

Problem for Flew: Pascal's Wager

- Flew: “If for you it is more important that **no guilty person should ever be acquitted** than that **no innocent person should ever be convicted**, then for you a presumption of guilt must be the rational policy.”
- Pascal: “Let us weigh the gain and the loss in wagering that God is... If you gain, you gain all; if you lose, you lose nothing. Wager, then, without hesitation that He is.”



	Innocent 50%	Guilty 50%
Presume Innocence	Difficult to punish innocent. +10	Easier to let guilty free. -5
Presume Guilt	-10	+5

Presume Innocence: $.5(10) + .5(-5) = 2.5$

Presume Guilt: $.5(-10) + .5(5) = -2.5$



	Innocent	Guilty
Presume Innocence	Difficult to punish innocent.	Easier to let guilty free.
Presume Guilt	Easier to punish the innocent.	Difficult to let the guilty free.



	God Exists	God Doesn't Exist
Presume Theism	Easier to "gain all" Hell more difficult	Easier to live religiously in vain.
Presume Atheism		

	WARTIME	Innocent	Guilty
	Presume Innocence	Difficult to punish innocent.	Easier to let guilty free.
✓	Presume Guilt	Easier to punish the innocent.	Difficult to let the guilty free.

		God Exists	God Doesn't Exist
✓	Presume Theism		
	Presume Atheism		

Summary

- Which would be worse: a false conviction, or a false acquittal?
 - Normally, we say false conviction. So we presume innocence.
 - On the battlefield, we say false acquittal. So we presume guilt.
- Which would be worse: believing in God in vain, or not believing in God when God exists?
 - If the former, presume atheism.
 - If the latter, presume theism.

Example of a “Dominant” Strategy

The Prisoners’ Dilemma

		Prisoner A Choices	
		<i>Stay Silent</i>	<i>Confess and Betray</i>
Prisoner B Choices	<i>Stay Silent</i>	Each serves one month in jail	Prisoner A goes free Prisoner B serves full year in jail
	<i>Confess and Betray</i>	Prisoner A serves full year in jail Prisoner B goes free	Each serves three months in jail

Strategy that Maximizes Utility

		Existence of God	
		No	Yes
Personal Conduct	Righteous	Oh Well	Whew (heaven)
	Sinful	Fun (short-term)	Damn (eternal)

The Argument

1. If a strategy will maximize your expected utility (and no other strategy dominates), it is rational to adopt that strategy.
2. Presuming theism (like presuming innocence) will maximize your expected utility (and no other strategy dominates).
3. Therefore, it is rational to presume theism.
(1, 2 MP)

“Many Gods” Objection?

1. If a strategy will maximize your expected utility (and no alternative strategy dominates), it is rational to adopt that strategy.
2. Presuming **MANY OTHER VIEWS** will maximize your expected utility (and no other strategy dominates).
3. Therefore, it is rational to presume **those many other views**. (1, 2 MP)

“Many Gods” Objection?

Not if the prior probability you assign to these many other views is super small, and we don't allow infinite utilities.

Same reason we don't all buy lottery tickets:

High potential payoff, but very low chance of winning.

2. Presuming **MANY OTHER VIEWS** will maximize your expected utility (and no other strategy dominates).
3. Therefore, it is rational to presume **those many other views**. (1, 2 MP)

Calum Miller

THE INTRINSIC PROBABILITY OF THEISM

The Problem of Priors

- If we could settle the question of prior probabilities, maybe we could settle the burden of proof question?
 - If a view has a very low prior probability, and we don't gain good evidence for it, the posterior probability will be low as well.
- But how do we determine the priors?
 - [Jaynes](#) (1968), "After nearly two centuries of discussion and debate, we still do not seem to have the principles needed to translate prior information into a definite prior probability assignment."
 - **Might be worth reflecting on how you got your priors. Arbitrary/random? Social pressure? Groups you admire?**

The Problem of Priors

- *If we could settle the question of prior probabilities, maybe we could settle the burden of proof question?*
- But priors don't matter in the criminal justice system. There, the *stakes* lead us to the presumption of innocence...
 - Maybe *I* am the accused, and I *know* I'm innocent (or guilty). We STILL put the burden on the prosecution...

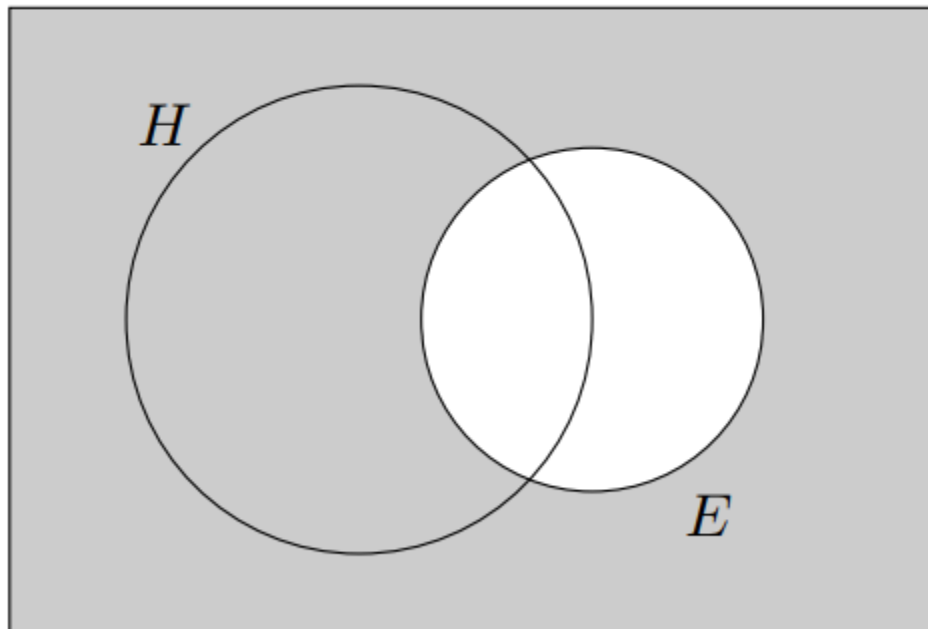
Two Questions

- What should my **CREDENCE** be, after hearing all the evidence in the God debate?
- How should I **ACT**, given that credence?
Should I go to church, pray, read more Christian philosophy, etc.? Begin a “devotional experiment” as the kids say?

Credence

$$\text{cr}_j(H) = \text{cr}_i(H | E) = \frac{\text{cr}_i(H \& E)}{\text{cr}_i(E)}$$

Updating H on E



Credence

$$\text{cr}_j(H) = \text{cr}_i(H | E) = \frac{\text{cr}_i(H \& E)}{\text{cr}_i(E)}$$

1	2	3
4	5	6

Credence

$$cr_j(H) = cr_i(H | E) = \frac{cr_i(H \& E)}{cr_i(E)}$$

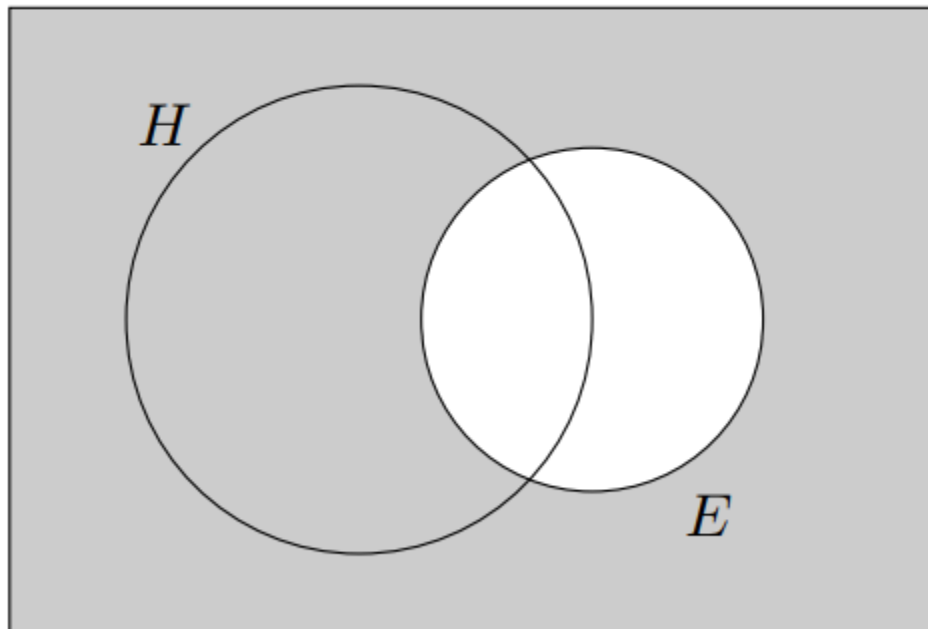
$$\begin{aligned} \text{Posterior } P(\text{six}) &= P(\text{six} | \text{four-six}) \\ &= P(\text{six} \& \text{four-six}) / P(\text{four-six}) \\ &= 1/6 / 1/2 \\ &= 1/6 * 2/1 \\ &= \mathbf{1/3} \end{aligned}$$

1	2	3
4	5	6

Credence

$$\text{cr}_j(H) = \text{cr}_i(H | E) = \frac{\text{cr}_i(H \& E)}{\text{cr}_i(E)}$$

Updating H on E



Prior Probability

- If you genuinely have NO background evidence, then either you use principle of indifference and come in at 50%, or you “take a vacation” and come in with no credence at all.
 - Probably children start with no credence at all? Like what you would do if I asked you how probable it is that Chomolungma exists.
- **But why worry about the ‘pure’ prior probability of theism, if none of us is really in the position of assessing the probability of theism on no evidence whatsoever?**
- Just assess probability of theism on your current evidence. Still tough, but much easier than assessing ‘pure’ prior probability. And it might help to quantify this by thinking about how much you’d *bet*.
 - How much wealth do you have? If you’d bet it all, you’re at 100% credence. If none, then 0% credence. If somewhere in between, that fraction of your wealth is your credence.
 - This will uncover a psychological fact about you: your confidence. But, if you’re trying your best to be rational about this, this will equal your best-faith effort to assess the actual probability, i.e. what credence it’s rational to have.

Posterior Probability

- What should my CREDENCE be, after hearing all the evidence in the God debate?
 - Update by conditionalization
 - **No one-size-fits-all verdict**
 - e.g. If you come in at X credence, and no new compelling evidence is presented, you leave at X.

Practical Policy

- How should I live, given my credence?

	God Exists 50%	No God 50%
“Devotional Experiment”	Heaven +10	Lose Sundays -5
Live Fast	Hell -10	Hedonism +5

Devotional Experiment: $.5(10) + .5(-5) = 2.5$

Live Fast: $.5(-10) + .5(5) = -2.5$

Practical Policy

- How should I live, given my credence?

	God Exists $g\%$	No God $1-g\%$
“Devotional Experiment”	Heaven $+h$	Lose Sundays $-f$
Live Fast	Hell $-h$	Hedonism $+f$

Devotional Experiment: $g(h) + (1-g)(-f) = \underline{\hspace{2cm}}$

Live Fast: $g(-h) + (1-g)(f) = \underline{\hspace{2cm}}$

In Conclusion...

- What should I **believe** if I don't encounter any great new evidence in the course of this debate?
 - It depends on what credence you bring into the debate!
- How should I **live**, given my updated credence?
 - It depends on how you fill out that Pascal's Wager table!