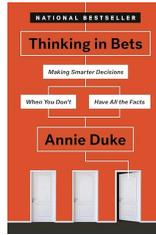


Your Kindle Notes For:



Thinking in Bets: Making Smarter Decisions When You Don't Have All the Facts

Annie Duke

95 Highlight(s) | 0 Note(s)

Location: 107

A hand of poker takes about two minutes. Over the course of that hand, I could be involved in up to twenty decisions. And each hand ends with a concrete result: I win money or I lose money.

Location: 122

The promise of this book is that thinking in bets will improve decision-making throughout our lives. We can get better at separating outcome quality from decision quality, discover the power of saying, "I'm not sure," learn strategies to map out the future, become less reactive decision-makers, build and sustain pods of fellow truthseekers to improve our decision process, and recruit our past and future selves to make fewer emotional decisions.

Location: 163

Pete Carroll was a victim of our tendency to equate the quality of a decision with the quality of its outcome. Poker players have a word for this: "resulting."

Location: 176

But, as I found out from my own experiences in poker, resulting is a routine thinking pattern that bedevils all of us. Drawing an overly tight relationship between results and decision quality affects our decisions every day, potentially with far-reaching, catastrophic consequences.

Location: 198

It sounded like a bad result, not a bad decision. The imperfect relationship between results and decision quality devastated the CEO and adversely affected subsequent decisions regarding the company.

Location: 204

When we say, “I should have known that would happen,” or, “I should have seen it coming,” we are succumbing to hindsight bias.

Location: 207

The decision didn’t work out, and he treated that result as if it were an inevitable consequence rather than a probabilistic one.

Location: 265

The challenge is not to change the way our brains operate but to figure out how to work within the limitations of the brains we already have.

Location: 278

Our goal is to get our reflexive minds to execute on our deliberative minds’ best intentions.
Poker

Location: 350

Chess, for all its strategic complexity, isn’t a great model for decision-making in life, where most of our decisions involve hidden information and a much greater influence of luck. This creates a challenge that doesn’t exist in chess: identifying the relative contributions of the decisions we make versus luck in how things turn out.

Location: 353

Poker, in contrast, is a game of incomplete information. It is a game of decision-making under conditions of uncertainty over time.

Location: 360

But life is more like poker. You could make the smartest, most careful decision in firing a company president and still have it blow up in your face. You could run a red light and get through the intersection safely—or follow all the traffic rules and signals and end up in an accident. You could teach someone the rules of poker in five minutes, put them at a table with a world champion player, deal a hand (or several), and the novice could beat the champion. That could never happen in chess.

Location: 368

The quality of our lives is the sum of decision quality plus luck.

Location: 432

Firestein points out that in science, “I don’t know” is not a failure but a necessary step toward enlightenment. He backs this up with a great quote from physicist James Clerk Maxwell:

“Thoroughly conscious ignorance is the prelude to every real advance in science.” I would add that this is a prelude to every great decision that has ever been made.

Location: 435

A great decision is the result of a good process, and that process must include an attempt to accurately represent our own state of knowledge. That state of knowledge, in turn, is some variation of “I’m not sure.”

Location: 454

But neither the veteran nor the rookie can be sure what the next flip will look like. The veteran will just have a better guess.

Location: 472

The secret is to make peace with walking around in a world where we recognize that we are not sure and that’s okay.

Location: 494

The public-at-large is often guilty of making black-and-white judgments about the “success” or “failure” of probabilistic thinking.

Location: 518

Decisions are bets on the future, and they aren’t “right” or “wrong” based on whether they turn out well on any particular iteration. An unwanted result doesn’t make our decision wrong if we thought about the alternatives and probabilities in advance and allocated our resources accordingly, as my client the CEO and Pete Carroll both did.

Location: 529

Maybe there were other choices that might have been better and the one we made wasn’t wrong or right but somewhere in between. The second-best choice isn’t wrong. By definition, it is more right (or less wrong) than the third-best or fourth-best choice. It is like the scale at the doctor’s office: there are a lot more choices other than the extremes of obesity or anorexia. For most of our decisions, there will be a lot of space between unequivocal “right” and “wrong.”

Blue highlight | Location: 534

Making better decisions stops being about wrong or right but about calibrating among all the shades of grey.

Location: 543

Redefining wrong allows us to let go of all the anguish that comes from getting a bad result. But it also means we must redefine “right.” If we aren’t wrong just because things didn’t work out, then we aren’t right just because things turned out well.

Location: 557

Second, being wrong hurts us more than being right feels good.

Location: 660

The definition of “bet” is much broader. Merriam-Webster’s Online Dictionary defines “bet” as “a choice made by thinking about what will probably happen,” “to risk losing (something) when you try to do or achieve something” and “to make decisions that are based on the belief that something will happen or is true.”

Location: 670

There is always opportunity cost in choosing one path over others.

Location: 684

In most of our decisions, we are not betting against another person. Rather, we are betting against all the future versions of ourselves that we are not choosing.

Location: 703

Our bets are only as good as our beliefs

Location: 724

This is ultimately very good news: part of the skill in life comes from learning to be a better belief calibrator, using experience and information to more objectively update our beliefs to more accurately represent the world.

Blue highlight | Location: 726

The more accurate our beliefs, the better the foundation of the bets we make.

Location: 742

We form beliefs in a haphazard way, believing all sorts of things based just on what we hear out in the world but haven’t researched for ourselves.

Location: 753

People are credulous creatures who find it very easy to believe and very difficult to doubt. In fact, believing is so easy, and perhaps so inevitable, that it may be more like involuntary comprehension than it is like rational assessment.”

Location: 761

Rather, their errors went in one direction: under any sort of pressure, they presumed all the statements were true, regardless of their labeling. This suggests our default setting is to believe what we hear is true.

Location: 766

As with many of our irrationalities, how we form beliefs was shaped by the evolutionary push toward efficiency rather than accuracy.

Location: 806

David Ludwig, a Harvard Medical School professor and doctor at Boston Children’s Hospital, summarized the cost of substituting carbs for fats in the Journal of the American Medical Association: “Contrary to prediction, total calorie intake increased substantially, the prevalence of obesity tripled, the incidence of type 2 diabetes increased many-fold, and the decades-long decrease in cardiovascular disease plateaued and may reverse, despite greater use of preventive drugs and surgical procedures.”

Location: 818

Truthseeking, the desire to know the truth regardless of whether the truth aligns with the beliefs we currently hold, is not naturally supported by the way we process information.

Blue highlight | Location: 819

We might think of ourselves as open-minded and capable of updating our beliefs based on new information, but the research conclusively shows otherwise.

Location: 849

Hastorf and Cantril concluded, “We do not simply ‘react to’ a happening. . . . We behave according to what we bring to the occasion.” Our beliefs affect how we process all new things, “whether the ‘thing’ is a football game, a presidential candidate, Communism, or spinach.”

Location: 885

The Internet is a playground for motivated reasoning. It provides the promise of access to a greater diversity of information sources and opinions than we’ve ever had available, yet we gravitate toward sources that confirm our beliefs, that agree with us.

Location: 969

Offering a wager brings the risk out in the open, making explicit what is already implicit (and frequently overlooked). The more we recognize that we are betting on our beliefs (with our happiness, attention, health, money, time, or some other limited resource), the more we are likely to temper our statements, getting closer to the truth as we acknowledge the risk inherent in what we believe.

Location: 1,000

Forcing ourselves to express how sure we are of our beliefs brings to plain sight the probabilistic nature of those beliefs, that what we believe is almost never 100% or 0% accurate but, rather, somewhere in between.

Location: 1,020

Our narrative of being a knowledgeable, educated, intelligent person who holds quality opinions isn't compromised when we use new information to calibrate our beliefs, compared with having to make a full-on reversal.

Blue highlight | Location: 1,023

Incorporating percentages or ranges of alternatives into the expression of our beliefs means that our personal narrative no longer hinges on whether we were wrong or right but on how well we incorporate new information to adjust the estimate of how accurate our beliefs are.

Location: 1,049

The goal is to advance knowledge rather than affirm what we already believe.

Location: 1,053

Acknowledging that decisions are bets based on our beliefs, getting comfortable with uncertainty, and redefining right and wrong are integral to a good overall approach to decision-making.

Location: 1,095

I was taught, as all psychology students are, that learning occurs when you get lots of feedback tied closely in time to decisions and actions. If we took that at face value, poker would be an ideal learning environment.

Location: 1,104

What are the obstacles in our way that make learning from experience so difficult? We all clearly have a desire to reach our long-term goals. Listening to what our outcomes have to teach us is necessary to do that. So what is systematically getting in the way?

Location: 1,108

“Experience is not what happens to a man; it is what a man does with what happens to him.”
There is a big difference between getting experience and becoming an expert. That difference lies in the ability to identify when the outcomes of our decisions have something to teach us and what that lesson might be.

Location: 1,204

Outcomes don't tell us what's our fault and what isn't, what we should take credit for and what we shouldn't. Unlike in chess, we can't simply work backward from the quality of the outcome to determine the quality of our beliefs or decisions.

Location: 1,214

Classical stimulus-response experiments have shown that the introduction of uncertainty drastically slows learning.

Location: 1,276

100% of our bad outcomes aren't because we got unlucky and 100% of our good outcomes aren't because we are so awesome. Yet that is how we process the future as it unfolds.

Location: 1,314

When it comes to self-serving bias, we act as if our good outcomes are perfectly correlated to good skill and our bad outcomes are perfectly correlated to bad luck.*

Location: 1,316

Whether it is a poker hand, an auto accident, a football call, a trial outcome, or a business success, there are elements of luck and skill in virtually any outcome.

Location: 1,346

“We must believe in luck. For how else can we explain the success of those we don't like?”

Location: 1,488

There are people who, like Phil Ivey, have substituted the routine of truthseeking for the outcome-oriented instinct to focus on seeking credit and avoiding blame. When we look at the people performing at the highest level of their chosen field, we find that the self-serving bias that interferes with learning often recedes and even disappears. The people with the most legitimate claim to a bulletproof self-narrative have developed habits around accurate self-critique.

Location: 1,511

When I admitted mistakes, when I recognized the luck element in my successes, when I gave other players credit for making some good decisions, when I was eager to share a hand that I

thought I played poorly because I might learn something from it, that chorus reminded me that what I was doing was hard, and that others weren't often doing it. Identifying learning opportunities that other players were missing made me feel good about myself, reinforcing my routine change.

Location: 1,528

(If you walked into a poker room and threw around words like “always” and “never,” you'd soon find yourself challenged to a bunch of bets. It's easy to win a bet against someone who takes extreme positions.)

Location: 1,535

Some of the reasons we come up with may be easy to discount. And some may not. The key is that in explicitly recognizing that the way we field an outcome is a bet, we consider a greater number of alternative causes more seriously than we otherwise would have. That is truthseeking. This is what Phil Ivey does.

Location: 1,544

Thinking in bets triggers a more open-minded exploration of alternative hypotheses, of reasons supporting conclusions opposite to the routine of self-serving bias. We are more likely to explore the opposite side of an argument more often and more seriously—and that will move us closer to the truth of the matter.

Location: 1,564

Remember, losing feels about twice as bad as winning feels good; being wrong feels about twice as bad as being right feels good. We are in a better place when we don't have to live at the edges.

Location: 1,576

Duhigg tells us that reshaping a habit requires time, preparation, practice, and repetition.

Location: 1,581

Despite the difficulties, striving for accuracy through probabilistic thinking is a worthwhile routine to pursue. For one thing, it won't always be so difficult. We have to start doing this with deliberation and effort, but it eventually becomes a habit of mind.

Location: 1,596

The benefits of recognizing just a few extra learning opportunities compound over time. The cumulative effect of being a little better at decision-making, like compounding interest, can have huge effects in the long run on everything that we do.

Location: 1,598

When we catch that extra occasional learning opportunity, it puts us in a better position for future opportunities of the same type.

Location: 1,641

Such interactions are reminders that not all situations are appropriate for truthseeking, nor are all people interested in the pursuit.

Location: 1,676

Because I agreed to the group's rules of engagement, I had to learn to focus on the things I could control (my own decisions), let go of the things I couldn't (luck), and work to be able to accurately tell the difference between the two.

Location: 1,680

A good decision group is a grown-up version of the buddy system.

Location: 1,729

Philip Tetlock and Jennifer Lerner, leaders in the science of group interaction, described the two kinds of group reasoning styles in an influential 2002 paper: "Whereas confirmatory thought involves a one-sided attempt to rationalize a particular point of view, exploratory thought involves even-handed consideration of alternative points of view."

Location: 1,753

In combination, the advice of these experts in group interaction adds up to a pretty good blueprint for a truthseeking charter: A focus on accuracy (over confirmation), which includes rewarding truthseeking, objectivity, and open-mindedness within the group; Accountability, for which members have advance notice; and Openness to a diversity of ideas.

Location: 1,808

Identifying mistakes in hands I won reinforced the separation between outcomes and decision quality.

Blue highlight | Location: 1,865

Why might my belief not be true? What other evidence might be out there bearing on my belief? Are there similar areas I can look toward to gauge whether similar beliefs to mine are true? What sources of information could I have missed or minimized on the way to reaching my belief? What are the reasons someone else could have a different belief, what's their support, and why might they be right instead of me? What other perspectives are there as to why things

turned out the way they did? Just by asking ourselves these questions, we are taking a big step toward calibration.

Location: 1,920

The authors concluded that the result endorsed the importance of exposure to diverse viewpoints: “What is necessary is reasonable diversity, or diversity of reasonable views . . . and that it is important to ensure that judges, no less than anyone else, are exposed to it, and not merely through the arguments of advocates.”

Location: 2,072

Researchers are entitled to keep data private until published but once they accomplish that, they should throw the doors open to give the community every opportunity to make a proper assessment. Any attempt at accuracy is bound to fall short if the truthseeking group has only limited access to potentially pertinent information. Without all the facts, accuracy suffers.

Location: 2,083

The mere fact of our hesitation and discomfort is a signal that such information may be critical to providing a complete and balanced account.

Location: 2,098

We have all experienced situations where we get two accounts of the same event, but the versions are dramatically different because they are informed by different facts and perspectives. This is known as the Rashomon Effect, named for the 1950 cinematic classic *Rashomon*, directed by Akira Kurosawa. The central element of the otherwise simple plot was how incompleteness is a tool for bias. In the film, four people give separate, drastically different accounts of a scene they all observed, the seduction (or rape) of a woman by a bandit, the bandit’s duel with her husband (if there was a duel), and the husband’s death (from losing the duel, murder, or suicide).

Blue highlight | Location: 2,113

Be a data sharer. That’s what experts do. In fact, that’s one of the reasons experts become experts. They understand that sharing data is the best way to move toward accuracy because it extracts insight from your listeners of the highest fidelity.

Location: 2,121

What the experts recognize is that the more detail you provide, the better the assessment of decision quality you get. And because the same types of details are always expected, expert players essentially work from a template, so there is less opportunity to convey only the information that might lead the listener down a garden path to a desired conclusion.

Location: 2,144

When we have a negative opinion about the person delivering the message, we close our minds to what they are saying and miss a lot of learning opportunities because of it. Likewise, when we have a positive opinion of the messenger, we tend to accept the message without much vetting. Both are bad.

Location: 2,175

If we hear an account from someone we like, imagine if someone we didn't like told us the same story, and vice versa. This can be incorporated into an exploratory group's work, asking each other, "How would we feel about this if we heard it from a much different source?" We can take this process of vetting information in the group further, initially and intentionally omitting where or whom we heard the idea from.

Location: 2,226

If the group is blind to the outcome, it produces higher fidelity evaluation of decision quality. The best way to do this is to deconstruct decisions before an outcome is known. Attorneys can evaluate trial strategy before the verdict comes in. Sales teams can evaluate strategy before learning whether they've closed the sale.

Location: 2,259

Yet true skepticism is consistent with good manners, civil discourse, and friendly communications.

Location: 2,274

Organized skepticism invites people into a cooperative exploration. People are more open to hearing differing perspectives expressed this way. Skepticism should be encouraged and, where possible, operationalized.

Location: 2,305

By putting into practice the strategies that promote universalism, actively looking for the ideas that we agree with, we will more naturally engage people in the process of learning with us. We will also be more open-minded to what others have to say as well, enhancing our ability to calibrate our own beliefs.

Location: 2,327

Finally, focus on the future. As I said at the beginning of this book, we are generally pretty good at identifying the positive goals we are striving for; our problem is in the execution of the decisions along the way to reaching those goals. People dislike engaging with their poor

execution. That requires taking responsibility for what is often a bad outcome, which, as David Letterman found out, will shut down the conversation.

Location: 2,338

When we validate the other person's experience of the past and refocus on exploration of the future, they can get to their past decisions on their own.

Location: 2,344

My son was expert at fielding bad test scores as the teacher's fault. I had to be careful not to Letterman him. Instead, I would tell him, "It must be hard to have a teacher like that. Do you think there's anything you can do to improve your grade in the future?" That at once provided validation and led to productive discussions about subjects like developing strategies for preparing for future tests and setting up meetings with the teacher to figure out what the teacher was looking for in assignments. Meeting with the teacher also created a good impression that would likely be reflected in future grades.

Blue highlight | Location: 2,395

Improving decision quality is about increasing our chances of good outcomes, not guaranteeing them. Even when that effort makes a small difference—more rational thinking and fewer emotional decisions, translated into an increased probability of better outcomes—it can have a significant impact on how our lives turn out. Good results compound. Good processes become habits, and make possible future calibration and improvement.

Location: 2,473

As Nietzsche points out, regret can do nothing to change what has already happened.

Location: 2,572

The way we field outcomes is path dependent. It doesn't so much matter where we end up as how we got there. What has happened in the recent past drives our emotional response much more than how we are doing overall. That's how we can win \$100 and be sad, and lose \$100 and be happy. The zoom lens doesn't just magnify, it distorts. This is true whether we are in a casino, making investment decisions, in a relationship, or on the side of the road with a flat tire.

Location: 2,578

The problem in all these situations (and countless others) is that our in-the-moment emotions affect the quality of the decisions we make in those moments, and we are very willing to make decisions when we are not emotionally fit to do so.

Location: 2,714

“Wrong” is a conclusion, not a rationale. And it’s not a particularly accurate conclusion since, as we know, nearly nothing is 100% or 0%. Any words or thoughts denying the existence of uncertainty should be a signal that we are heading toward a poorly calibrated decision.

Location: 2,731

The swear jar is a simple example of a Ulysses contract in action: we think ahead to a hazard in our decision-making future and devise a plan of action around that, or at least commit that we will take a moment to recognize we are veering away from truthseeking. Better precommitment contracts result from better anticipation of what the future might look like, what kinds of decisions we want to avoid, and which ones we want to promote. That takes thoughtful reconnaissance.

Location: 2,751

For us to make better decisions, we need to perform reconnaissance on the future.

Location: 2,909

Imagining a successful future and backcasting from there is a useful time-travel exercise for identifying necessary steps for reaching our goals. Working backward helps even more when we give ourselves the freedom to imagine an unfavorable future.

Location: 2,947

Being a team player in a premortem isn’t about being the most enthusiastic cheerleader; it’s about being the most productive heckler.

Location: 2,955

Once we frame the exercise as “Okay, we failed. Why did we fail?” that frees everyone to identify potential points of failure they otherwise might not see or might not bring up for fear of being viewed as a naysayer. People can express their reservations without it sounding like they’re saying the planned course of action is wrong.