

Built to Be Biased

by Jimmy Mitchell and Andrew Thompson



We are programmed to make thousands of decisions a day. How can we know we are being objective about the ones that really matter?

Take a moment to think about the following questions:

- Which would you choose: 4 ounces of popcorn for \$3, 9 ounces for \$6.50, or 10 ounces for \$7?
- What is more likely: getting killed by a cow or a shark?
- Which media channel is less biased: MSNBC or Fox News?
- If the roulette wheel has come up red nine of the last ten times, which do you choose: red or black?
- When markets are down, do you check your account balance more or less often?

And most importantly, what does any of this have to do with day-to-day life and work?

You may be surprised that how we answer these questions affects each of us every day. They involve the concept of “decision-making bias.” We’ll look at why decision-making biases exist, provide examples familiar to both your personal and professional lives, and give tips on noticing these biases and mitigating their effect.

Background of Decision-Making Biases

Decision-making is the process of selecting a logical choice from the available options. Many variables affect the decisions we make every day. Over the past several decades, there has been a lot of research into decision-making and the evolution of how humans make decisions. It is considered a part of psychology, behavioral economics, and strategy research. While the academic world now offers a lot of information on what influences decisions, many are unaware of strategies that can improve decision-making.

Picture this scenario: You have come into the office early to wrap up a project for your boss that is due first thing this morning. Lo and behold, your boss is also using this morning to catch up on other things and is about to walk right by your cubicle! You begin to feel overly stressed. Should you hide or run? Should you pop out of the cube and immediately start asking about her weekend to keep her distracted? She is seconds away; what do you do?

In a business workplace, we do not have the same stressors and threats people faced in previous centuries. Safety and order in our society have improved considerably and, except for a few extreme occupations, most of us do not fear injury or death at work. However, the “fight or flight” instinct still exists, as do many inherent biases made necessary as humans evolved.

Nearly all decisions are biased. For the most part, it is good to make subjective decisions. Biased decision-making enables you to make many decisions in a day, from choosing what you want for dinner to pressing the brakes when you approach a red light. We are wired to make these decisions to save time and, even more importantly, to save our lives. This allows us to spend time on our higher priorities. However, some of the biases inherent to how we developed our civilization can actually hinder us in the workplace.

Love at First Sight: Anchoring Bias

Imagine you are preparing for a long-awaited interview. As you walk in, you are greeted by the candidate with a hello, a name, a handshake, and a resume. As you sit, your brain already begins processing information about this person: “Do I like her? Should I hire her?” How quickly do you think your brain has made a decision about this candidate through the interview process? When it is over, or maybe even halfway through?

According to studies recalled by Malcolm Gladwell in his book *Blink*, you make a hiring decision within the first two to three seconds of meeting the candidate. That means, when you shook hands and made eye contact, you already anchored to a decision. If you read her resume or LinkedIn profile, you may have made a decision before she stepped into the room. You will end

Types of Biases

AMBIGUITY EFFECT

Tendency to avoid or rule out options that have missing information

.....
A 1990 study showed that people were reluctant to vaccinate a child if the vaccination could cause death, even if deaths from the vaccination were extremely rare compared to deaths caused by the disease itself.¹

ANCHORING BIAS

Tendency to fixate on initial information and devalue subsequent information

.....
In an experiment run by Dan Ariely (author of *Predictably Irrational*) at MIT, only 32 percent of students chose a “web only” subscription to *The Economist* when two options were given (web only at \$59; print and web for \$125). When a third option was introduced (print only for \$125), 84 percent of students now chose the print and web option.²

AVAILABILITY BIAS

Recent or impactful events weigh more heavily on the decision-making process; also, valuing information at hand more than information that may be more difficult to gather

.....
People buy lottery tickets because the media and commercials so often show the winners. Winning the lottery looks more common/accessible. In fact, the odds of winning any amount in the Mega Millions lottery are less than 7 percent (the odds of winning the jackpot are 1 in 258,890,850).³

up spending the remaining time in the interview confirming or disproving your initial decision.

This is an example of an anchoring bias: overvaluing the initial set of information received toward a decision. This bias explains why you may think you are getting a great deal on a new pair of jeans (40 percent off “retail”); why curb appeal matters for home values more than we would like to admit; and why many of you probably opted for that huge \$7 bucket of popcorn!

In the workplace, one example of anchoring involves project estimation. In general, people are terrible at estimating. How often does a project you worked on either deliver less scope than originally expected, run longer than anticipated, or exceed the budget? This often happens because a team is given a target date to complete the project. Instead of working out sound estimates and giving a realistic depiction of what can be completed within that time frame—or what a realistic time line would look like—the team will work to fit the estimates into the time frame given.

The More You Know: Availability Bias

You are getting ready to launch into a new market. Your costs are well within what was estimated and expected, the demand exists for the service, and your partners are ready to distribute as soon as you say go. Do you go ahead with the price that worked well for the last launch, use your current pricing, or wait on your business partners to provide their input from a competitive pricing analysis? Waiting could cost money, but so could setting the wrong price. Will that pricing analysis really turn up much new information?

We call that initial urge—the comfort to charge ahead with existing information—availability bias. People often overemphasize the value of the information they have and lessen the value or importance of

gathering and incorporating information they do not have. In January 1986, NASA had a major decision to make. Launch day at Cape Canaveral was an unseasonably cold 31 degrees. Flight engineers had lots of checks and procedures to follow before launch, but none of the information really gave a good sense of what would happen at a temperature that cold. Lost in the sea of charts, diagrams, and procedures was a readout of the rocket booster’s O-rings—the gaskets between adjoining sections of the boosters. The data was presented in a way that was difficult to interpret. The rest is history: 73 seconds into the launch, Space Shuttle Challenger exploded, killing seven crew members. Although availability bias does not always blind us to life-or-death situations, it can lead us to think that fatal shark attacks are more common than death by cows because we hear about them in the news more often (cows do not tend to be nearly as newsworthy).

They Are Who We Thought They Were: Confirmation Bias

Tomorrow is the deadline to deliver the operational analysis for which your business unit lead asked. He had a hunch there were significant inefficiencies in the upstream sales organization, but wanted you to validate the hypothesis. He sent a note to an analyst to pull some raw data for you and gave you a list of people to interview. Sure enough, the data showed sales were at an all-time low. Each of the stakeholders you reached had nothing positive to say about the sales team. Analysis completed...or not?

This happens all too often in the workplace. Someone has a hunch or hypothesis that something is or should be occurring, then finds the data and people to back up the theory. We call this a confirmation bias. It occurs when someone selectively uses data or

Types of Biases

BLIND SPOT BIAS

Tendency to think you are less biased than other people in similar situations

.....
In a study from 2002, after having unconscious biases explained, 63 percent of participants still rated their self-assessments as accurate and objective.⁴

CONFIRMATION BIAS

Tendency to look for information that supports a preconceived notion

.....
In 2015, fivethirtyeight.com (run by Nate Silver) published an interactive feature called “Science Isn’t Broken.” Depending on which variables about the economy you choose, you can prove with statistical significance that the Democratic and Republican parties both improve or degrade the economy while in office.⁵

FRAMING EFFECT

Presenting the same information in different ways to try to get an audience to have a certain reaction

.....
When presented with meat that was 75 percent lean and meat with 25 percent fat, participants in a 1988 study were more likely to choose the 75 percent lean meat.⁶

Availability bias can lead us to think that fatal shark attacks are more common than death by cows because we hear about them in the news more often.

information to support a position and downplays information that does not support the case. How easy was it to justify the last impulse purchase you made? It is much easier to build a story and then find the data to support it than it is to allow the objective data to guide you down the right path. Depending on your political stance, MSNBC and Fox News are equally biased and as wrong or right as a media outlet could be!

Sixty Percent of the Time, It Works Every Time: Outcome Bias

It is two weeks from the next release launch, and today is your go/no-go meeting. Even though you can delay a release if necessary, there is a ton of pressure to get these new features out the door. The focus groups and beta testers loved it. The media is buzzing about it. The new marketing campaign is snazzy, and finance has built some impressive projections for the revenue the launch will bring. However, that QA team always seems to be behind. They estimate another three weeks to test everything, which would delay the product launch a week.

Should you delay? You have a top-notch development team. For every release thus far, no major bugs have ever been uncovered during testing—even for releases where they skipped testing and saved a ton of money. Surely that means there will not be any issues this time, right?

As you might imagine, skipping tests for a major release is a recipe for disaster. We call this an outcome bias. People tend to think the better idea is the one with the better outcome, regardless of the intent or the likelihood of something happening. The team may not feel testing is needed based on the past. But they are forgetting why testing is part of the process in the first place. Because of outcome bias, gamblers tend to flock to the “hot” blackjack table or bet on red to come up again at the roulette table. In fact, the best investment option is to walk away: Both red and black each have a 47.4 percent chance of winning, no matter what the previous outcomes were.

If I Ignore It, It Will Go Away: Ostrich Effect

The annual employee survey came out almost a month ago and there it is, sitting right at the top of your inbox: “My employees love me,” you tell yourself as you continue to ignore the document and move right along into the day’s tasks.

GAMBLER’S FALLACY

Thought that future probabilities are influenced by past events when, in fact, the probabilities are unchanged

In 1913, gamblers lost millions of francs betting against a roulette wheel that, for 26 times in a row, landed on a black number. Gamblers still often follow this mentality today.⁷

GROUPTHINK

The inability for people in a group setting to disagree with the common thoughts discussed by the group

Enron, thought at the time to be a very prosperous and growing company, operated under a groupthink philosophy. That mentality resulted in one of the largest business failures in U.S. history.

LOSS AVERSION

The utility lost by giving up an item is greater than the utility gained from acquiring the same item

Investors frequently focus on one investment losing money when the rest of their portfolio is gaining value.

According to research by Loewenstein and Seppi, investors tend to review their holdings 50–80 percent less often in a down market versus a rising or flat market.

As you continue to work through the emails, you see it: One of your best and brightest has put in her two weeks’ notice. You do not understand; how could she leave? You love this company and the work you do; doesn’t your team?

Annual surveys, customer feedback, yellow/red status updates, and financial results are just a few things we ignore because of the ostrich effect. Our desire to enjoy life and stay happy can lead to us to impulsively ignore negative information.

Have you ever avoided looking at your latest bank statement, but cannot wait to open your child’s report card? We are drawn to positivity, but for things we know either subconsciously or consciously are going to be bad, we often drag our feet. According to research by Loewenstein and Seppi, investors tend to review their holdings 50–80 percent less often in a down market versus a rising or flat market. If you are avoiding your portfolio, you are not alone.

Identification and Mitigation Techniques

For each of these biases (and many more), there are a few ways to both notice you are succumbing to them and mitigate their effects.

Understand the problem you are trying to solve.

Take time to reflect on the situation at hand and try not to be reactive. Remember that what you initially see may not always be what it seems.

Collect diverse input.

Reach out to those who might be able to play devil’s advocate or could provide a different angle than you or your team can. Incorporate that feedback into your decision.

Think forward to what consequences a decision will bring.

Instead of reacting and focusing on the decision that needs to be made, think forward to the potential consequences for your decision—and whether they’re good or bad. If possible, compare those consequences to those of alternative decisions.

Types of Biases

OSTRICH EFFECT

Tendency to avoid negative information

Research by George Loewenstein and Duane Seppi determined that people in Scandinavia looked up the value of their investments 50–80 percent less often during bad markets.⁸

OUTCOME BIAS

Tendency to value a decision based solely on its outcome and not by the decision’s quality at the time of the decision

Gamblers continue to play in casinos because they think they could win a large sum of money.

OVERCONFIDENCE

Tendency to believe you are more certain than you truly are for a given question

Blockbuster was presented with the opportunity to buy Netflix for \$50 million in 2000, but decided not to purchase Netflix (now with a market cap of greater than \$50 billion). The decision was based on the current movie-rental market, without the vision to see the changing landscape.⁹

Be willing to compromise.

In some cases, there is a clear-cut decision; in others, the solution's outcomes are not as black and white. Be open to suggestions and modifications to ensure buy-in for the decision.

Let multiple hypotheses drive data, not the desired outcome.

For the decision at hand, build multiple hypotheses and try to prove or disprove those with the data available. If conflicting hypotheses can be proven, you may not have enough information at hand to make the decision.

Embrace curiosity.

Do not be afraid to ask questions. The adage, "Better to keep your mouth closed and let people think you are a fool than to open it and remove all doubt" could not be further from the truth when trying to solve a tricky problem.

Reference and learn from experiences and situations.

As we mentioned, many biases are good. Leverage your knowledge and experience to guide you and your team to an effective decision.

Individually, none of these mitigation techniques will solve your problem. In addition, we often fall victim to multiple biases concurrently. Leverage these techniques in combination with one another to effectively mitigate biases you regularly encounter in the workplace and your personal life.

We encounter a great deal of decision-making bias daily. For most, moving forward with a biased decision is appropriate. For the small subset of important decisions requiring more objectivity, we should be mindful to recognize and avoid biased decisions. At the least, it is nice to know the beach is a safer family vacation option than the farm!

Jimmy Mitchell

jimmy.mitchell@jabian.com

Andrew Thompson

andrew.thompson@jabian.com

References:

- 1 Ritov, I., & Baron, J. (1990). Reluctance to vaccinate: omission bias and ambiguity. *Journal of Behavioral Decision Making*, 3, 263-277
- 2 TED Talk, Predictably Irrational, etc.
- 3 <http://www.durangobill.com/MegaMillionsOdds.html>
- 4 Pronin et al. (2002)
- 5 fivethirtyeight.com
- 6 Levin and Gaeth (1998)
- 7 *The Universal Book of Mathematics: From Abracadabra to Zeno's Paradoxes*
- 8 Zweig, Jason (September 13, 2008). "Should You Fear the Ostrich Effect?" *The Wall Street Journal*. pp. B1
- 9 <http://variety.com/2013/biz/news/epic-fail-how-blockbuster-could-have-owned-netflix-1200823443/>
- 10 Greenwald and Banaji (1994)
- 11 <http://medical-dictionary.thefreedictionary.com/Delaney+clause>

REACTANCE

Tendency to make a choice opposed to the guidance received because of the perceived loss of freedom of choice

.....
Frequently seen with parent/child relationships; kids tend to want to go to their friends' houses more when their parents tell them they are not allowed to go.

STEREOTYPING

Basing one's perception of another on a generalization of that person's gender, ethnicity, personality, etc., without having actual information about that person

.....
Participants from a study by Greenwald and Banaji were asked to pick out famous names from a list. In cases where they chose names that were fictionalized, they chose males names by a 2-to-1 ratio.¹⁰

ZERO-RISK BIAS

Tendency to prefer complete elimination of smaller risks rather than an alternative that produces a much greater risk reduction, but doesn't fully eliminate the risk

.....
The Delaney clause, part of the Food Additive Amendment, outlaws cancer-causing additives from foods (regardless of the actual risk and other ingredients that could cause other complications).¹¹