

BIG QUESTIONS

BETTING ON THE TRUTH

OVERVIEW:

Whether it's rational to take a bet depends on at least two things: (1) the likelihood of winning the bet, and (2) the value of whatever is at stake for you in taking the bet. On the analogy we've been pursuing, then, when we consider whether or not to believe some claim, we should consider: (1) the probability that that claim is true, and (2) the value we place in knowing the truth about that particular claim. In this exercise, we'll take this analogy seriously and see how it might change the way you approach belief formation.

Consider the following bet:

Bet	Probability of Winning	What's at Stake?	Rational to Take the Bet?
There are an even number of stars in the sky.	50/50	Win: \$ 50,000 Lose: \$ 0.01	Y / N

Unless you're extremely risk averse, you'd probably think that this is a bet worth taking. Although you've only got a 50% chance of winning, the cost of losing the bet is so low and the reward if you win is so high that it makes sense to take it even though the outcome is totally uncertain. Now, consider the same claim, but where the question is whether or not to *believe*:

Belief	Probability of Believing Truly	What's at Stake?	Rational to Believe?
There are an even number of stars in the sky.	50/50	Right: You form a trivial, true belief. Wrong: You form a trivial, false belief.	Y / N

Most people would probably think it's irrational to believe in such circumstances, both because your probability of getting things right (believing truly) is no better than chance and because the reward for doing so is so trivial. But now, consider two further potential beliefs.

Belief	Probability of Believing Truly	What's at Stake?	Rational to Believe?
Two is an even number.	99.9 / .1	Right: You form a useful, true belief. Wrong: You form a harmless, false belief.	Y / N

The overwhelming likelihood of getting things right in this scenario, combined with the fact that believing true math facts is, in general, useful, would lead most people to conclude that it's rational to form this belief.

Here's where things get tricky. Consider the following table of beliefs and ask yourself: (1) what the likelihood is of getting the truth if you formed the relevant belief (this will depend, in part, on how much evidence you have that the particular belief is true), and (2) what the stakes are for believing truly or falsely on this particular question. Then, based on these answers, decide whether you think it's rational for you to form that particular belief.

Belief	Probability of Believing Truly	What's at Stake?	Rational to Believe?
God exists.	(Determined by your evidence)	<p>Right: (what happens if you believe this and it turns out to be true):</p> <p>Wrong: (what happens if you believe this and it turns out to be false):</p>	Y / N
You are, in general, a morally good person.	(Determined by your evidence)	<p>Right:</p> <p>Wrong:</p>	Y / N
You will be successful in your major professional endeavors.	(Determined by your evidence)	<p>Right:</p> <p>Wrong:</p>	Y / N

This exercise illustrates how the rationality of forming particular beliefs varies both with the evidence that you have and the stakes of getting at the particular truth in question. Spend a few moments reflecting on this.

Reflection Questions:

1. Which of your beliefs have the highest potential payoff?
2. How much evidence do you have with respect to that belief?

One important *disanalogy* with betting is that in belief formation, you can often go out and gather more evidence. Belief formation is sometimes forced, but not always. In a global sense then, the most rational belief formation strategy is one in which you allocate significant resources to the investigation of the questions that matter most.