

Some Background Material

Descartes (1596-1650) – based his philosophical reasoning on the principles and methods of mathematics, thereby refusing (as he believed) to make any initial metaphysical assumptions. He argued that in experience as in mathematics whatever is clearly and distinctly conceived – that is, whatever can be conceived as part of a logical and coherent whole – is true. The first ‘clear and distinct idea’ outside of itself is the idea of God, and this idea is unaccountable except on the assumption that God exists; the veracity of our other ideas is guaranteed by God’s existence and goodness (implied in the conception of a perfect being). Descartes based reason upon sense-experienced eventually led later philosophers to the difficulty that if experience is our only source of information and if we have no reason to suppose that anything in objective reality corresponds with the evidence of our senses, we can know nothing.

Pascal did not agree with Descartes and has disparaging things to say about “the God of the philosophers.”

Jansenism – Technically, Jansenism is summed up in five propositions. The sense of these is

1. that without a special grace from god, the performance of His commandments is impossible to men.
2. that the operation of grace is irresistible; and hence that man is the victim of either a natural or supernatural determinism, limited only by not being violently coercive.
3. the defence of Augustine’s theology of grace, as interpreted by Jansen’s, against Molinism (the efficacy of grace has its ultimate foundation, not within the substance of the divine gift itself, but in the Divinely foreknown fact of free human cooperation with this gift. This was a view adopted by the Jesuits and was argued as required in order to adequately guard human free-will).
4. a rigorist tendency in all matters of ecclesiastical discipline.
5. hostility to Probabilism (the principle that if the licitness or illicitness of an action is in doubt, it is lawful to follow a solidly probable opinion favoring liberty, even though the opposing opinion, favoring the law, be more probable). Probabilism was felt to lead to laxism.

A Brief Biography

Blaise Pascal (1623-1662) – Theologian, mathematician, savant. Did experiments that led to the invention of the barometer, developed an adding machine. In 1646 he experience his ‘first conversion’ when he came in contact with the Jansenists (along with his family). He was reluctant to accept all the demands of the Jansenists. In 1654 he experienced his ‘definitive conversion’ when he discovered the ‘God of Abraham, the God of Isaac, the God of Jacob, and not of the philosophers and men of science’.

Pascal's religion was centered on the Person of Christ as Savior and based on his personal experience. Here, as in his scientific investigations, his thought was deeply influenced by his interest in experiential knowledge. Nourished on the Augustinianism of Port-Royal (home of the Jansenists), his deepest experience was that of man's tragic situation between greatness and misery, to escape from which he plunges into distractions. From this state only faith can free him, since human experience is confronted with the necessity of making a decision for or against God. The element of risk in the life of faith and emphasis on the will are characteristic of Pascal, who confesses that the 'heart has its reasons of which reason knows not'. He does not, however, thereby exclude the use of reason from demonstrating the truth of faith.

Pascal's Wager (233 in the handout)

Pass out copy of original text

Some miscellaneous comments by way of background

1. 230, 231, 232, and the first few paragraphs of 233 give some insight into Pascal's notion of infinity. Careful mathematical formulations of the notion of infinity did not occur until 20th century.

2. Pascal studied probability, which was motivated by gambling. In Pascal's time probabilities were formulated as "logical" probabilities. For any situation, one attempted to specify the possible outcomes as a set of events that logically all had equal probability of occurring. For example, in a game where one is dealt 5 cards from a deck of 52, the possible outcomes should be viewed as all possible sets of 5 cards from the deck of 52 (as opposed to, say, the number of aces in the set of 5). This view may be reflected in some of Pascal's statements in the wager.

Modern views of probability were clarified in the 20th century and include probability as relative frequency and probability as one's best guess at the odds.

Pascal's Wager Presented in the Context of Decision Theory

Decision Theory – a statistical procedure (strategy for making decisions in the presence of uncertainty) should be evaluated by its consequences (what happens as a result of the decision made) in various circumstances.

Suppose we want to decide if

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

Basic Ingredients of a Decision Problem

1. Specify the set of possible states of nature.

For our question the possible states of nature are

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.*

For our question, we might choose fractions P1 and P2 with

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

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

Notice P1=0 means we are certain State1 is false. Nothing can change our mind.

P1=1 means we are certain State1 is true. Nothing can change our mind.

$0 < P1 < 1$ means we have some doubt about State1.

Since history reveals cases of people who at one time believed they were convinced that State1 was false and later changed their minds, perhaps it is best to assume $0 < P1 < 1$.

3. Specify the set of decisions to be made.

For our question these might be

Decision1 = believe in such a God.

Decision2 = do not believe in such a God.

4. Collect data.

For our question, the data would be our accumulated life long experiences (observations, thoughts, miracles seen, prayers answered, prayers unanswered, injustice unpunished, suffering, etc.)

In a strict formulation of decision theory one usually requires the data to be numerical so that it can be exactly specified rather than “vague” as I have suggested for our question.

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

This is probably difficult to specify for our question, but is assumed in a strict formulation.

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

Perhaps here L would represent the pleasurable experiences in your finite life that you missed out on by making Decision1 when State2 is actually true.

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*.

How does one evaluate 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.

For our question, this requires that we think about our possible (internal) “rules,” think about what decisions we would come to under various life experiences, and for each state of nature, the resulting loss I would incur.

In a strict formulation this is possible because everything is explicitly specified.

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.

For our question,

if State1 is true, when we average over all possible life experiences, the loss incurred will be infinite unless our rule says we always believe.

if State2 is true, when we average over all possible life experiences, the loss incurred will be a value between 0 and L, hence finite.

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 State 1 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 Decision 1.
interests.

Is the argument convincing? Probably not, given that most people do not understand probability and risk.

Note that it is not a proof that God exists (some people seem to take it as such), but rather an argument for acting as though God exists. Pascal seems to suggest that mathematical proofs for God's existence are not to be found because we are finite and God is infinite. However, Pascal does suggest that there is reasonable evidence that God exists.