

3. PASCAL'S WAGER

Suppose you are facing a decision “under conditions of uncertainty”: say, whether to take an umbrella or not, on a day when the chance of rain is one half. The value of taking as opposed to leaving the umbrella depends on whether it rains, so we should list all the possible scenarios—taking and rain, taking and dry, leaving and rain, and leaving and dry—and note how well things work out in each of them. The rational choice is the one likely to produce the best outcome.

Practical Rationality Principle One should choose the action A with the highest expected value
 \Rightarrow_{DF} the sum of the values of A's possible outcomes, weighted according to their probabilities.

	RAIN (.5)	DRY (.5)	EV
TAKE	10	-4	3
LEAVE	-20	2	-9

EV(TAKE)

= (value of TAKE if rain x chance of rain) + (value of TAKE if dry x chance of dry)

$$= 10 \times .5 + -4 \times .5 = 3$$

EV(LEAVE)

= (value of LEAVE if rain x chance of rain) + (value of LEAVE if dry x chance of dry)

$$= -20 \times .5 + 2 \times .5 = -9$$

So you should take the umbrella. If the probabilities change, or the values you assign to the possible outcomes change, you may reach a different result. Say the probability of rain is 10%:

$$EV(\text{TAKE}) = 1 + -3.6 = -2.6$$

$$EV(\text{LEAVE}) = -2 + 1.8 = -.2$$

Now apply this reasoning to the issue of whether to “take” God or leave him. Say the probability of God's existence is 50%. If God exists, believers are rewarded with eternal bliss; that's infinitely valuable (it literally couldn't be better: ‘unity joined to infinity adds nothing to it’) so the first box gets filled like this: ∞ . Disbelievers, let's say, are “rewarded” with eternal damnation so the second box gets filled like this: $-1,000,000$ (Note: Pascal doesn't seem to think that it is infinitely bad: ‘Justice to the outcast is less

bad vast ... than mercy to the elect'. But you can make the disutility of hell as large as you like, so long as it is finite.) Now what if God does not exist? Then the believer suffers some inconvenience on account of his/her observant lifestyle; and the nonbeliever, let's say, enjoys an equal amount of pleasure. This gives

	GOD (.5)	NO GOD (.5)	EV
BELIEVE	∞	-20	∞
REJECT	-1,000,000	20	-499,990

EV (BELIEVE)

= (value of BELIEVE if God x prob. God) + (value of BELIEVE if no God x prob. no God)

$$= \infty \times .5 + -20 \times .5 = \infty$$

EV(REJECT)

= (value of REJECT if God x prob. God) + (value of REJECT if no God x prob. no God)

$$= -1,000,000 \times .5 + 20 \times .5 = -499,990$$

More generally, so long as the probability of God existing is finite (however small), the reward of heaven is infinite, and the rewards from other options are finite, we get:

	GOD (f_n)	NO GOD ($1 - f_n$)	EV
BELIEVE	∞	f_1	∞
REJECT	f_2	f_3	f_4

So $EV(\text{BELIEVE}) > EV(\text{REJECT})$

1. The practically rational thing to do is the thing with the highest expected value. [A]
2. The expected value of believing in God is higher than that of not accepting God. [A]
3. Believing in God and rejecting God are the only options. [A]
4. Therefore, I should believe in God. [1,2,3]

IS BELIEF UNDER OUR CONTROL?

There's a worry though: belief isn't under our direct control. ('I'll give you \$10 if you can believe that Elvis is still alive') It is only practically rational to do a thing if we *can* do that thing. Pascal's response: we can make it much more likely that we come to believe in God by *behaving like a believer*. So we get a new argument:

1. The practically rational thing to do is the thing with the highest expected value. [A]
2. Behaving like a believer makes one more likely to believe in God. [A]
3. The expected value of believing in God is higher than that of not. [A]
4. Therefore, the expected value of of behaving like a believer is higher than that of not [2,3]
5. Behaving like a believer and not behaving like a believer are the only options [A]
6. Therefore, I should behave like a believer. [1,4,5]

FIRST OBJECTIONS

- i. The Wager is cynical and God would not reward a theist whose belief is based on it. (Deny 3)
- ii. The probability of God is 0. (Deny 3)
- iii. One's life will be based on a lie if one behaves like a believer and God doesn't exist. (Deny 1)

MANY GODS

So far we have assumed a very specific sort of God, call him or her the God of Abraham. What about the gods of Hinduism or the Shinto faith or etc? What about possible gods not worshipped by any religion? The trouble is that as far as Pascal's actual reasoning goes, it would seem that we have just as good an argument for believing in some of these other gods as we do for believing in the God of Abraham. Yet to believe in all of them at once makes no sense. Some of these gods contradict each other; you can't have more than one all-powerful god for what if they disagree? Even consistent gods may require inconsistent behavior. How is one to choose which god to believe in?

WEIRD GODS

Why not an AntiGod who is just like the God of Abraham except in being absolutely evil? Or a Jealous God who will reward you for believing in him but has a horrible fate in store for you if you even think of believing in the God of Abraham? Or a Shy God who gives you everlasting life provided you don't believe in him, etc. Once these are thrown into the hopper, the earlier calculation needs to be revised. Is it clear that if you believe, and God doesn't exist, then you lose only a finite reward? Not if an Anti-Abrahamic Jealous God exists, and puts you through infinite hell if you believe in the God of Abraham.

	GOD (.5)	JEALOUS-GOD (.1)	NO GOD (.4)	EV
ACCEPT	∞	$-\infty$	f_1	? f_5
REJECT	f_2	f_3	f_4	f_6

The immediate problem is that mathematically there is no well-defined way to calculate the result; infinite numbers can be added but there's no well-defined way to subtract them. But suppose we bracket that concern, and assume that the two infinities cancel out. The calculation favors, if anything, rejecting God, since you don't have to pay the cost of (say) abstinence. The advantage of accepting God over rejecting God has disappeared.

**IS THE EXPECTED VALUE OF ACTING LIKE A BELIEVER HIGHER?
(I.E. DOES 4 FOLLOW FROM 2 & 3?)**

First: imagine that instead of behaving like a believer, one decided to flip a coin: if it comes up head, you do, if tails, you don't. The expected utility is still infinite. Or suppose you roll a die, with the plan to act like a believer if and only if it comes up 6. Expected utility is still infinity. And so on for any chance you take for acting like a believer, however small, so long as it is finite.

This involves rejecting premise 5. But even if we accept premise 5 (make any outcome that has a finite probability of behaving like a believer count as behaving like a believer), 4 doesn't follow from 2, 3 & 5. Don't we accord a finite probability to the possibility that, having decided not to behave like a believer, you will still end up believing in God? (Perhaps your action will backfire.) In which case, the expected utility of not behaving like a believer is still infinite. So there is no advantage in behaving like a believer.

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