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# THINKING IN BETS: HOW TO IMPROVE DECISION-MAKING WITH ANNIE DUKE

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On last week's podcast—alongside my co-host, Wesley Gray, the CEO of Alpha Architect—I had the privilege of interviewing retired professional poker player Annie Duke about her new best-selling book, *Thinking in Bets: Making Smarter Decisions When You Don't Have All the Facts*.

Duke has an interesting background for a former professional poker player. Her journey to poker started close to our interview location—on Penn's campus—where she was working toward her doctoral degree in psychology before she became sick and missed the window in which degree candidates have their recruiting and job talks. She ended up playing poker from 1992 to 2012 as a diversion from her studies and ended up never going back to finish her doctorate.

We discussed whether she has an itch to come back to Penn and finish her doctorate, and she stated that she had an 82% probability of doing so—and that probability has been inching up.

82/18

Framing this decision as 82% for finishing her doctoral degree and 18% against is an important illustration of how Duke thinks we should all depict a more accurate representation of the world. The future is uncertain and probabilistic—people like to know their lives will turn out a certain way, and we all tend to be addicted to certainty. While Duke does not know it really is an 82% probability, she feels describing the future in this manner is far superior to saying she has a 50/50 chance of doing so or 0%/100% chance. This has the advantage of not putting herself as being “right” or “wrong,” but, rather, if she does not do it, it was just in the 18% probability of outcomes that played out.

## Resulting: Outcome versus Process

One of the major focuses of Duke's book is a concept called “resulting.” The problem with resulting is that too often people look at bad outcomes and conclude it was caused by a bad decision process—hence a focus on the poor results and not the decision process. Conversely, it could be that one concludes a good outcome was the result of a sound process—when it was just luck or the lower end of a probability range like 82% versus 18% and the 18% chance event occurred, even though it was not the most likely outcome.

## Talking in Probabilities: The Benefit of Keeping an Open Mind

Duke believes there is a big problem in confusing confidence and certainty. People often think that leaders need to express themselves in absolute certainty to be very convincing. There are two sources of uncertainty: luck, which we cannot do anything about, and hidden information. When one talks in probabilities, you open yourself to looking for new information and updating your forecast. When you express yourself with certainty, you shut down your motivation for being information hungry to hunt for new information that updates your views. By contrast, when you say you are 45% on a situation, you will look for new information to upgrade your probability forecast or downgrade it.

### **Truth-Seeking Groups: Keeping Yourself Honest**

One of Duke's suggestions for how to optimize a learning process is to identify a truth-seeking group to help sort through decision quality and keep you honest in an "exploratory style" when evaluating decisions. Groups can act like a "mega-individual" if there is an echo chamber, but if a group helps you keep biases in check, this can help improve biased world views because it's easier to see bias in others than in yourself.

### **"Yes...and" Instead of "But"**

One of Duke's suggestions is to eliminate the use of the word "but" in conversations and pivot to a model of saying "yes...and." When you use the word "but" in conversations, it invalidates everything said previously and puts people in a defensive frame of mind. However, if you can agree with a person's world view and then ask him or her to think about a future that might lead to a different internalization of a given situation, it often leads to better evaluations. While Duke counsels it would be impossible to completely get rid of the word "but" from your vocabulary, using it less and substituting the words "yes...and" instead will lead to more open-minded conversation. Duke says that if you want people to change their beliefs, you have to put them in an open-minded state, and the word "but" just shuts down this type of open-mindedness.

### **How Betting Markets Improve Decisions**

Duke talked about how there was a study of peer-reviewed scientific research papers and whether scientists could predict which papers' conclusions could be replicated in a fresh evaluation of the research. When the same scientists were given money and offered a chance to bet on which studies they would replicate, the scientists' accuracy on predicting the outcome was increased by putting money on the line and making explicit rewards compared with implicit reputation motivation. Companies such as Google are using betting markets to help their predictions in different business ventures.

### **An Uncertainty Evangelist**

One of Duke's life missions is to be an evangelist for uncertainty—to celebrate and embrace it. She sees a lot of benefits from this, including being more open-minded, less judgmental and more compassionate and information hungry. She also suggests embracing dissent without being overly disagreeable.

This was a great conversation on a great new book. You can listen to the full conversation below.

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