

PASCAL'S WAGER

230. It is incomprehensible that God should exist, and it is incomprehensible that He should not exist; that the soul should be joined to the body, and that we should have no soul; that the world should be created, and that it should not be created, etc.; that original sin should be, and that it should not be.

231. Do you believe it to be impossible that God is infinite, without parts? Yes. I wish therefore to show you an infinite and indivisible thing. It is a point moving everywhere with an infinite velocity; for it is one in all places and is all totality in every place.

Let this effect of nature, which previously seemed to you impossible, make you know that there may be others of which you are still ignorant. Do not draw this conclusion from your experiment, that there remains nothing for you to know; but rather that there remains an infinity for you to know.

232. Infinite movement, the point which fills everything, the moment of rest; infinite without quantity, indivisible and infinite.

233. Infinite- nothing.- Our soul is cast into a body, where it finds number, dimension. Thereupon it reasons, and calls this nature necessity, and can believe nothing else.

Unity joined to infinity adds nothing to it, no more than one foot to an infinite measure. The finite is annihilated in the presence of the infinite, and becomes a pure nothing. So our spirit before God, so our justice before divine justice. There is not so great a disproportion between our justice and that of God as between unity and infinity.

The justice of God must be vast like His compassion. Now justice to the outcast is less vast and ought less to offend our feelings than mercy towards the elect.

We know that there is an infinite, and are ignorant of its nature. As we know it to be false that numbers are finite, it is therefore true that there is an infinity in number. But we do not know what it is. It is false that it is even, it is false that it is odd; for the addition of a unit can make no change in its nature. Yet it is a number, and every number is odd or even (this is certainly true of every finite number). So we may well know that there is a God without knowing what He is. Is there not one substantial truth, seeing there are so many things which are not the truth itself?

We know then the existence and nature of the finite, because we also are finite and have extension. We know the existence of the infinite and are ignorant of its nature, because it has extension like us, but not limits like us. But we know neither the existence nor the nature of God, because He has neither extension nor limits.

But by faith we know His existence; in glory we shall know His nature. Now, I have already shown that we may well know the existence of a thing, without knowing its nature.

Let us now speak according to natural lights.

If there is a God, He is infinitely incomprehensible, since, having neither parts nor limits, He has no affinity to us. We are then incapable of knowing either what He is or if He is. This being so, who will dare to undertake the decision of the question? Not we, who have no affinity to Him.

Who then will blame Christians for not being able to give a reason for their belief, since they profess a religion for which they cannot give a reason? They declare, in expounding it to the world, that it is a foolishness, stultitiam;* and then you complain that they do not prove it! If they proved it, they would not keep their word; it is in lacking proofs that they are not lacking in sense. "Yes, but although this excuses those who offer it as such and takes away from them the blame of putting it forward without reason, it does not excuse those who receive it." Let us then

examine this point, and say, "God is, or He is not." But to which side shall we incline? Reason can decide nothing here. There is an infinite chaos which separated us. A game is being played at the extremity of this infinite distance where heads or tails will turn up. What will you wager? According to reason, you can do neither the one thing nor the other; according to reason, you can defend neither of the propositions.

* I Cor. 1. 21.

Do not, then, reprove for error those who have made a choice; for you know nothing about it. "No, but I blame them for having made, not this choice, but a choice; for again both he who chooses heads and he who chooses tails are equally at fault, they are both in the wrong. The true course is not to wager at all."

Yes; but you must wager. It is not optional. You are embarked. Which will you choose then? Let us see. Since you must choose, let us see which interests you least. You have two things to lose, the true and the good; and two things to stake, your reason and your will, your knowledge and your happiness; and your nature has two things to shun, error and misery. Your reason is no more shocked in choosing one rather than the other, since you must of necessity choose. This is one point settled. But your happiness? Let us weigh the gain and the loss in wagering that God is. Let us estimate these two chances. If you gain, you gain all; if you lose, you lose nothing. Wager, then, without hesitation that He is. "That is very fine. Yes, I must wager; but I may perhaps wager too much." Let us see. Since there is an equal risk of gain and of loss, if you had only to gain two lives, instead of one, you might still wager. But if there were three lives to gain, you would have to play (since you are under the necessity of playing), and you would be imprudent, when you are forced to play, not to chance your life to gain three at a game where there is an equal risk of loss and gain. But there is an eternity of life and happiness. And this being so, if there were an infinity of chances, of which one only would be for you, you would still be right in wagering one to win two, and you would act stupidly, being obliged to play, by refusing to stake one life against three at a game in which out of an infinity of chances there is one for you, if there were an infinity of an infinitely happy life to gain. But there is here an infinity of an infinitely happy life to gain, a chance of gain against a finite number of chances of loss, and what you stake is finite. It is all divided; where-ever the infinite is and there is not an infinity of chances of loss against that of gain, there is no time to hesitate, you must give all. And thus, when one is forced to play, he must renounce reason to preserve his life, rather than risk it for infinite gain, as likely to happen as the loss of nothingness.

For it is no use to say it is uncertain if we will gain, and it is certain that we risk, and that the infinite distance between the certainty of what is staked and the uncertainty of what will be gained, equals the finite good which is certainly staked against the uncertain infinite. It is not so, as every player stakes a certainty to gain an uncertainty, and yet he stakes a finite certainty to gain a finite uncertainty, without transgressing against reason. There is not an infinite distance between the certainty staked and the uncertainty of the gain; that is untrue. In truth, there is an infinity between the certainty of gain and the certainty of loss. But the uncertainty of the gain is proportioned to the certainty of the stake according to the proportion of the chances of gain and loss. Hence it comes that, if there are as many risks on one side as on the other, the course is to play even; and then the certainty of the stake is equal to the uncertainty of the gain, so far is it from fact that there is an infinite distance between them. And so our proposition is of infinite

force, when there is the finite to stake in a game where there are equal risks of gain and of loss, and the infinite to gain. This is demonstrable; and if men are capable of any truths, this is one.

"I confess it, I admit it. But, still, is there no means of seeing the faces of the cards?" Yes, Scripture and the rest, etc. "Yes, but I have my hands tied and my mouth closed; I am forced to wager, and am not free. I am not released, and am so made that I cannot believe. What, then, would you have me do?"

True. But at least learn your inability to believe, since reason brings you to this, and yet you cannot believe. Endeavour, then, to convince yourself, not by increase of proofs of God, but by the abatement of your passions. You would like to attain faith and do not know the way; you would like to cure yourself of unbelief and ask the remedy for it. Learn of those who have been bound like you, and who now stake all their possessions. These are people who know the way which you would follow, and who are cured of an ill of which you would be cured. Follow the way by which they began; by acting as if they believed, taking the holy water, having masses said, etc. Even this will naturally make you believe, and deaden your acuteness. "But this is what I am afraid of." And why? What have you to lose?

But to show you that this leads you there, it is this which will lessen the passions, which are your stumbling-blocks.

The end of this discourse.- Now, what harm will befall you in taking this side? You will be faithful, humble, grateful, generous, a sincere friend, truthful. Certainly you will not have those poisonous pleasures, glory and luxury; but will you not have others? I will tell you that you will thereby gain in this life, and that, at each step you take on this road, you will see so great certainty of gain, so much nothingness in what you risk, that you will at last recognise that you have wagered for something certain and infinite, for which you have given nothing.

"Ah! This discourse transports me, charms me," etc.

If this discourse pleases you and seems impressive, know that it is made by a man who has knelt, both before and after it, in prayer to that Being, infinite and without parts, before whom he lays all he has, for you also to lay before Him all you have for your own good and for His glory, that so strength may be given to lowliness.

234. If we must not act save on a certainty, we ought not to act on religion, for it is not certain. But how many things we do on an uncertainty, sea voyages, battles! I say then we must do nothing at all, for nothing is certain, and that there is more certainty in religion than there is as to whether we may see to-morrow; for it is not certain that we may see to-morrow, and it is certainly possible that we may not, see it. We cannot say as much about religion. It is not certain that it is; but who will venture to say that it is certainly possible that it is not? Now when we work for to-morrow, and so on an uncertainty, we act reasonably; for we ought to work for an uncertainty according to the doctrine of chance which was demonstrated above.

Saint Augustine has seen that we work for an uncertainty, on sea, in battle, etc. But he has not seen the doctrine of chance which proves that we should do so. Montaigne has seen that we are shocked at a fool, and that habit is all-powerful; but he has not seen the reason of this effect.

All these persons have seen the effects, but they have not seen the causes. They are, in comparison with those who have discovered the causes, as those who have only eyes are in comparison with those who have intellect. For the effects are perceptible by sense, and the causes are visible only to the intellect. And although these effects are seen by the mind, this mind is, in comparison with the mind which sees the causes, as the bodily senses are in comparison with the intellect.

235. Rem viderunt, causam non viderunt.*

* "They have seen the thing; they have not seen the cause." St. Augustine, Contra Pelagium, iv.

236. According to the doctrine of chance, you ought to put yourself to the trouble of searching for the truth; for if you die without worshipping the True Cause, you are lost. "But," say you, "if He had wished me to worship Him, He would have left me signs of His will." He has done so; but you neglect them. Seek them, therefore; it is well worth it.

237. Chances.- We must live differently in the world, according to these different assumptions: (1) that we could always remain in it; (2) that it is certain that we shall not remain here long, and uncertain if we shall remain here one hour. This last assumption is our condition.

238. What do you then promise me, in addition to certain troubles, but ten years of self-love (for ten years is the chance), to try hard to please without success?

239. Objection.- Those who hope for salvation are so far happy; but they have as a counterpoise the fear of hell.

Reply.- Who has most reason to fear hell: he who is in ignorance whether there is a hell, and who is certain of damnation if there is; or he who certainly believes there is a hell and hopes to be saved if there is?

240. "I would soon have renounced pleasure," say they, "had I faith." For my part I tell you, "You would soon have faith, if you renounced pleasure." Now, it is for you to begin. If I could, I would give you faith. I cannot do so, nor therefore test the truth of what you say. But you can well renounce pleasure and test whether what I say is true.

241. Order.- I would have far more fear of being mistaken, and of finding that the Christian religion was true, than of not being mistaken in believing it true.

THE WAGER IN DECISION THEORETIC TERMS

Ingredients of a decision theoretic approach to deciding whether

There exists a God who rewards those who believe and condemn those who do not believe to eternal punishment?

1. Specify the set of possible states of nature.

State1= yes, such a God exists.

State2= no, such a God does not exist.

2. Specify our “prior” (before we examine the data) beliefs as to the relative chances that the various states of nature are true. *Not everyone agrees that this step is essential.*

P1 = our assessment of the chance that State1 is correct.

P2 = 1–P1 = our assessment of the chance that State2 is correct.

3. Specify the set of decisions to be made.

Decision1 = believe in such a God.

Decision2 = do not believe in such a God.

4. Collect data.

5. Specify the frequency with which the various possible data sets we could collect occur.

6. Specify the consequences (losses) of the various decisions for the various states of nature (or in some formulations the consequences are gains).

For our question, for each possible state of nature we list the consequences (losses) to be incurred for each possible decision.

		Decisions	
		Decision1	Decision2
States of Nature	State1	Loss = 0	Loss = ∞
	State2	Loss = L	Loss = 0

7. Specify what decision you would make for each possible set of data that you could observe. Such a specification is called a *decision rule*.

Evaluating a given decision rule

A. For each possible state of nature, calculate the loss resulting from the decision the rule would make for each possible set of data.

B. For each state of nature, calculate the average loss incurred by averaging over all possible data sets. This will be a weighted average, where the weights are the frequencies with which each possible data set occurs.

C. If 2 above is used. Take a weighted average of the losses in B, where the average is over all possible states of nature and the weights are the prior beliefs about the states of nature. *This is the expected loss for the rule.*

For our question, unless our rule says that we should always believe or unless our prior belief about State1 is 0, this will always yield infinite loss.

Selecting an optimal decision rule

Evaluate all rules and choose the one that minimizes the expected loss.

(If 2 and C are not applied, then there are several strategies

- If a rule has the smallest average loss for each state of nature, choose it.

If no such rule exists,

- choose the rule that minimizes the maximum (over all states of nature) loss

or

- choose the rule that minimizes the average (or some weighted average) loss, where losses are averaged over all states of nature.

For our question, the only rule that does not lead to infinite loss for State1 is the rule that says you should always believe regardless of life experience.

So by decision theoretic arguments, the only rational strategy is to make Decision1.