

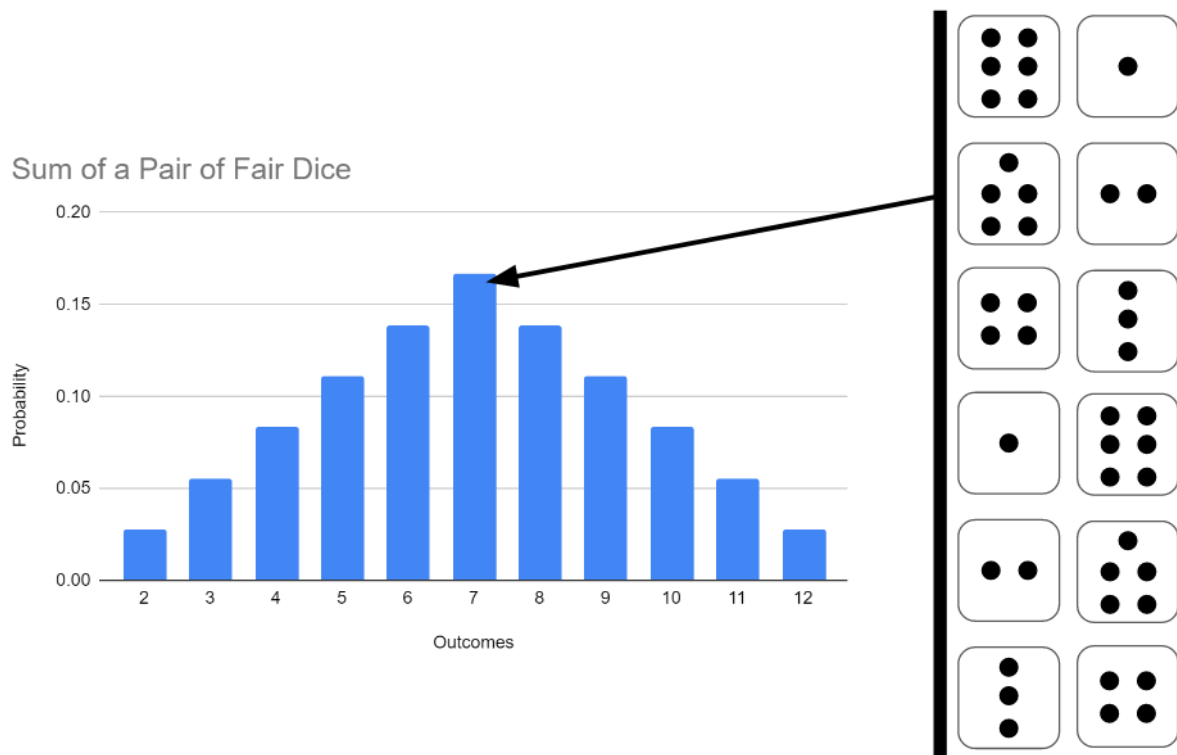
Prediction, Part 1: Thinking in Buckets (Binning the Ugh)

Welcome to Thinking in Buckets; Part One of the Practical Decision-Making course offered by the Guild of the ROSE. Visit guildoftherose.org for more details.

A fundamental habit which will improve your decisiveness in daily life is the habit of thinking in buckets, or in bins.

Thinking in bins simply means quickly categorizing the possible outcomes of a situation into a small number of possibilities.

For example, the game Craps involves throwing a pair of dice and betting on the outcome. There are 36 possible outcomes when you throw two dice, and each of those 36 outcomes is equally likely. But from the perspective of the final sum of the two dice, there are only eleven possible outcomes, namely the numbers 2 through 12, and you can fairly easily calculate the odds of each of the sums.



You can easily see that the number 7 is the most likely because there are six different ways of getting a 7, each of which is equally likely. From the perspective of thinking about the game of Craps, it's obvious that we want to bin the possible outcomes into the right number of buckets - no more, no less.

The real world is always more complicated than games, but it can often be made simpler from a binning point of view. You generally want to make a decision or prediction problem as simple as you possibly can, breaking down a distinction into only two possibilities if

appropriate. It is much easier to think about a problem when you have defined the specific possible outcomes that you most care about.

For example, if you're trying to pick a stock to invest in, you might settle on three meaningful possibilities; either you'll make a lot of money, you'll lose a lot of money, or your funds will remain static. Instead of trying to imagine all the twists and turns that a negotiation might take, you could simply predict whether the sale will take place, or not. If you're trying to be more punctual, then instead of predicting what time you'll arrive at your destination, you could just ask whether you'll probably be late, or early. These simplifications turn confusing questions with an apparently unlimited space of outcomes into simple sets of bins, which are much easier to grapple with mentally.

Breaking possible outcomes into bins can also help clarify your thinking about emotionally charged topics. A sense of vague anxiety is often an excellent indicator that you need to break your worries down into distinct bins. That sense of "ugh", that internal feeling of aversion to even thinking about a topic, is a big flag that you should apply this technique. One main source of anxiety, in general, is a lack of clarity surrounding possible outcomes. In fact, in most situations where you have experienced decision paralysis, you will probably find that the root of the problem was a failure to even specify exactly what the possible outcomes were!

Thus, the basic mental skill, which I use daily, is to reflexively ask myself the question: What exactly am I worried will happen? How many possible outcomes are there here? Can I reduce my vague cloud of worry into two or three vivid possibilities? And once I have done that, I can use the tools of probabilistic reasoning to take action.

This course will focus on the practicalities of decision-making, so it will help you learn most effectively if you bring a real problem to the table during discussion sessions. This week, think of a decision or problem that you're facing, which you wouldn't mind sharing with your cohort. For this exercise, simply break the space of possible outcomes of the decision down into a small number of bins that make sense. We're trying to cultivate a mental habit, an action-response pattern, where the trigger is a sense of vague worry, and the action is to break down the worry into distinct possibilities.



Let's discuss an example, help explain the sort of thing I'm talking about.

I've been stuck on a particular 3D printing project for a few days. I'm trying to make a Sisu dragon for my daughter. The last iteration of this part came out poorly. Sisu lost her arms, as you can see here. This version was damaged due to being too weak to survive the process of removing the support material.

Despite the fact that I've taken steps to fix the problem, I haven't moved forward due to a vague sense of worry. Faced with the unformed thought of repeating my failure and disappointing my daughter again, I simply avoided thinking about the problem. Which is a great policy if your goal is failure. (Fade to black.) Obviously I'm being melodramatic; but also, obviously, it's exactly this sort of stupid thing that blocks our progress on a hundred different fronts in our daily lives.

So what do I do? I simply ask myself what is causing my indecision. After thinking about it for a moment, I conclude that it's a worry that I'm missing something, and that I'll waste another load of filament and 24 hours of printer time due to some other mistake that I haven't noticed. On the other hand, it's possible that, due to my tweaks, the part will come out fine. Projects like this are *just* time-consuming enough to trigger a strong "ugh" response if you aren't sure of the outcome. But now I have explicitly thought of at least two distinct possibilities, which is the first step in understanding how to solve the problem. Just going through this simple process of breaking the outcomes down into two possibilities has dissolved my cloud of worry -- I'm actually eager to get started on printing the part, now.

This may seem like a simple, low-stakes problem ... and it is! But evidently I've been stuck on it for several days. A problem doesn't need to be complicated and weighty to benefit from

being broken down into bins. There wasn't really even a decision to be made here, just a hurdle of confusion to overcome. So as you consider a problem to bring to your cohort session, remember that it can be as simple or complex as you wish. It may seem like I'm belaboring what seems like a very simple technique, but I think you'll find that most instances of feeling decision-paralysis in your own life can be traced to a failure to take this first basic step.

So, in conclusion: when you sense an "ugh", just bin it.

If you're interested in taking this course, visit guildoftherose.org for more details, or patreon.com/guildoftherose to join the Guild. Click the link in the sidebar to view the playlist of videos for Practical Decision-Making.