

**THINKING IN BETS:
MAKING SMARTER
DECISIONS WHEN
YOU DON'T HAVE ALL
THE FACTS**

by Annie Duke

Summary & Worksheet

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The Book In Three Or More Sentences:

In *Thinking in Bets*, the author, Annie Duke, holder of a World Series of Poker gold bracelet, takes us on a journey that starts inside smoke-filled rooms full of high-stakes. But the book is not about gambling or about winning a national championship - absolutely not. It's about making decisions. About approaching decisions as bets so you can more accurately predict the future, become a rational thinker, and, eventually, create a better future for yourself.

The Core Idea:

By using the poker table as a lab, Annie Duke realized that the two most important factors determining how our lives will turn out are the following: the quality of our decisions and luck. When you adequately recognize the difference between the two, you'll begin to handle uncertainty more accurately. A decision, in the book, is explained as nothing more than betting on a possible future.

Highlights:

- *A bad result doesn't necessarily mean a bad decision.*
- *Looking for certainty in an uncertain world can be soul-crushing. Your decisions are simply bets.*
- *Don't focus on the outcome. Concentrate your attention on the decision-making process.*

6 Key Lessons from Thinking in Bets:

- *Lesson #1: We Evaluate The Quality of a Decision Based on The Result*
- *Lesson #2: We Search for Certainty in an Uncertain World*
- *Lesson #3: Decisions are Never Only Right and Only Wrong*
- *Lesson #4: We're Always Betting On a Possible Future*
- *Lesson #5: Experience is Not Enough to Get Better*
- *Lesson #6: Encourage Dissent to Create an Objective Decision-Making Group*

Lesson #1: We Evaluate The Quality of a Decision Based on The Result

We are terrible at separating luck from skill. We create a strong connection between the results and the quality of our decisions. Never successfully identifying the patterns – when the result is bad – that are far beyond our control.

This type of thinking in poker is called “resulting”. It means that we label decisions as bad only because the outcome wasn’t successful.

In theory, blaming the decision sounds like the right thing to do. After all, if things didn’t turn out as we anticipated, it’s logical to turn things around and point the finger at the person making the decision – you.

When we use this pattern of evaluation, however, we fail to understand something important. That oftentimes, our decision-making process was good enough. Simply the “play”, in the words of the author, didn’t work out as we hoped.

After all, there are a lot of things that can go wrong in life. Blaming yourself if things didn’t work out is not a smart move. The best move is to observe your process when deciding – and search for gaps there. If there aren’t any, you simply got unlucky. And understanding the difference between luck and skill is of major importance.

“Take a moment to imagine your best decision in the last year. Now take a moment to imagine your worst decision. I’m willing to bet that your best decision preceded a good result and the worst decision preceded a bad result.” Annie Duke

Lesson #2: We Search for Certainty in an Uncertain World

We assume causation when there is only a correlation.

What does this mean?

We tend to adjust the evidence we collect from the world to fit our narrative. We use this to create order and feel good about our decision and eventually about ourselves.

And why do we do it?

Because this way of thinking kept us alive.

It's way better to run when you hear a noise in the forest rather than to "check" what's in the bush. After all, if there is a wild beast you won't live long enough to warn your tribe members.

But this type of thinking is not sufficient for our sophisticated world. It was enough to get us out of the jungle alive and help us evolve but not enough to help us create the future we so desperately desire.

What can be done then?

Well, we can't change how our brains operate. Searching for certainty in an uncertain world is deeply rooted in our brains and trying to alter this internal logic is a waste of time.

Instead, we can accept that many things in our lives are unpredictable. Uncertainty is part of the world we live in and putting the world in order is impossible. We need to allow in our brains the following concept: that things might not work out the way we want them to, even if we do our best.

"We are uncomfortable with the idea that luck plays a significant role in our lives. We recognize the existence of luck, but we resist the idea that, despite our best efforts, things might not work out the way we want. It feels better for us to imagine the world as an orderly place, where randomness does not wreak havoc and things are perfectly predictable. We evolved to see the world that way. Creating order out of chaos has been necessary for our survival." Annie Duke

Lesson #3: Decisions are Never Only Right and Only Wrong

An interesting theme in the book is that real life is like poker, not like chess.

To explain this, Annie Duke includes a famous conversation between scientist Jacob Bronowski and mathematician John von Neumann:

“Bronowski was a chess enthusiast and asked him to clarify. “You mean, the theory of games like chess?”

“No, no,’ von Neumann said. ‘Chess is not a game. Chess is a well-defined form of computation. You may not be able to work out the answers, but in theory there must be a solution, a right procedure in any position. Now, real games,’ he said, ‘are not like that at all. Real life is not like that. Real life consists of bluffing, of little tactics of deception, of asking yourself what is the other man going to think I mean to do.’”

A chessboard hides nothing. Both players are observing the game in real-time and a good player is able to “calculate” the possible moves of both him and his opponent. Therefore, the conclusion that chess is more a game about calculation.

Poker, in contrast, is a game similar to real life. You don’t get to see everything. There are gaps, incomplete information, that you need to somehow assess based on your experience and your current hand.

But even if you lose a hand in poker, this doesn’t mean that your decision was 100% wrong. Yes, probably there is something you can improve but luck is also part of the game. You don’t know the cards of your opponent as you don’t know what cards will further appear on the board.

Once you understand that there are alternatives to the commonly perceived outcomes – right or wrong, called shades of grey. You can better approach your decision-making process. For example, after an evaluation, you can label a decision as 70% wrong and 30% luck. And once you’re able to make the separation, you know exactly where to focus on.

Lesson #4: We’re Always Betting On a Possible Future

When you apply for a new job you’re essentially hoping that it will be better than your current one. Yet, you’re never sure what will happen the moment you decide to quit your current job. You’re simply guess-

ing that the new job will be better.

If we can generalize, your decision is based on the following two concepts:

- Your research for the new job.
- Your beliefs and views of the world.

If the new job is more closely related to your understanding of the world we live in. Or, if your current job is not properly satisfying your needs – financial and emotional – it's only natural to look for a new place.

While the first thing – searching for a high-paying job – is common, the second will be different for each person

We all start life empty-headed. OK, probably not without anything inside, there are certain behaviors embedded in us transmitted by our genes. Still, the majority of our beliefs are created based on our environment – the people we communicate with, the books we read, the media we consume, etc.

Slowly, we create sequences in our heads that help us to understand the world around. Once formed, it is very difficult to change these beliefs. They become permanent residents and form our ideology. Sadly, if we never update our beliefs, so they can better represent the always-changing world we live in, they can plague our thinking and sabotage our future progress.

To become better future-betters, we need to make decisions beyond the ideology we created for ourselves when we were young. To look at things objectively and to regularly question our assumption.

So, before making a decision based on your stubborn beliefs, question them by answering the following questions that are shared in the book:

*“How do I know this?
Where did I get this information?
Who did I get it from?
What is the quality of my sources?
How much do I trust them?
How up to date is my information?
How much information do I have that is relevant to the belief?
What other things like this have I been confident about that turned out not to be true?
What are the other plausible alternatives?”*

Lesson #5: Experience is Not Enough to Get Better

Accumulating expert advice and binge-watching National Geographic won't make you an expert. Sure, you'll gather knowledge about "things" but this is not enough to become a proper professional.

The difference between a genuine expert and a random internet blogger who position himself as "a great source of knowledge" is perfectly outlined in the following paragraph in the book:

"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." Annie Duke

As it's stated numerous times in the book, when deciding on something, you're betting on a possible future. The choice you're making is based on your beliefs. But when the bet is placed, your work doesn't stop there. The set of results originating from your choice should also be considered and taken into account.

It's basically a learning loop that looks like this:

Belief > Bet > Outcome > Bet 2 > Update belief...

The way our future unfolds shouldn't be just passively observed. We should use the outcomes to further improve our beliefs and extract useful insights that will help us make better bets in the future.

This helps us in two important ways: 1) we learn more about the specific subject and 2) we reduce uncertainty.

How fake experts operate?

They never question their assumptions and if something bad happens to them they label it as luck. Or more precisely, as bad luck. In contrast, if their assumption for the future was correct, they pad themselves on the back for successfully navigating in the situation.

Unfortunately, this type of outcome-handling, if you do it yourself, is worsening your beliefs. You're basically avoiding the responsibilities of your choices.

Understand, regardless of the outcome, there is always something that can be learned. Find what it is and update your beliefs to close the loop and improve your future decisions.

“Experience is not what happens to a man; it is what a man does with what happens to him.” Aldous Huxley

Lesson #6: Encourage Dissent to Create an Objective Decision-Making Group

People prefer to communicate with fellows who think and act the same as they do. On the surface, this doesn't seem like a bad way to spend your evening. However, it turns out to be a devastating practice if you are about to make an important decision.

If you want to improve, you don't want to hear your ideas and assumptions echoed back to you. You want someone to disagree with them. Someone who will question your assumptions and spot where your logic is failing.

To create such a group, the author suggests looking at the famous CUDOS framework created by the sociologist, also magician, Meyer R. Schkolnick (or Robert K. Merton – his performing name).

The idea of this model is to push a group towards objectivity. Instead of people agreeing with each other because it's easier and more polite, Merton wants to inspire truthseeking and unbiased review of a situation.

Here's the framework itself:

CUDOS Framework:

- **Communism**: The first principle is about freely sharing all the gathered data with the group. All facts, sources, observations, research – everything. According to Merton, accuracy suffers if facts are kept secret. After all, you can't expect others to help you if they don't know everything. So, be a data sharer. Communicate all the details to the group. This will not only help them, but it will also allow you to clarify what you know.
- **Universalism**: We tend to falsely translate the data we gather from others because we let our emotions and our opinion of the messenger dominate. This can be a problem. Being fair and unjudgmental towards the person providing you with the facts should be your default state. Consider what everyone is saying, even if you don't personally like all of them. A way to do the latter, as suggested in the book, “is to imagine the message coming from a source we value much more or much less.”
- **Disinterestedness**: Don't share your opinion with the group. Also, if you want others to help you find mistakes in a situation, don't share the outcome. This will cloud their thinking. By not sharing

the result, you're forcing people to think on their own and to express their views based on their own experience and skill. After all, if feedback is what you seek, the result doesn't matter. It only matters what can be improved in a situation.

- Organized Skepticism: Revert to disagreement. Instead of agreeing with everything and with everyone, become a friendly skeptic. Approach the world by considering why things might not be true. After all, agreeing with everyone is easy. You just vote for what the other person stated hardly flexing your brain. In contrast, if you disagree, you'll explore how what was mentioned will potentially fail. Once you know, you can find a solution to the problems you unveil.

“If someone expresses a belief or prediction that doesn't sound well calibrated and we have relevant information, try to say and, as in, “I agree with you that [insert specific concepts and ideas we agree with], AND . . .” After “and,” add the additional information. In the same exchange, if we said, “I agree with you that [insert specific concepts and ideas you agree with], BUT . . .,” that challenge puts people on the defensive. “And” is an offer to contribute. “But” is a denial and repudiation of what came before.” Annie Duke

Actionable Notes:

- Avoid resulting: The following exercise is mentioned in the book and it can help you adequately evaluate your decision-making process. In short, think about your best and worst decisions of the previous year. If you identify your best and worst results instead of your best and worst decisions you're not properly looking at the situation. Take a step back and observe your worst result. Before making the choice that turned out to be devastating, have you considered all possible results? If not, then the decision was indeed bad and you're to blame. If you did all the work before making the choice, you evaluated all possible scenarios, then simply the result wasn't any good. Something we can't always successfully predict.
- Pursue truthseeking: Desire to know the truth regardless of how it makes us feel is a powerful tool – not quite easy to achieve though. We think of ourselves as open-minded creatures ready to take feedback and improve our life. Yet, the moment someone comments our work we shut off completely and we take a defensive position. As you can imagine, this can be a problem. The book encourages you to find things in the outcomes of your decisions, things you have control over, and find ways to improve them. Moaning about “bad luck” is of no use. Be a truthseeker. Find things you have control over and

- refine them. Even if this means admitting your initial mistakes.
- Get a buddy to watch your back: Do you want to live in the matrix or do you want to hear the truth? Yes, the author uses the famous movie *The Matrix* to illustrate our tendency to fool ourselves by protecting our biases. The easiest way to exit the matrix and figure out the blind spots in your understanding of the world is to find a group of people that will keep you accountable. Honest people who will give you honest feedback. The more diverse the group is, the better. Avoid taking advice from people who think the same way you do because they'll simply agree with what you stated. Thus, you'll never help each other improve.
 - The 10-10-10 tool: Can't find people to give you critical feedback? Become your own mentor by communicating with your future self. Is it possible? Well, not literally but you can use a simple framework called 10-10-10. The moment you're about to make a decision, ask yourself the following set of questions: "What are the consequences of each of my options in ten minutes? In ten months? In ten years?" You can tailor the time-frame depending on the situation. The idea is to imagine yourself in the future bearing the consequences of the decision you're about to make.
 - Keep things probabilistic: When a certain decision is made and the result is clear, we take it as it was bound to happen. If it was bad, we say things like, "I had to see that coming." If it was good, we usually say, "I'm a real expert!" But this way of evaluating your decision is not useful if you want to become a better decision-maker. Even if something turns out to be a bad decision, especially then, we should work backwards and inspect the whole process that led to this decision. Don't focus on the result and don't let it corrupt your evaluation of the situation. If you want to improve, every time a decision is made, go back to the process and find where things could improve.

Commentary and My Personal Takeaway

It all comes down to this: the ability to figure out the chain of events a decision will trigger and then find a solution to all possible outcomes. All this done before actually making the decision.

Or in other words, consider all possible futures. That's the proper way to make a decision. The proper way to make a bet.

Annie Duke, a professional poker player, argues that we're all betting. We're all betting on a possible future when we're making a decision.

The book offers some unique ways to look at your decision-making process. A way to distinguish luck from skill and focus on improving

the latter.

A book about bets from a professional poker player about decision-making?

Yes, I was too skeptical at first. But the book doesn't fail to deliver.

It's a light read with a ton of tactics that will help you make better bets so you can improve your future.

My key takeaway:

The world is not black and white. Even if a certain result is bad, this doesn't mean that the decision was 100% wrong. There are nuances. Filtering the right from wrong will help you spot exactly what part didn't work out so you can better calibrate your thinking.

Notable Quotes:

"Instead of altering our beliefs to fit new information, we do the opposite, altering our interpretation of that information to fit our beliefs." Annie Duke

"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." Annie Duke

"Life, like poker, is one long game, and there are going to be a lot of losses, even after making the best possible bets. We are going to do better, and be happier, if we start by recognizing that we'll never be sure of the future. That changes our task from trying to be right every time, an impossible job, to navigating our way through the uncertainty by calibrating our beliefs to move toward, little by little, a more accurate and objective representation of the world." Annie Duke

What to read next:

- Actionable [Book Summary: Ultralearning](#) by Scott H. Young
- Actionable [Book Summary: The Art of Thinking Clearly](#) by Rolf Dobelli
- Actionable [Book Summary: Fooled by Randomness](#) by Nassim Nicholas Taleb

INTERACTIVE SHEET FOR NOTE-TAKING

Reading alone won't help you understand the actionable notes. You need to engage with the content. Answer the question below (just type inside the boxes) to outline your future steps:

- 1. Think about your best and worst decisions of the previous year:*
- 2. Can you distinguish luck from skill from the above mentioned results?*
- 3. The consequences of a decision in ten minutes? In ten months? In ten years?*
- 4. Do you want to live in the matrix or do you want to hear the truth?*
- 5. Default to disagreement. Instead of agreeing, search for flaws.*

Don't forget to save your changes.