PHIL 3600 - Philosophy of Religion
Spring 2014
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Handout 4: Pascal's Wager

I. The Argument from Dominance

A. The Principle of Dominance

1. The Concept of Dominance

"The simplest special case occurs when one course of action is better no matter what the world is like"

- Ian Hacking, "The Logic of Pascal's Wager" (1972)

a. Decision Matrices

A *decision matrix* represents, for each act, A, someone could perform at some time, and each state, S, the world might be in, how good things would go for the agent if she were to do A, if the world is in S.

b. An Example of a Decision Matrix

	S1	S2	S3
A1	10	10	30
A2	5	10	30

c. Dominance Defined

An act *dominates* iff (i) in at least one state it brings about an outcome that is better for the agent than the outcome that would be brought about by any alternative act to it, and (ii) in no state does it bring about an outcome that is worse for the agent than the outcome that would be brought about by any alternative act to it.

In other words: an act dominates iff it might be better, and can't be worse.

In the decision matrix above, act A1 dominates.

2. The Principle

The Principle of Dominance: If an agent is in a situation in which one of her alternatives dominates, then she ought (prudentially speaking) to perform that alternative.

B. The Argument

The Argument from Dominance
P1. The following decision matrix represents your situation with respect to the decision whether to believe in God:

	G	~G
B	10,000	100
~B	-10,000	100

P2. If (1), then B dominates.
P3. If B dominates, then you ought to choose B.
C. Therefore, you ought to choose B (in other words, you ought to believe that God exists).

C. Problems for the Argument from Dominance

1. Doxastic Voluntarism

2. The Appeals of a Libertine Life:

	G	**~G**
B	10,000	10
~B	-10,000	200

II. The Argument from Expected Value

A. The Principle of Expected Value

1. The Concept of Expected Value

"The *expected value*, or *expectation*, of [an act] is the average value of doing [it]"
- Ian Hacking, "The Logic of Pascal's Wager" (1972)

"In *decisions under risk*, the agent assigns subjective probabilities to the various states of the world. … the *expected utility* … of a given action can be calculated by a simple formula: for each state, multiply the utility that the action produces in that state by the state's probability; then, add these numbers."
- Alan Hájek, "Pascal's Wager," *The Stanford Encyclopedia of Philosophy*

<u>Definition of 'expected value' (in English)</u>:
The *expected value* of an act, A, when there are several possible states (S1, S2, S3, etc.) that the world could be in, is the *sum* of these numbers:

- the probability that the world is in the first state (S1) that it might be in × the utility or value for you of the world being in that state if you were to perform A;
- the probability that the world is in the second state (S2) × the utility of the world being in that state if you were to perform A;
- the probability that the world is in the third state (S3) × the utility of the world being in that state if you were to perform A;
- and so on, for all of the states that the world might be in.

<u>Definition of 'expected value' (in Symbols)</u>:
$EV(A) = [P(S1) * V(A|S1)] + [P(S2) * V(A|S2)] + [P(S3) * V(A|S3)] + \ldots$

<u>Probabilities are numbers between 0 and 1; for example</u>:

- '0' represents zero probability, or no chance of being true

- '1' represents 100% likelihood, or certainty of being true
- '.5' represent a 50/50 chance of being true
- '.25' represents a 1 in 4 chance of being true
- '.99' means highly likely
- '.01' means highly unlikely
- and so …

2. Examples

a. The Coin Bet
b. The Libertine Life

3. The Principle of Expected Value

<u>The Principle of Expected Value</u>: One ought to maximize expected value, i.e., perform the act (or one of the acts) such that no alternative to it has a higher expected value.

B. The Argument

<u>The Argument from Expected Value</u>
P1. The following decision matrix represents your situation with respect to the decision whether to believe in God:

	G	**~G**
B	∞	10
~B	-10,000	200

Why $V(\sim B|G) \neq -\infty$:

"But [God's] justice done upon the reprobate is not so vast as … His mercy shown towards the elect."

- Pascal

P2. The following probability assignments represent how likely you think it is that God exists:

P(G) = .5
P(~G) = .5

P3. If (1) and (2), then B maximizes expected value for you.
P4. If B maximizes expected value for you, then you ought to choose B.
C. Therefore, you ought to choose B.

C. Problems for the Argument from Expected Value

1. Might P(G) < .5?

III. The Argument from Dominating Expected Value

A. The Principle of Dominating Expected Value

1. The Concept of Dominating Expected Value

An act has *dominating expected value* iff it maximizes expected value for all (non-zero) probability assignments.

In other words: an act has dominating expected value iff it maximizes expected value no matter what you believe (with one exception).

2. The Principle of Dominating Expected Value

The Principle of Dominating Expected Value: If an agent is in a situation in which one of her alternatives has dominating expected value, then she ought to perform that alternative.

B. The Argument

The Argument from Dominating Expected Value
P1. The following decision matrix represents your situation with respect to the decision whether to believe in God:

	G	**~G**
B	∞	10
~B	-10,000	200

P2. If (1), then B has dominating expected value.
P3. If B has dominating expected value, then you ought to choose B.
C. Therefore, you ought to choose B.

C. Problems for the Argument from Dominating Expected Value

1. The Many-Gods Objection