



# Think Twice

Harnessing the Power of Counterintuition

by Michael J. Mauboussin  
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## Focus

- Leadership & Management
- Strategy
- Sales & Marketing
- Finance
- Human Resources
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- ▶ **Career Development**
- Small Business
- Economics & Politics
- Industries
- Intercultural Management
- Concepts & Trends

## Take-Aways

- Even intelligent people make poor decisions.
- Base your decisions on objective data, not anecdotal information.
- Weigh all the possibilities before you make up your mind.
- Computers and crowds often outperform experts.
- Be aware that your situation often inappropriately influences the decisions you make.
- Microbehavior is a flawed guide to macrobehavior.
- The rules you use to understand simple systems will not work with complex ones.
- Don't confuse luck with skill, or vice versa.
- Decision checklists and decision-making journals can aid the decision-making and decision-evaluation processes.
- The right decision is often a counterintuitive one.

## Rating (10 is best)

| Overall  | Applicability | Innovation | Style    |
|----------|---------------|------------|----------|
| <b>8</b> | <b>8</b>      | <b>7</b>   | <b>8</b> |

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## Relevance

### What You Will Learn

In this Abstract, you will learn: 1) Why even brilliant individuals can make poor decisions; 2) What some of the most common decision-making mistakes are; and 3) How to avoid them.

### Recommendation

Research indicates that people buy more German wine when a store's sound system plays German music in the background and more French wine when it plays French music. However, shoppers claim that the background music has no effect on their wine choices. Most people think that they make rational decisions, even if they do not. In this example, irrelevant, low-level sensory input determines people's choices. Michael J. Mauboussin, a finance professor and investment strategist, wants to help people make better decisions. In his book, he details the most common decision-making mistakes and suggests practical techniques you can use to avoid them. *getAbstract* recommends this book to people who want to increase their awareness of their own irrationality and, especially, to managers in decision-making positions, whose mistakes may have ripple effects throughout their organizations and even beyond.

## Abstract

### Even Gullibility Experts Can Be Duped

Psychology professor Stephen Greenspan's book, *Annals of Gullibility: Why We Get Duped and How to Avoid It*, hit the bookstores in December 2008, the month that Bernard Madoff's Ponzi scheme became public and cost gullible investors more than \$60 billion. Greenspan was one of Madoff's investors; he lost nearly a third of his retirement savings. Later, Greenspan stated that the attraction of a return on investment "that looked, in retrospect, too good to be true" had clouded his thought processes. Greenspan's case is not uncommon. Smart, well-informed people make decisions as poorly as anyone else.

The human mind is not hard-wired for rational thinking, and many intelligent and creative people harbor false beliefs. Arthur Conan Doyle, the creator of the superrational detective Sherlock Holmes, believed in spiritualism and fairies. His capacity to interpret the world accurately was therefore rather less than that of his protagonist. To make better decisions, learn to "think twice" to counteract false premises and avoid other mental pitfalls. Don't go with your first impulse. Instead, slow down and take these three steps:

1. **"Prepare"** – Learn about the kinds of mistakes you and other people make. Study botched decisions.
2. **"Recognize"** – Identify the type of problem you confront, what the risks of a poor decision are and "what tools you need to choose wisely." People often attempt to apply simple solutions to complicated problems. Analyze your problem's context.
3. **"Apply"** – Train your mind, the way athletes train their bodies. Often this requires "keeping your intuition in check."

### "The Outside View"

In 2008, Big Brown, a three-year-old racehorse, was a heavy favorite to win the Triple Crown, which honors horses that win the Kentucky Derby, the Preakness Stakes and the

*"History contains plenty of examples of intelligent people who made poor decisions, with horrific consequences."*

*"No one wakes up thinking, 'I am going to make bad decisions today.'"*

*“Smart people make poor decisions because they have the same factory setting on their mental software as the rest of us, and that software isn’t designed to cope with many of today’s problems.”*

*“To make good decisions, you frequently must think twice – and that’s something our minds would rather not do.”*

*“Mistakes generally arise from the mismatch between the complex reality you face and simplifying mental routines you use to cope with that complexity.”*

*“Information without context is falsely empowering.”*

Belmont Stakes – races that take place over a short, five-week period. Big Brown had already won the first two and he was up against negligible talent in the Belmont Stakes. Thus, many bettors saw Big Brown as a shoo-in for that race and the Triple Crown. “It’s a foregone conclusion,” said Rick Dutrow, the horse’s trainer. He should have done some more concluding. Big Brown came in last.

Instead of relying on anecdotal evidence, the handicappers should have studied how previous double winners had performed in the Belmont Stakes – badly – and should have considered Big Brown’s “Beyer Speed Figure.” This analysis evaluates a horse’s performance based on its race times and individual track speeds. Big Brown’s figures were unpromising.

If you judged him by the “inside view,” Big Brown’s previous victories and impressive appearance made him the likely winner. If you judged him by the “outside view,” though, and compared his situation with similar ones, you could have predicted that he was a likely loser.

Don’t let “close-at-hand information” lead you astray. Avoid the inside view. Your problems are not unique. Use objective information about how other people have evaluated and handled the type of problem you face. Study the decisions of this “reference class” – other individuals in circumstances similar to yours. Note the “distribution of outcomes” – the rates of success versus failure.

Humans tend to be overly optimistic. If you must forecast something that is inherently difficult to predict, for example, movie attendance or book sales, “adjust your prediction” to the most “relevant statistical measure.”

### **“Open to Options”**

If you ask someone to jot down the last four digits of his or her phone number and then to guess the number of doctors in New York City, the estimate will be significantly higher for people whose phone number digits represent a higher number than for those with a lower number. The reason for this strange result is that when people must guess a number, they start with an “anchor.” They adjust their guess according to the information that’s closest at hand. People will grab any anchor, even if it has nothing to do with the question.

Avoid the “tunnel vision trap” by seeking out different points of view. Don’t make important decisions at stressful times. Since incentives can sway your opinions, analyze the incentives that might cause you to make one decision or another. Consider the potential consequences of your actions.

Keep a “decision-making journal.” Enter each major decision you make into this log, the reasons that led to your choice, a description of your mood and your prediction of the outcome. By auditing your decisions, you’ll be able to evaluate them. The journal will reveal patterns in your thinking. With a record of your decisions, you will avoid “hindsight bias,” the inclination to see events as more predictable than they were. It will help you remember how the situation presented itself to you before you knew its outcome.

### **“The Expert Squeeze”**

Retailers that cannot accurately forecast sales estimates will eventually go out of business. They will either have too few products on their shelves to satisfy customers or too much excess inventory. Therefore, they pay large sums to experts to advise them about what and how many products to order.

*“Even considering the power of the placebo effect, hope is not a strategy.”*

*“An ill-suited mental model will lead to a decision-making fiasco.”*

*“Two may not be a trend, but our brains sure think so.”*

*“Paying a lot of attention to one thing means you are not paying a lot of attention to others, often creating a form of blindness.”*

However, these specialists don't always know the answers. The giant retailer Best Buy learned through tests that a “relatively uninformed crowd” could actually predict sales more accurately than any expert. Computers, too, often outperform the experts. Don't get caught in the expert squeeze. Experts are most helpful with narrowly defined problems. For anything more complicated, seek out a diversity of information sources. Use computers and data to develop decision-making models or to tap into the “wisdom of crowds.”

### “Situational Awareness”

In a famous experiment, psychologist Stanley Milgram instructed test subjects to administer electric shocks to others (the shocks were actually fake). Because obedience to authority was the norm, the subjects did not object to torturing others. Without other guidelines for behavior, “situational power” – in this case, that of the scientists – takes over. Your circumstances influence your decisions.

Thus, to make good decisions, increase your awareness of your environment and its influence upon you. Don't mindlessly base your own decisions on what your peers do. Keep your thinking fresh and relevant, and don't let yourself be dragged down by inertia or the status quo. Establish objective goals.

### “More Is Different”

If you watch an individual ant, its actions seem pointless. But watching an individual ant misses the point. “Ants aren't smart; ant colonies are,” says Stanford University biologist Deborah Gordon. The individual members of the colony are clueless about the collective's overall affairs. But they work splendidly together to achieve their goals.

Trying to understand the behavior of a swarm by observing the behavior of a single insect is impossible, because the swarm is a “complex adaptive system” that is “loosely coupled” – in other words, one in which microchanges do not affect things on a macrolevel. The stock market is another such system. Thus, what individual investors say or do is immaterial. To make good decisions, focus on the “correct level.”

### “Evidence of Circumstance”

Psychologist Frank Sulloway believes that birth order affects personality. To illustrate, he points out that first-born children are often conservative while later children are rebellious. Some psychologists have attacked Sulloway's theory because of his methodology, which they claim is not scientific. The problem with Sulloway's theory, they say, is that he ignores context. Based on their order of birth, children often assume particular roles within their families – but they don't carry these roles into the external world. Instead, they adjust their thinking and behavior to their particular circumstances.

Assuming that what applies in one situation will apply in all others is a cognitive mistake. Instead, employ “circumstance-based thinking” to make good decisions.

### “Grand Ah-Whooms”

Small changes can have major effects. Physicist Philip Ball terms this the grand ah-whoom. For example, water remains liquid right up to the point of freezing. Then – ah-whoom! – the water suddenly turns into ice. A “small incremental change” in temperature takes place and the liquid becomes solid. The ah-whoom effect plays out in complex systems such as the stock market, “where collective behavior emerges from the interaction of

*“We openly defer to people in white lab coats or pinstripe suits.”*

*“In most day-to-day decisions, cause and effect are pretty clear. If you do X, Y will happen. But in decisions that involve systems with many interacting parts, causal links are frequently unclear.”*

*“Intuition is losing relevance in an increasingly complex world.”*

its constituent parts.” Reach a tipping point and everything dramatically changes – for example, the stock market suddenly plunges. Inductive reasoning, that is, inferring from the past to arrive at a general conclusion, is useless in these kinds of “phase transitions.”

To spot an ah-whoom moment, watch for situations when the “system actors” – such as investors – begin to “coordinate their behavior” – for instance, by buying or selling securities. Predicting phase transitions in complex systems is nearly impossible, so don’t place much faith in forecasters. Instead, allow for numerous contingencies. “Consider all possible outcomes.”

### “Sorting Luck from Skill”

In 2005, the volatile New York Yankees owner George Steinbrenner publicly chastised his famous baseball team because it opened the season with only four wins out of 12 games. Although the Yankees still had 93% of the season ahead of them, Steinbrenner spoke disparagingly of the team. However, by the end of the season the Yankees were tied for first place in their division. Steinbrenner should have understood the concept of “reversion to the mean”: Things even out over time.

Thus, Yankee fans (and Steinbrenner) should predict that the Yankees, with their roster of highly paid star players, will win more games than they lose. But they also must factor in luck. During a short segment of the long baseball season, luck’s effects are pronounced. However, over time, “skill shines through as luck evens out.” Include the proportions of luck and skill into your decision-making equations. Weigh each separately and don’t mistake one for the other.

### Improve Your Decision Making

Often, you must consider numerous factors when you make decisions. Therefore, in addition to a decision-making journal, develop a “decision checklist” so you don’t inadvertently overlook something crucial. People more often make mistakes by forgetting an important step than by failing to handle the individual steps well.

The value of your checklist will increase in proportion to the stability of your “environment.” For example, decision checklists are useful for pilots and surgeons, because much data exists regarding situations similar to those they routinely confront. However, in an environment where everything is fluid and circumstantial, decision checklists are less helpful.

Warren Buffett said, “Virtually all surprises are unpleasant.” With this in mind, think through the worst-case outcomes of your decisions. When you regard such scenarios as potential real-life situations, you will be motivated to think things through rationally and systematically. Place yourself mentally in the future. Imagine that your decision did not work out as you had planned. Should you have been able to predict the poor outcome from the beginning? This technique enables you to spot in advance problems that may result from your decisions.

## About the Author

**Michael J. Mauboussin** is the chief investment strategist for a capital management firm and teaches finance at Columbia Business School.