financial or liquidity problems, such as from a sudden job loss or severe illness. This can cause them to take on excessive debt under the expectation that they will do better than average in the future and be readily able to pay it off.

There's a good side to optimism bias as well. Depressives tend to be more accurate and less overconfident in their assessments of the probabilities of good and bad events occurring to others, but they tend to overestimate the probability of bad events happening to them, making them risk-averse in self-destructive ways.

Sewell Avery

Ostrich Effect

The optimism bias is linked to the ostrich effect, a common strategy of dealing with (especially financial) risk by pretending it doesn't exist. Research has demonstrated that people look up the value of their investments 50-80% less often during bad markets.

Outcome Bias

At the end of World War II, Montgomery Ward chairman Sewell Avery made a fateful decision. The United States, he was sure,

would experience major difficulties moving from a wartime to a peacetime economy. Millions of troops would return, all seeking jobs. At the same time, factories geared for the production of tanks, bombers, and fighting ships would grind to a halt with no further need for their production.

Let Sears and JCPenney expand; Montgomery Ward would stand pat on its massive cash reserves (one Ward vice president famously said, "Wards is one of the finest banks with a storefront in the US today.") and when the inevitable collapse came, Montgomery Ward would swallow its rivals at pennies on the dollar.

As we know, it didn't turn out that way. Instead of falling back into depression, the United States in the postwar years saw unprecedented economic growth.

Sewell Avery was wrong. But was he stupid?

Outcome bias describes our tendency to judge the quality of the decision by the outcome: Sewell Avery was stupid. But that's not fair. The outcome of the decision doesn't by itself prove whether the decision was good or bad. Lottery tickets aren't a good investment strategy. The net return is expected to be negative. On the other hand, occasionally someone wins. That doesn't make them a genius.

Similarly, wearing your seatbelt is a good idea. There are, alas, certain rare accidents in which a seatbelt could hamper your escape.

As it happens, Avery <u>was</u> stupid — not because he made a decision that turned out to be wrong, but because he stuck to it in the face of increasing evidence to the contrary, even firing people who brought him bad news. But that's a different bias.

Outgroup Homogeneity Bias

In response to the claim that all black people look alike, comedian Redd Foxx performed a monologue that listed some thirty or forty different shades of black, set against the single color of white. "No, dear white friends," Foxx said, "it is you who all look alike."

The proper name for this perception (in all directions) is "outgroup homogeneity bias," the tendency to see members of our own group as more varied than members of other groups. Interestingly, this turns out to be unrelated to the number of members of the other group we happen to know. The bias has been found even when groups interact frequently.

Overconfidence Effect

One of the most solidly demonstrated cognitive biases is the "overconfidence effect," the degree to which your personal confidence in the quality and accuracy of your own judgment is greater than the actual quality and accuracy. In one experiment, people were asked to rate their answers. People who rated their answers as 99% certain turned out to be wrong about 40% of the time.

The overconfidence gap is greatest when people are answering hard questions about unfamiliar topics. What's your guess as to the total egg production of the United States? How confident are you in the guess you just made? (The average person expects an error rate of 2%, but the real error rate averages about 46%.)

Clinical psychologists turn out to have a high margin of overconfidence. Weather forecasters, on the contrary, exhibit almost none.

P/Q
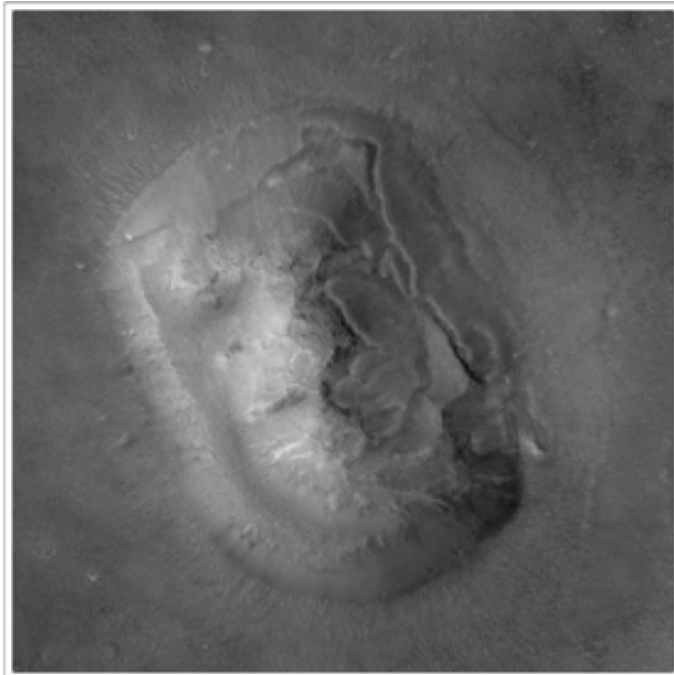
Pareidolia

On July 25, 1976, a camera aboard Viking 1 took a series of pictures of the Cydonia region of the planet Mars. To the left, you see a photograph of a 1.2 mile long Cydonian mesa at 40.75° north latitude and 9.46° west latitude. Nothing special, right?

How about the picture below it?

This is the famous "Face on Mars," an example of the cognitive bias known as pareidolia, the tendency of the human brain to turn vague or random stimuli into objects of significance. Watching for patterns in clouds is an exercise in voluntary pareidolia. Some people overrate the significance of these patterns, especially when they see apparent religious imagery, like the infamous Virgin Mary grilled cheese sandwich or the Jesus tortilla.
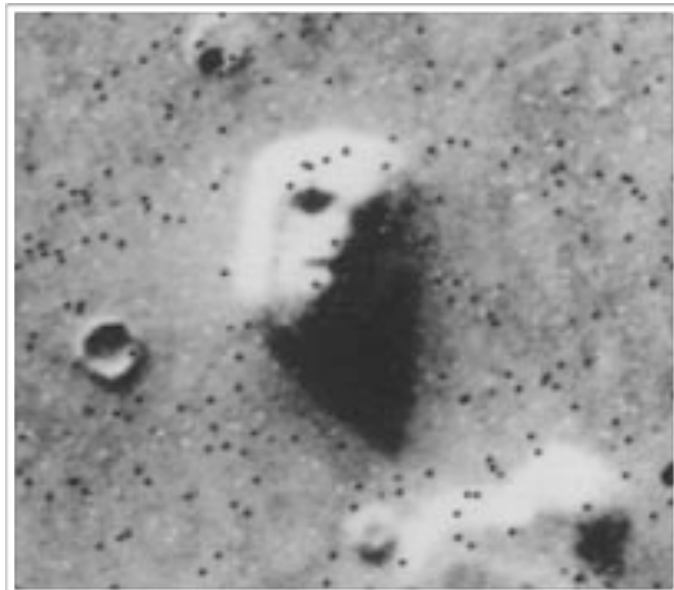
When you look at a Rorschach inkblot, the images you see are the result of "directed pareidolia." The blots are carefully designed not to resemble any object in particular, so that what you see is what you

project. Pareidolia appears in sound as well. There's a tendency to hear apparently meaningful words and phrases in a recording played backward.

Planning Fallacy

In a 1994 study, 37 psychology students were asked to estimate how long it would take to finish their senior theses. The average estimate was 33.9 days. They also estimated how long it would take "if everything went as well as it possibly could" (averaging 27.4 days) and "if everything went as poorly as it possibly could" (averaging 48.6 days). The average actual completion time was 55.5 days, with only about 30% of the students completing their thesis in the amount of time they predicted.

The researchers asked their students for estimates of when they (the students) thought they would complete their personal academic projects, with 50%, 75%, and 99% confidence.

- 13% of subjects finished their project by the time they had assigned a 50% probability level;
- 19% finished by the time assigned a 75% probability level;
- 45% (less than half) finished by the time of their 99% probability level.

In project management, this is sometimes referred to as Hofstadter's Law: It always takes longer than you expect, even when you take into account Hofstadter's Law. (Douglas Hofstadter was the author of the 1979 work Gödel, Escher, Bach.) There are a number of theories as to why this is so often true. To my mind, the best explanation comes from Eliyahu Goldratt in his 1997 Critical Chain, which analyzed project management issues from a different perspective.

Goldratt argued that when asked to estimate task duration, people tended to give a safe estimate whenever possible. Knowing the estimate had safety built in, people then tended to procrastinate or attack other problems until the actual time available was insufficient to get the job done. This is also known as Parkinson's Law, the tendency of work to expand to fill the time available for its completion.

Numerous books (including some of mine) try to point out solutions, but the problem persists.

Post-Purchase Rationalization

Earlier, I told the story about the man who lost the quarter in an outhouse (irrational escalation), and it fits here as well.

Post-purchase rationalization is the bias that once you've invested significant time, money, or energy in something, you tend to think it was all worthwhile. In his brilliant 1984 book, The Psychology of Influence, Dr. Robert Cialdini cites several examples. Just after placing a bet at the racetrack, people are much more confident about their horse winning than they were before they placed the bet. Researchers staged thefts on a New York City beach to see if onlookers would risk themselves to stop the thefts. Four in twenty observers gave chase. Then they did it again, but now the supposed victim first asked the onlooker, "Would you watch my things?" Nineteen out of twenty people tried to stop the theft or catch the thief.

Most interestingly, when an attendee at a sales meeting for Transcendental Meditation raised a series of embarrassing questions that undermined the claims made by the presenter, enrollments went up, not down! One person who signed up told the observer that he agreed with the points, but needed help so much that the criticisms made him sign up now, before he had time to think about them and fail to join up.

There's a value in intelligent consistency. Foolish consistency, as we recall, is the hobgoblin of little minds.

Projection Bias

Sigmund Freud named this bias, a psychological defense mechanism in which we unconsciously deny our own attributes, thoughts, or emotions and ascribe them to the outside world, whether to other people or to phenomena like the weather...or in one famous case, witches.

Projection bias is one of the medical explanations of bewitchment that attempts to diagnose the behavior of the afflicted children at Salem in 1692. The historian John Demos asserts that the symptoms of bewitchment experienced by the afflicted girls in Salem during the witchcraft crisis were because the girls were undergoing psychological projection. Demos argues the girls had convulsive fits caused by repressed aggression and were able to project this aggression without blame because of the speculation of witchcraft and bewitchment.

The Salem Witch Trials affected a community under considerable strife: property lines, grazing rights, and upheavals in the church had all given Salem Village a reputation as quarrelsome. Population pressures from increasing family size built demand for farmland. And in the Puritan culture, anything from loss of crops or livestock, illness or death of children, and even bad weather were generally seen as the wrath of God in action.

The Salem witches were hardly the first accused witches in the area. Making accusations of witchcraft against widowed or orphaned land-owning women was a good way to take their land. And, of course, witches served as a good target for the projection bias: all the ill feelings and bad conduct of the community were projected onto a group that couldn't fight back.

The Salem Witch Trials claimed twenty victims.

Pseudocertainty Effect

Which of the following options do you prefer?

> A. 25% chance to win $30 and 75% chance to win nothing
> B. 20% chance to win $45 and 80% chance to win nothing

Now consider the following two stage game. In the first stage, there is a 75% chance to end the game without winning anything, and a 25% chance to move into the second stage. If you reach the second stage you have a choice between:

> C. a sure win of $30
> D. 80% chance to win $45 and 20% chance to win nothing

You have to make your choice before the first stage.

Here's how most people choose:

- In the first problem, 42% of participants chose option A while 58% chose option B.
- In the second, 74% of participants chose option C while only 26% chose option D.

The probability of winning money in option A is 25%. For option B, the probability is 20%. Now let's look at the other two. To win money in option C, you have to win the first stage (25% chance) and then you automatically win the second, so the probability is 25% x 100%, or 25% — the same as option A. For option D it's 25% x 80%, or 20% — the same as option B. Nevertheless, people don't perceive the deals the same way.

If the probability of winning money is the same, why do people choose differently? The answer is the pseudocertainty effect: the tendency to perceive an outcome as if it is certain when it's actually uncertain. It's most easily observed in multi-stage decisions like the second problem.

In the second problem, since individuals have no choice on options in the first stage, individuals tend to discard the first stage (75% chance of winning nothing), and only consider the second, where there's a choice.

Publication Bias

Out of a hundred scientific studies where 95% of them had a negative outcome (no correlation found) and 5% had a positive outcome (correlation found), which do you think is more likely to get into print?

The publication bias is, simply, that positive results are more likely to get published than negative ones. This is also known as the file drawer problem: many studies in a given area of research are conducted but never reported, and those that are not reported may on average report different results from those that are reported. Even a small number of studies lost "in the file drawer" can result in a significant bias.

The effect is compounded with meta-analyses and systematic reviews, which often form the basis for evidence-based medicine, and is further complicated when some of the research is sponsored by people and companies with a financial interest in positive results.

According to researcher John Ioannidis, negative papers are most likely to be suppressed:

- when the studies conducted in a field are smaller
- when effect sizes are smaller
- when there is a greater number and lesser preselection of tested relationships
- where there is greater flexibility in designs, definitions, outcomes, and analytical modes
- when there is greater financial and other interest and prejudice
- when more teams are involved in a scientific field in chase of statistical significance.

Ioannidis observes that "claimed research findings may often be simply accurate measures of the prevailing bias." In an effort to decrease this problem some prominent medical journals, starting in 2004, began requiring registration of a trial before it commences so that unfavorable results are not withheld from publication.

R

Reactance

Reactance is the bias to do the opposite of whatever you're being pushed to do. It's the impulse to disobey, to resist any threat to your perceived sense of autonomy. Reactance is what happens when you feel your freedom is threatened.

What turns it into a bias is when the reactance leads you to act in ways contrary to your own self-interest. Get pushed hard enough to get a good job and make some money, and you may ruin a big interview just to show you won't be pushed around.

There are four stages to reactance:

- **Perceived freedom.** Something we have the physical capability to do, or refrain from doing. This can be anything imaginable.
- **Threat to freedom.** A force that is attempting to limit your freedom. This doesn't have to be a person or group, again, it can be anything. People react against the laws of physics all the time.
- **Reactance.** An emotional pressure to resist the threat and retain the freedom.
- **Restoration of freedom.** This can be either direct (you win), or indirect (you lose, but you continue resistance or shift the area of battle).

There are some rules to this. A pretty obvious one is that the magnitude of the reactance grows depending on the importance of the freedom in question. The magnitude of the reactance also grows when a wider swath of freedoms are threatened, even if individually they're less important. And the magnitude of the reactance depends not only on the freedoms being threatened today, but on the implied threat to future freedom loss.

Lowering the degree of reactance is the degree to which you feel the infringement of your freedom is justified and legitimate. Less confrontational approaches lower reactance in other people.

Reminiscence Bump

Another cognitive bias is the unequal distribution of memories over a lifespan. We begin with infantile amnesia, the tendency not to remember much before the age of four. We remember something of our childhoods, but we recall more personal events from adolescence and early adulthood than anything before or after, except for whatever happened most recently.

Besides personal events, the reminiscence bump affects the temporal distribution of public events (where were you when JFK was shot/the Challenger exploded/the Towers fell?), favorite songs, books and movies. It's why, after all these years, I still can't forget the lyrics to Herman's Hermits "Henry VIII."

Restraint Bias

"Lead us not into temptation," says the Lord's Prayer. The restraint bias is the extent to which we tend to overestimate our ability to show restraint in the face of temptation, and as the Lord's Prayer suggests, we aren't nearly as good at it as we think we are.

In a recent study at Northwestern's Kellogg School of Management, researchers studied the effects hunger, drug and tobacco cravings, and sexual arousal had on the self-control

process, first by surveying people on their self-assessed capacity to resist temptation, then by actual temptation, and the results showed a substantial overestimation on the part of most people.

This is one of the ways people inadvertently sabotage efforts to change behavior, by overexposing themselves to temptation. Recovering tobacco smokers with more inflated degrees of restraint bias were far more likely to expose themselves to situation in which they would be tempted to smoke, with predictably higher rates of relapse in a four-month period.

Rosy Retrospection

Three groups going on different vacations were interviewed before, during, and after their trips. The typical emotional pattern was initial anticipation, followed by mild disappointment during the trip — and ending up with a much more favorable set of memories some time later!

The cognitive bias of rosy retrospection leads us to compare the present unfavorably when compared to the past, but the difference is that minor annoyances and dislikes, prominent in immediate memory, tend to fade over time.

Once again, Daniel Kahneman and Amos Tversky, our gurus of bias, come to the rescue with a technique called reference class forecasting. This corrects for rosy retrospection and other memory biases. Human judgment, they argue, is generally optimistic for two reasons: overconfidence and insufficient consideration of the range of actual likely outcomes. Unless you consider the issue of risk and uncertainty, you have no good basis to build on.

Reference class forecasting for a specific project involves the following three steps:

1. Identify a reference class of past, similar projects.
2. Establish a probability distribution for the selected reference class for the parameter that is being forecast.
3. Compare the specific project with the reference class distribution, in order to establish the most likely outcome for the specific project.

The technique has been successful enough that it's been endorsed by the American Planning Association (APA) and the Association for the Advancement of Cost Engineering (AACE).

S

Selection Bias

There's a growing argument that telephone polls, once the gold standard of scientific opinion surveys, are becoming less reliable. More and more people are refusing to participate, meaning that the actual sample becomes to some extent self-selected: a random sample of people who like to take polls. People who don't like to take polls are underrepresented in the results, and there's no guarantee that class feels the same as the class answering.

Selection bias can happen in any scientific study requiring a statistical sample that is representative of some larger population: if the selection is flawed, and if other statistical analysis does not correct for the skew, the conclusions are not reliable.
There are several types of selection bias:

- **Sampling bias.** Systemic error resulting from a non-random population sample. Examples include self-selection, pre-screening, and discounting test subjects that don't finish.
- **Time interval bias.** Error resulting from a flawed selection of the time interval. Examples include starting on an unusually low year and ending on an unusually high one, terminating a trial early when its results support your desired conclusion or favoring larger or shorter intervals in measuring change.
- **Exposure bias.** Error resulting from amplifying trends. When one disease predisposes someone for a second disease, the treatment for the first disease can appear correlated with the appearance of the second disease. An effective but not perfect treatment given to people at high risk of getting a particular disease could potentially result in the appearance of the treatment causing the disease, since the high-risk population would naturally include a higher number of people who got the treatment and the disease.
- **Data bias.** Rejection of "bad" data on arbitrary grounds, ignoring or discounting outliers, partitioning data with knowledge of the partitions, then analyzing them with tests designed for blindly chosen ones.

- **Studies bias.** Earlier, we looked at publication bias, the tendency to publish studies with positive results and ignore ones with negative results. If you put together a meta-analysis without correcting for publication bias, you've got a studies bias. Or you can perform repeated experiments and report only the favorable results, classifying the others as calibration tests or preliminary studies.
- **Attrition bias.** A selection bias resulting from people dropping out of a study over time. If you study the effectiveness of a weight loss program only by measuring outcomes for people who complete the whole program, it'll often look very effective indeed — but it ignores the potentially vast number of people who tried and gave up.

In general, you can't overcome a selection biases with statistical analysis of existing data alone. Informal workarounds examine correlations between background variables and a treatment indicator, but what's missing is the correlation between unobserved determinants of the outcome and unobserved determinants of selection into the sample that create the bias. What you don't see doesn't have to be identical to what you do see.

Selective Perception

Expectations affect perception.

We know people are suggestible: several studies have shown that students who were told they were consuming alcohol when they weren't still got drunk enough their driving was affected.
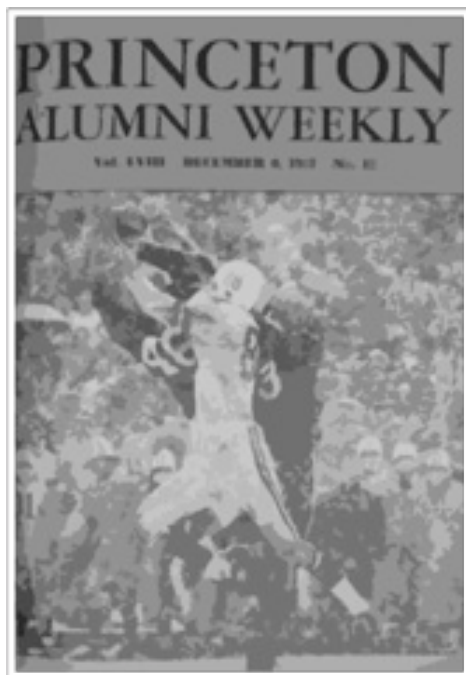
In one classic study, viewers watched a filmstrip of a particularly violent Princeton-Dartmouth football game. Princeton viewers reported seeing nearly twice as many rule infractions committed by the Dartmouth team than did Dartmouth viewers. One Dartmouth alumnus did not see any infractions committed by the Dartmouth side and sent a message that he'd only seen part of the film and wanted the rest.

Selective perception is also an issue for advertisers, as consumers may engage with some ads and not others based on their pre-existing beliefs about the brand. Seymour Smith, a prominent advertising researcher in the early 1960s, found that people who like, buy, or are considering buying a brand are more likely to notice advertising about it than are those who are neutral toward the brand. It's hard to measure the

quality of the advertising if the only people who notice it are already predisposed to like the brand.

Self-Fulfilling Prophecy

A self-fulfilling prophecy is a prediction that directly or indirectly causes itself to become true, by the very terms of the prophecy itself, due to positive feedback between belief and behavior. The term was coined by sociologist Robert K. Merton, who formalized its structure and consequences in his 1949 book Social Theory and Social Structure.

A self-fulfilling prophecy is initially false: it becomes true by evoking the behavior that makes it come true. The actual course of events is offered as proof that the prophecy was originally true.

Self-fulfilling prophecies have been used in education as a type of placebo effect.

The effects of teacher attitudes, beliefs and values, affecting their expectations have been tested repeatedly. A famous example includes a study where teachers were told arbitrarily that random students were "going to blossom". The prophecy indeed self-fulfilled: those random students actually ended the year with significantly greater improvements.

Self-Serving Bias

A self-serving bias occurs when people attribute their successes to internal or personal factors but attribute their failures to situational factors beyond their control: to take credit for success but to shift the blame for failure. It also occurs when we are presented with ambiguous information and evaluate it in the way that best suits our own interest.

Several reasons have been proposed to explain the occurrence of self-serving bias: maintaining self-esteem, making a good impression, or sometimes that we're aware of factors outsiders might miss.

The bias has been demonstrated in many areas. For example, victims of serious occupational accidents tend to attribute their accidents to external factors, whereas their coworkers and management tend to attribute the accidents to the victims' own actions.

When the self-serving bias causes people to see Rashomon reality, the ability to negotiate can be dramatically impaired. One of the parties may see the other side as bluffing or completely unwilling to be reasonable, based on the self-serving interpretation of the ambiguous evidence. This has significant real-life impact.

In one experiment, subjects played the role of either the plaintiff or defendant in a hypothetical car accident case with a maximum potential damages payment of $100,000. The experiment used real money at the rate of $1 real = $10,000 experiment.

They then tried to settle in a fixed amount of time, and if they failed, the settlement amount would be charged a hefty legal bill. On average, plaintiffs thought the likely award would be $14,500 higher than the defendants. The further away the perceived "fair" figures were from each other strongly correlated with whether they could reach an agreement in time.

The self-serving bias, interestingly, seems not to exist in our struggles with personal computers. When we can't get them to work, we blame ourselves rather than the technology. The reason is that people are so used to bad functionality, counterintuitive features, bugs, and sudden crashes of most contemporary software applications that they tend not to complain about them. Instead, they believe it is their personal responsibility to predict possible issues and to find solutions to computer problems. This unique phenomenon has been recently observed in several human-computer interaction investigations.

Semmelweis Reflex

Dr. Ignatz Semmelweis, assistant to the head of obstetrics at the Vienna General Hospital in the 1840s, discovered that his clinic, where doctors were trained, had a maternal mortality rate from puerperal fever (childbed fever) that averaged 10 percent. A second clinic, which trained midwives, had a mortality rate of only four percent.

This was well known outside the hospital. Semmelweis described women begging on their knees to go to the midwives clinic rather than risk the care of doctors. This, Semmelweis said, "made me so miserable that life seemed worthless." Semmelweis started a systematic analysis to find out the cause, ruling out overcrowding, climate, and other factors before the death of an old friend from a condition similar to puerperal fever after being accidentally cut with a student's scalpel during an autopsy.

Semmelweis imagined that some sort of "cadaverous particles" might be responsible, germs being at that time unknown. Midwives, after all, didn't perform autopsies. Accordingly, Semmelweis required doctors to wash their hands in a mild bleach solution after performing autopsies. Following the change in procedures, death rates in the doctors clinic dropped almost immediately to the levels of the midwives clinic.

This theory contradicted medical belief of the time, and Semmelweis eventually was disgraced, lost his job, began accusing his fellow physicians of murder, and eventually died in a mental institution, possibly after being beaten by a guard.

Hence the Semmelweis effect: normally described as a reflex-like rejection of new knowledge because it contradicts entrenched norms, beliefs or paradigms: the "automatic rejection of the obvious, without thought, inspection, or experiment."

Some credit Robert Anton Wilson for the phrase. Timothy Leary defined it as, "Mob behavior found among primates and larval hominids on undeveloped planets, in which a discovery of important scientific fact is punished."

I don't agree. I think there's something else going on here.

The Semmelweis effect, I think, relates more to the implied threat and criticism the new knowledge has for old behavior. Let's go back to Semmelweis' original discovery. If his hypothesis about hand washing is correct, it means that physicians have contributed to the deaths of thousands of patients. Who wants to think of himself or herself as a killer, however inadvertent?

The Semmelweis reflex is, I think, better stated as the human tendency to reject or challenge scientific or other factual information that portrays us in a negative light. In that sense, it's related to the phenomenon of reactance, discussed earlier.

In this case, Semmelweis's own reaction to discovering the mortality rate of his clinic might have been a tip-off. He was "so miserable that life seemed worthless." In his own case, this drove him to perform research, but these other doctors can only accept or deny the results. It's not unreasonable to expect a certain amount of hostile response, and calling people "murderers," as Semmelweis did, is hardly likely to win friends and influence people.

You don't have to look far to find contemporary illustrations, from tobacco executives aghast someone dared accuse them of marketing a harmfulproduct to the notorious Ford

Motor Company indifference to safety in designing the Ford Pinto. The people involved weren't trying to be unethical or immoral; they were in the grips of denial triggered by the Semmelweis reflex. This denial was strong enough to make them ignore or trivialize evidence that in retrospect appears conclusive. You can also see evidence of a Semmelweis effect in the reaction of Sarah Palin, et al., to suggestions that their conduct and rhetoric contributed to the Tucson murders and other acts of violence.

As a former marketing director of TSR, a company accused of contributing to teenage suicides with its game *Dungeons & Dragons*, I understand the power. TSR, admirably, spent a substantial amount of money actually investigating the possibility, and showed itself ready to make adjustments as necessary. These turned out to be minor, because the connection didn't prove out, but at least there was no reflexive and thoughtless denial that there could be any possible merit in the charge.

Dr. Ignatz Semmelweis

When you're accused of fault, watch for the Semmelweis reflex in yourself. The natural first impulse is to deny or deflect, but the right practice is to examine and explore. Depending on what you find, you can select a more reasoned strategy.

Serial Position Effect

In memory, the accuracy of your ability to recall an item in a list depends on where in the list the item is located. That's known as the serial position effect.

There are two sub-biases in the serial position effect. When asked to recall a list of items in any order (free recall), people tend to begin recall with the end of the list, recalling those items best (the **recency effect**). Among earlier list items, the first few items are recalled more frequently than the middle items (the **primacy effect**).

One suggested reason for the primacy effect is that the initial items presented are most effectively stored in long-term memory because of the greater amount of processing

devoted to them. (The first list item can be rehearsed by itself; the second must be rehearsed along with the first, the third along with the first and second, and so on.) One suggested reason for the recency effect is that these items are still present in working memory when recall is solicited. Items that benefit from neither (the middle items) are recalled most poorly.

There is experimental support for these explanations. For example:

- The primacy effect (but not the recency effect) is reduced when items are presented quickly and is enhanced when presented slowly (factors that reduce and enhance processing of each item and thus permanent storage).
- The recency effect (but not the primacy effect) is reduced when an interfering task is given; for example, subjects may be asked to compute a math problem in their heads prior to recalling list items; this task requires working memory and interferes with any list items being attended to.
- Amnesiacs with poor ability to form permanent long-term memories do not show a primacy effect, but do show a recency effect.

Status Quo Bias

Sigmund Freud suggested that there were only two reasons people changed: pain and pressure. Evidence for the status quo bias, a preference not to change established behavior (even if negative) unless the incentive to change is overwhelming, comes from many fields, including political science and economics.

Another way to look at the status quo bias is inertia: the tendency of objects at rest to remain at rest until acted upon by an outside force. The corollary, that objects once in motion tend to stay in motion until acted upon by an outside force, gives hope for change. Unfortunately, one of those outside forces is friction, which is as easy to see in human affairs as it is in the rest of the material universe.

Daniel Kahneman (this time without Amos Tversky) has created experiments that can produce status quo bias effects reliably. It seems to be a combination of loss aversion and the endowment effect, both described elsewhere.

The status quo bias should be distinguished from a rational preference for the status quo in any particular incident. Change is not in itself always good.

Stereotyping

A stereotype, strictly speaking, is a commonly held popular belief about a specific social group or type of individual. It's not identical to prejudice:

- Prejudices are abstract-general preconceptions or abstract-general attitudes towards any type of situation, object, or person.
- Stereotypes are generalizations of existing characteristics that reduce complexity.

A Stereotype

The word stereotype originally comes from printing: a duplicate impression of an original typographic element used for printing instead of the original. (A cliché, interestingly, is the technical term for the printing surface of a stereotype.) It was journalist Walter Lippmann who first used the word in its modern interpersonal sense. A stereotype is a "picture in our heads," he wrote, "whether right or wrong.

Mental categorizing and labeling is both necessary and inescapable. Automatic stereotyping is natural; the necessary (but often omitted) follow-up is to make a conscious check to adjust the impression.

A number of theories have been derived from sociological studies of stereotyping and prejudicial thinking. In early studies it was believed that stereotypes were only used by rigid, repressed, and authoritarian people, but it turns out that it's really all of us.

One theory as to why people stereotype is that it is too difficult to take in all of the complexities of other people as individuals. Even though stereotyping is inexact, it is an efficient way to mentally organize large blocks of information.

Categorization is an essential human capability because it enables us to simplify, predict, and organize our world. Once one has sorted and organized everyone into tidy categories, there is a human tendency to avoid processing new or unexpected information about each individual. Assigning general group characteristics to members of that group saves time and satisfies the need to predict the social world in a general sense.

Another theory is that people stereotype because of the need to feel good about oneself. Stereotypes protect one from anxiety and enhance self-esteem. By designating one's own group as the standard or normal group and assigning others to groups considered inferior or abnormal, it provides one with a sense of worth, and in that sense, stereotyping is related to the ingroup bias.

Subadditivity Effect

The subadditivity effect is the tendency to judge probability of the whole to be less than the probabilities of the parts.

For instance, subjects in one experiment gave the following estimates:

- probability of death from cancer 18%
- probability of death from heart attack 22%
- probability of death from "other natural causes" 33%

...totalling 73%.

A control group estimated probability of death from natural causes as 58%. Of course, natural causes are made up of cancer, heart attack, and "other."

The effect (Tversky and Koehler, 1994) is consistent. We think the likelihood is higher when we add up individual probabilities than we think when we estimate the probability of the whole set.

This doesn't imply that one set of estimates is better or worse, only that they are different. When you make estimates, compare the results you get with different techniques, and choose rationally.

Subjective Validation

Subjective validation, also known as the personal validation effect, is the tendency to consider a statement correct if it's meaningful to the listener. It's related to the Forer effect and validated by confirmation bias, and it's the basic technique that reinforces belief in paranormal phenomena. The listener focuses on and remembers the accurate statements and forgets or ignores the inaccurate ones, forming an impression of the psychic's success that is wildly inflated.

Say anything, and it's possible to find meaning in it. "I sense a father figure trying to contact you from the spirit world," becomes validated if there's anyone in the subject's life that can be made to qualify. "I hear the phrase 'broken wheel,'" the psychic says, and of all the thousands of possible associations, the subject finds one with personal meaning, and the psychic is validated.

What if the phrase 'broken wheel' evokes no associations? Then the psychic says, "I hear the name 'Charles,'" and so forth until there's a

winner. Selective memory comes into play as well, so the subject doesn't remember the 'broken wheel' figure, but remembers the 'Charles' association vividly.

The strength of the effect depends less on the skill of the psychic, of course, and much more on the level of desire of the subject. If we want to believe, we'll find the evidence we need.

Suggestibility

You are suggestible to the extent you are inclined to accept or act on the suggestions of others. Some people are naturally more suggestible than others, of course, but suggestibility in individuals is varied. Intense emotions, current level of self-esteem or assertiveness, and age play a role.

The nature of suggestibility plays a big role in hypnosis. There are three different types of suggestibility, according to Dr. John Kappas.

- **Emotional Suggestibility.** A suggestible behavior characterized by a high degree of responsiveness to inferred suggestions that affect emotions and restrict physical body responses; usually associated with hypnoidal depth. Thus the emotional suggestible learns more by inference than by direct, literal suggestions.
- **Physical Suggestibility.** A suggestible behavior characterized by a high degree of responsiveness to literal suggestions affecting the body, and restriction of emotional responses; usually associated with cataleptic stages or deeper.
- **Intellectual Suggestibility.** The type of hypnotic suggestibility in which a subject fears being controlled by the operator and is constantly trying to analyze, reject or rationalize everything the operator says. With this type of subject the operator must give logical explanations for every suggestion and must allow the subject to feel that he is doing the hypnotizing himself.

With all of that, there's surprisingly little consensus on what suggestibility is and how it works. Is it a function of character, a learned habit, a function of language acquisition and empathy, a biased term used to provoke people to greater resistance, or something else?

Common examples of suggestible behavior in everyday life include "contagious yawning" (multiple people begin to yawn after observing a person yawning) and the medical student syndrome (a person begins to experience symptoms of an illness after reading or hearing about it).

Placebo response may also be based on individual differences in suggestibility, at least in part. Suggestible persons may be more responsive to various forms of alternative health practices that seem to rely upon patient belief in the intervention. People who are highly

suggestible may be prone to making poor judgments because they did not process suggestions critically and falling prey to emotion-based advertising.

System Justification Theory

System justification theory (SJT) is a scientific theory within social psychology that proposes people have a motivation to defend and bolster the status quo, that is, to see it as good, legitimate, and desirable.

According to system justification theory, people not only want to hold favorable attitudes about themselves (ego-justification) and their own groups (group-justification), but they also want to hold favorable attitudes about the overarching social order (system-justification). A consequence of this tendency is that existing social, economic, and political arrangements tend to be preferred, and alternatives to the status quo are disparaged.

Early SJT research focused on compensatory stereotypes. Experiments suggested that the widespread endorsement of stereotypes such as "poor but happy" or "rich but miserable" exist to balance out the gap between those of low and high socioeconomic status.,Later work suggested that these compensatory stereotypes are preferred by those on the left while people on the right prefer non-complimentary stereotypes such as "poor and dishonest" or "rich and honest", which rationalize inequality rather than compensate for it.

According to system justification theory, this motive is not unique to members of dominant groups, who benefit the most from the current regime; it also affects the thoughts and behaviors of members of groups who are seemingly incurring disadvantages by it (e.g., poor people, racial/ethnic minorities). System justification theory therefore accounts for counter-intuitive evidence that members of disadvantaged groups often support the societal status quo (at least to some degree), often at considerable cost to themselves and to fellow group members.

System justification theory differs from the status quo bias in that it is predominately motivational rather than cognitive. Generally, the status quo bias refers to a tendency to prefer the default or established option when making choices. In contrast, system justification posits that people need and want to see prevailing social systems as fair and just. The motivational component of system justification means that its effects are exacerbated when people are under psychological threat or when they feel their outcomes are especially dependent on the system that is being justified.

Which, in a nutshell, explains the 2010 elections.

T

Telescoping Effect

The telescoping effect is a memory bias, first documented in a 1964 article in the Journal of the American Statistical Association. People tend to perceive recent events as being more remote in time than they are (backward telescoping) and more remote events as being more recent than they are. The Galton-Crovitz test measures the effect; you can take the test here: http://memory.uva.nl/testpanel/gc/en/.

Texas Sharpshooter Fallacy

A sales manager I once knew had an infallible sense of what was going to sell. Because he didn't want to waste his time, he put all his emphasis on selling what he knew would sell, and didn't bother pushing the stuff that wouldn't sell anyway.

This is an example of the Texas sharpshooter fallacy. The Texas sharpshooter, you see, fired a bunch of shots at the side of the barn, went over and found a cluster of hits, and drew a bullseye over them. When you don't establish your hypothesis first and test it second, your conclusion is suspect.

This was first described in the field of epidemiology. For example, the number of cases of disease D in city C is greater than would be expected by chance. City C has a factory that has released amounts of chemical agent A into the environment. Therefore, agent A causes disease D.

Not so fast.

The cluster may be the result of chance, or there may be another cause. Now, if you conclude that agent A should be <u>tested</u> as a possible trigger of disease D, that's a reasonable inference.

Finding a Nostradamus prophecy that could arguably relate to a big event in history is another example. Here's a famous prophecy that appears to predict Hitler:

"Beasts wild with hunger will cross the rivers,
The greater part of the battle will be against Hister.
He will cause great men to be dragged in a cage of iron,
When the son of Germany obeys no law."

"Hister/Hitler" is a coincidence, absolutely. But what are the odds that no one from Germany involved in a military conflict would have a similar name, or that out of a thousand or more prophecies, at least one of them will appear a little uncanny?

Nostradamus

Trait Ascription Bias

Trait ascription bias is the tendency for people to view themselves as relatively variable in terms of personality, behavior and mood while viewing others as much more predictable in their personal traits across different situations. This may be because our own internal states are much more observable and available to us than those of others. A similar bias on the group level is the outgroup homogeneity bias.

The degree to which we fall into this bias often depends on how well we know the other person, but not entirely. "You always behave like that" is an accusation most of us have leveled at a loved one at some time in our lives.

U-Z

Ultimate Attribution Error

A phrase I used to hear from time to time in my Alabama days was, "He's a credit to his race." It was never used to refer to a white person, of course, but only to blacks. On the surface, it appears to be a compliment, but it's an example of the ultimate attribution error.

In the ultimate attribution error, people view negative behaviors on the part of members of an outgroup as a normal trait, and positive behavior as exceptions to the norm. It relates to the fundamental attribution error, in which we explain our own behavior as reactions to situations and other peoples' behavior as a matter of basic character, and clearly relates to stereotyping. Ultimate attribution error is one of the basic mechanisms of prejudice.

Valence Effect

In psychology, valence refers to the positive or negative emotional charge of a given event or circumstance. The valence effect is a probability bias in which people overestimate the likelihood of something good rather than something bad: it's the basic mechanism that stimulates the sale of lottery tickets.

There are numerous studies that demonstrate the valence effect. In one study, people assigned a higher probability of picking a card with a smiling face than one with a frowning face in a random deck.

The valence effect can be considered as wishful thinking, but it's been shown in some case that belief in a positive outcome can increase the odds of achieving it — you may work harder or refuse to give up as early.

Von Restorff Effect

First identified by Dr. Hedwig von Restorff in 1933, this bias (also called the isolation effect) predicts that an item that "stands out like a sore thumb" (called distinctive encoding) is more likely to be remembered than other items. For instance, if a person

examines a shopping list with one item highlighted in bright green, he or she will be more likely to remember the highlighted item than any of the others.

Wishful Thinking

This popular cognitive bias involves forming beliefs and making decisions based on your imagination rather than evidence, rationality, or reality. All else being equal, the valence effect holds: people predict positive outcomes are more likely than negative ones.

There is also reverse wishful thinking, in which someone assumes that because it's bad it's more likely to happen: Murphy's Law as cognitive bias.

Wishful thinking isn't just a cognitive bias, but a logical fallacy: I wish that P would be true/false; therefore, P is true/false. It's related to two other fallacies that are reciprocals of one another: negative proof and argument from ignorance.

In negative proof, the absence of certainty on one end of the argument is taken as proof of the opposite end: climate scientists cannot say with 100% certainty that their claims about global warming are true, therefore, they must be false. The reciprocal fallacy is known as the argument from ignorance: no one can be sure that there is no God; therefore, there is a God.

Zero-Risk Bias

Since 2000, terrorists attacks against the United States or Americans abroad have killed about 3,250 people, the vast majority of them on 9/11. Your odds of being a victim are about one in ten million.

The Transportation Security Administration consumes $5.6 billion a year. Its job is to reduce the chance of terrorist attacks on transportation infrastructure, primarily air, to zero. Let's assume that they are completely effective in their mission. If so, the cost per life saved is $1.7 million.

Perhaps that's a completely reasonable price to pay to save a human life. However, from a logical point of view, you have to consider what else $5.6 billion might accomplish. Over a ten-year period, about 420,000 people die in car accidents. If $5.6 billion would eliminate 100% of the risk of aviation terrorist deaths, or 10% of the risk of car accident deaths, which risk would you chose to attack?

Common sense argues for a 10% reduction in car accidents, but the zero-risk bias argues the opposite: it's the preference for completely eliminating a risk (even if small) to reducing a larger risk. It values certainty over residual risk.

There are other arguments that can be made in support of anti-terrorist activities, but the zero-risk bias is also operational here, and it leads to faulty decisions.

the end of cognitive biases

"These are the only ones of which the news has come to Harvard.
There may be many others, but they haven't been dis-car-vard."

(Tom Lehrer, "The Elements")

Random Jottings
on Random Jottings

The Letter Column

My responses thusly.

Random Jottings 2

The Name Dropping Issue

Tim Marion

Thanks so much for sending me Random Jottings 2, a mere 32 years after the first issue. I actually have a memory of writing you and asking you for a copy of the first issue, but I suppose you didn't have any at that time.

It seems obvious that there is some sort of time-binding or nostalgia occurring in our circle of friends and fannish acquaintances. Steve Stiles finally got around to writing the TAFF report he was supposed to write in the late 60s, I finally got around to doing another issue of So It Goes after a mere 27 years (ah, you outdid me, Michael!), and now yours after 32 years.

I enjoyed your article about name-dropping, and you're right --- it is an art. And I have seldom seen it practiced well. Two very brief anecdotes --- a house guest, a fan, in the mid-80s, seemed to have an

annoying habit of starting a conversation with, "Oh and Harlan over there was going —" when Harlan hadn't even been previously established as a topic of conversation — slightly disconcerting and annoying. Oh, and how 'bout the time that I saw Jonathan Frid perform readings in my local library? When he was finished, I should have told him, thank you so much, sir, for all the entertainment you gave me as a small child (Dark Shadows here), but I was shy and embarrassed and thought that what I might say would merely make him feel old. I left without saying anything to him. Or at least, I tried to. Instead my way out was blocked by someone who was practicing the art of name-dropping and had obviously never gotten it right. He saw I was wearing a "Warner Brothers" sweatshirt (with Bugs, Sylvester, Tweetie, et al. on it), and started dropping names of the executives he knew at Warner Bros. Of course I had no idea who he was talking about nor why he had singled me out, unless he thought I was good-looking, which would have been even more of an annoyance. All I could do was just politely say, "Yes, OK," and "Uh huh," until he got out of my way and I could leave.

But as interesting as your article was, I can't help but feel that you jumped the shark occasionally, and particularly in regards to your mention of F.W. Dixon... Whom you then never mention again. Surely, this reader thought, Michael is going to regale us with an anecdote or two about the employee who was contractually bound not to reveal that he was F.W. Dixon...who, if I am thinking of

the same person you are, was actually the pen name he used to write The Hardy Boys novels. In recent memory I did a one-shot for FAPA about my Hardy Boys reading experiences and how chagrined I was to learn in recent years that those fun, dangerous, pulpy kids' novels had been rewritten and re-edited into safe, boring pablum some time during my youth. Gone forever now are the original stories, which were actually sometimes downright scary to a young reader, unless you manage to find the old, out-of-print books.

Enjoyed reading in more detail your account of meeting Gahan Wilson. You probably don't remember this, but I visited Charlotte the very next weekend, and hung out with you and Edsmith. This was a very fond memory in amidst the stultifying boredom of seeing relatives again. Thanks for driving over to my uncle's house, Michael! As I recall, you and Ed actually invited me to go bookstore hopping with you. Since my parents said no, I missed out on a chance to hang out with you guys and to get to know you better --- you guys probably would have cheerfully introduced me to my first funny smoking adventure. But of course, had you done that, my father would have smelled it (he has a nose that a dog would envy) and I would have been very forcibly (and probably brutally, knowing him) fafiated...which isn't funny, when you think about it.
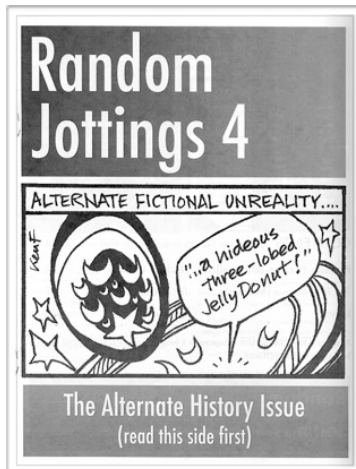
On a personal note, yes, I inherited my father's dog-nose and my mother's cat-ears... It's just too bad I didn't inherit

someone's eagle-eyes. Instead, I have these bulbous, swollen orbs which betray me a tiny bit more each year. Thank you so much, Michael, for printing your zine in such nice, large type!

Random Jottings 4

The Alternate History Issues

Lloyd Penney

Many thanks for Random Jottings 4 and 2, and I will respond to them in that order, as you wish. I didn't go the Ace Double route, but at least you coded them as 4a and 4b, and I'll save them as .pdfs.

4...Three-lobed jelly donuts are hideous? Can't be eating them right. Those are my favorite. Wish I could have been at Corflu Zed, but at least I got something good for my trouble. I have won the FAAn Award for Best Letterhack five times now, and never have I been at any of those Corflus.

I can think of a few realities I'd like to edit. Of course this fanzine doesn't exist. It only appears to me on a computer screen. If it were real, I'd be getting eyetracks all over a paper fanzine. So many realities hinge on the fannish RSN, for varying values of 'soon'. My own fanzine is coming out soon, and trust me that will probably be a mighty distant 'soon'.

The year 1973 was a little before my time fanwise, and as I was learning the fannish ropes around here, I found out more about the 1973 Worldcon in Toronto. I did not especially enjoy Torcon 3, so I had wondered more lately about Torcon 2, and if there are any reports about that convention, they are probably tucked away in private collections, probably never to see the light of day. Hope I'm wrong, though. If there variant timelines available to me, I think I'd be lying in a comfortable field right now, doing... nothing much. The eschaton could come

and go, and I wouldn't much care. Ah, we weren't careful about what we asked for...

(Great to see Ken Fletcher's good artwork gracing the zine. I haven't seen Ken since an early Ad Astra.)

Loc on issue 3...I haven't seen Ed Greenwood in a while now, but I gather he might show up to Ad Astra this year, so if he does, I'll say hello, and look for his reaction.

2...now to see what I can make of this alternate timeline zine. Will I recognize anyone? Anything at all? How many of the contributors are still around to get their copy?

Now that the draft is gone, and the conflict du jour is Afghanistan, we still get a few dodgers up here, but while the public has sympathy for them, our current government does not. I hope you never have to deal with the draft again. Being a conscientious objector these days will get you arrested by Canadian forces, and handed back at the border.

I suspect that many of those long-haired hippie freaks whish they had some of that hair right now instead of that spreading bald spot they probably have now. And, today's neofan probably has never heard of a fanzine, has no interest in fanzines whatsoever, and will tell you that you are wasting his time because an episode of Battlestar Galactica is on. Makes me sound cranky? Just being realistic in this modern world.

I have a lot of names on my shelves, but one I don't have much of is Keith Laumer. Being out of print like that keep such an author as Laumer out of the current public eye.

Ah, there's Mr. Glicksohn. Michael is retired and finally healthy, and enjoying his retirement. Haven't seen him since one of our regular fan pubnights in February. Unfortunately, Mike won't abide any electronic fanzine; the only real fanzines appear on paper. A shame about that, especially when he's got something in the locol.

Spiror is a prophet! Steve Stiles is still waiting for that Fan Artist Hugo. Let's put the man out of his misery and vote him one.

The middle of the night beckons, as does a warm bed. I hope this letter satisfies someone (not me, but I grabbed at all the comment hooks I could find). Off it goes into the mists of Webland, and into your fully furnished IN box. Many thanks, and I hope you'll provide more.

Ned Brooks

Thanks for the hardcopy of the lunacy. I thought you had sent it twice, but then I remembered that I had filed a bad attempt at printing it from the PDF. Nice art from the archives! The alternate universe #2 however cannot be a facsimile from a 1973 issue - you would not have had access to any way to cut those fonts into mimeo stencils. They are cyber fonts and could only have been cut into stencil with

a dot-matrix printer - and not that sharply. Of course a 1973 zine could have been typeset and then electrostencilled - but the fonts are not quite the same. What did ever happen to Good-Time Eddie Ferrell?

I always find fan humor (or any humor for that matter) hard to comment on. I suppose you could have recreated a 1973-style zine mimeoed onto twiltone - but it's getting harder. I still have the RexRotary M4s and stencils and ink - but lack the patience to type stencils, even with an electric typewriter, if any of the ones I have worked well enough. And I never had an electrostenciller. I used to used thermal mimeo stencils, but when I tried that recently it no longer worked as it had - those special stencils may have passed their shelf-life. I recently heard from Jeff Schalles, who still has a working stencil burner. But the old technology is crumbling.... Some people making a movie about Allan Ginsberg (to be called "Howl", for 2010 release) wanted amateur 1950s printing. After some discussion, the set guy decided that what they were after was ditto rather than mimeo, so I got out some typewriters that would have been available in the 50s and typed a ditto master. When I tried to run it, I found that the rubber seal in the fluid tank had crumbled. I made one from a plumbing washer - and discovered that the paper-feed rubber was dead. I revived the rubber feed wheels by wiping them with Lysol. But although the fluid was fresh and the copy paper wetted properly - the copies were barely legible. Apparently ditto carbons also have a finite shelf life....

The movie people (who had wanted to buy or rent the spirit duplicator) decided to CGI what they needed.

Tim Marion

Michael, just received Random Jottings 4 and I'm wondering why I wasn't even Wahfed --- especially after I wrote you such a nice two-page letter and included that Hardy Boys fanzine. How in the hell am I ever going to eclipse Lloyd Penney's's role as fandom's premiere letterhack if people won't print my letters?! In your case, you didn't even *mention* it. Fie on you, sir.

I'm glad you printed your old letters, but you should have included the *dates* of the letters rather than old, probably useless addresses.

The *real* mystery to me (aside from why my letter isn't mentioned) is why the art on page 50 is credited to "unknown" when it's obviously old art by Jim McLeod. Remember him? He actually wants to make a comeback. Doesn't seem like he's going to make it if people can't remember his name...

Thanks to you and others for reminding me about Jim McLeod; I sent him a copy, but no response. Sorry about your earlier letter. As you can see, it's here now...better laid than Neffer!

Jim Young

The copies of the fanzine have arrived, and I confess to being mightily impressed by the Ace-Doubleness of it all.

Fortunately you didn't have to contend with the ever-cantankerous A. A. Wyn, the long-time publisher of Ace, who has long since passed from this plane of existence.

Let me say that Ken's illos also look excellent. Somehow the dread inspired by the three-lobed jelly doughnut is even greater today than it was in those Halcyon years surrounding 1973.... Who ever worried about cholesterol at such an age? Now we know the great god Cholesterol is attended by numerous sprites and demons, all of which have various lipids as their familiars.

With a bit of luck, others will find this as much fun as it was to write.

Jerry Kaufman

Thanks again for the Random Jottings - both sides. I was truly stonkered to see the letter from my younger self. I think it would have been written in 1971, my final winter and spring in college. Guessing from the content, I'd say that I was struggling to find something interesting to contribute, so thanks for your kindness in printing any of it.

You were probably just as stonkered to find out that Sandra Miesel still lives at the same address. In some ways, Sandra is more conventional than most of us.

Unlike her, I've probably lived at a dozen or more different addresses after leaving school. (In other ways, Sandra is much less conventional than us, what with her hobbies of collecting art and translating television theme songs into Latin - though with many fewer shows having original theme songs these days, she may no longer do so.)

Your mystery artist with the initials "JM" is Jim McLeod. Or was. I have no idea if he's still alive. We published a lot of his work in The Spanish Inquisition, but I don't think we ever met him.

Random Jottings 5

Odell F. Dobson Memorial Issue
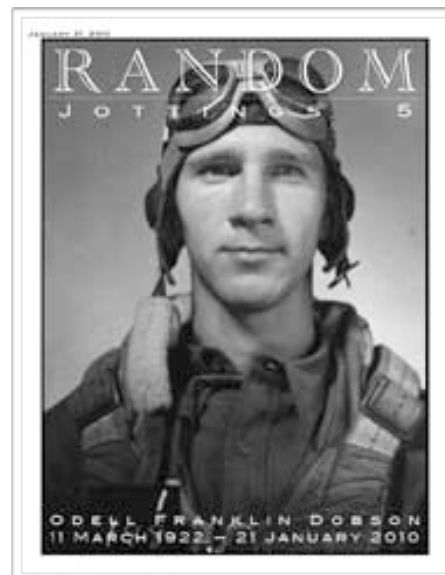
Mike Glicksohn

Sincere thanks for sending me a paper copy of this amazing publication. Your family must be extremely proud of the tribute you've prepared for your father and I'm sure he would have been proud of you too. (For the record, I lost my father when I was 44 and my mother when I was 22 so I know about loss.)

My father and my uncle served with the British Army in WW II (and came back intact and without being imprisoned) so I've heard some of their stories about the war. If I hadn't and if I'd seen your father's story as a movie I'd probably have thought it was more fiction than fact. As it is, what he wrote about still seems unbelievable. He must have been an amazing character.

I can't imagine how difficult it must have been for you to create this record/tribute but the result is worth the pain it must have caused you.

Lloyd Penney

Thank you very much for Random Jottings 5. This is definitely not going to be the usual kind of letter of comment, mostly because this is definitely not the usual kind of fanzine I get.

First of all, I will congratulate you on putting together such a comprehensive publication on such a personal nature. My condolences on the loss of your father, and this is quite the tribute to him and his life, especially his life in the Army.

How can I comment on the material? In this case, you are the editor and researcher, with a ringside seat to the subject at hand. The letters from your father are well complemented by all the photographs, cartoons and illustrations. They show the experience of fighting for one's life and country, and the harsh experience of being stuck in a German camp. One man's experience of the war, fighting, being a POW and being liberated and restored home is a powerful tale, one that is often forgotten this far forward in the calendar from WWII. We see far inside this one man, and understand him; I think that after you linked all the letters and graphics together, you perhaps understood him a little more, too. This whole project must have been very cathartic.

Then comes the Eulogy, and your own comments. I am not close to my own father; I haven't seen him in years. Too many sons are not close to their fathers, and very seldom is it one or the other to blame. You plainly write that it was not easy to like your father, but as we see from this fine publication, he is easy to respect for his life and his sacrifice to his country. May you benefit full from the healing that has come to you from the creation of this tribute.

Not being an American, but being very close to American politics by sheer geography, I have trouble understanding the far American right. Even an American liberal would seem far to the right by most Canadians. To read how one might go from such a liberal to such a

conservative opinion in such a short time mystifies me, but then I suspect it comes from the same gene that allows most parents to forget what it was like when they were kids. Just my own opinion. I see what my father did in his past, many good things and many bad, and I have made a conscious effort not to do the bad. I've tried my best to be better, and I think for the most part, I have succeeded. I hope your relationship with James has been a better one than the one you had with your father. This can also be in tribute to your dad.
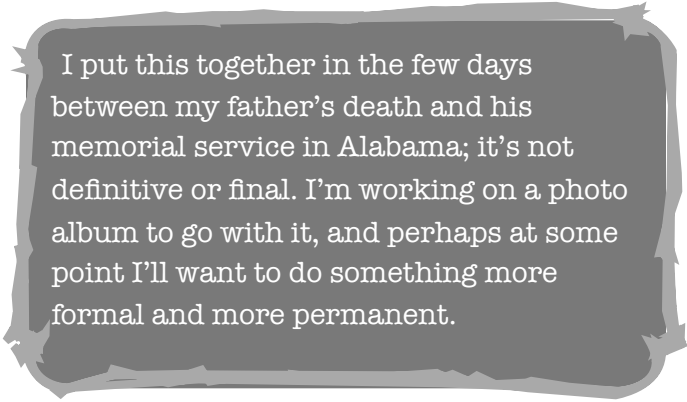
The good thing about using the .pdf format is that you can put in as many photographs and as much colour as your like, and you have. White type on top of the photographs add to the chapter header effect, and you have not kept back any graphic that would help tell the story. I like the chapter headers on the top of the pages, too. A skilful creation of a publication, IMHO.

Michael, did you just intend this as an edition of Random Jottings? I can't believe that you would. This goes way beyond a fanzine and the fanzine format; this should be a booklet, magazine, chapbook or small book, something that should be professionally published, and sold or given to your father's friends and fellow men at war, your father's unit, and most of all, to the members of your family. Yvonne mentions that aviation groups would be very interested in reading this; she especially thought of the 99s. Yvonne used to belong to the 99s and WAI; she's taken flying lessons in the past. Historical

aviation groups, too; this is a fine encapsulation of one man's history in WWII. War historians would find this of value, too. I hope you will consider a professionally published version.

This issue of Random Jottings needs a larger audience, so I hope I can push some more people over to that part of eFanzines.com. With this in mind, I would like to take much of this letter and put it in my upcoming fanzine review column to go in John Purcell's Askance, if that's okay with you.

Well done on such a personal project, and thank you for sharing it us all.

I put this together in the few days between my father's death and his memorial service in Alabama; it's not definitive or final. I'm working on a photo album to go with it, and perhaps at some point I'll want to do something more formal and more permanent.

fig.1