If We Can't Tell What Theism Predicts, We Can't Tell Whether God Exists: Skeptical Theism and Bayesian Arguments from Evil

Nevin Climenhaga

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Abstract According to a simple Bayesian argument from evil, the evil we observe is less likely given theism than given atheism, and therefore lowers the probability of theism. I consider the most common skeptical theist response to this argument, according to which our cognitive limitations make the probability of evil given theism inscrutable. I argue that if skeptical theists are right about this, then the probability of theism given evil is itself largely inscrutable, and that if this is so, we ought to be agnostic about whether God exists.

Keywords The Problem of Evil, Skeptical Theism, Agnosticism, Probability, Bayes' Theorem

In recent years, "skeptical theists" have contended that our limited cognitive capacities—for example, our ignorance of the reasons God could have to allow horrendous evils—undermine atheistic arguments from evil.[1] A common criticism of skeptical theists is that the considerations they cite in support of their skepticism about arguments from evil commit them to more radical forms of skepticism—for example, about morality, induction, or the external world.[2] In this essay I present a different skeptical challenge for skeptical theists: the way they have responded to Bayesian arguments from evil commits them to agnosticism about the existence of God—and so skepticism about theism itself.[3]

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[1] For representative skeptical theists, see Wykstra 1984, Alston 1991, van Inwagen 1991, Bergmann 2001, and Hendricks 2020a.

[2] See Russell 1996, Almeida and Oppy 2003, McBrayer 2009, Hasker 2010, and Law 2015. For critical examinations of these kinds of objections, see Beaudoin 2005, Bergmann 2009: 389–94, and Hendricks 2020b and 2021.

[3] Laraudogoitia (2000) argues that Wykstra's main skeptical theist principle, which is different from the principle I target here, also implies that we should be agnostic about whether God exists, by implying that we should be agnostic about whether there are gratuitous evils. See Snapper 2011 for a response to this argument. Other philosophers have argued that skeptical theists cannot endorse natural theological arguments. (See Beaudoin 1998, Piper 2008, and Lovering 2009. See Poston 2014 for an attempt to reconcile skeptical theism with natural theology.) My argument does not assume that natural theological arguments are necessary for rational theistic belief.

There are several different evidential arguments from evil in the contemporary philosophical literature. Skeptical theists have focused most of their attention on Rowe's 1979 argument.[4] This emphasis has sometimes obscured the difference between distinct issues: whether Rowe's inference from our inability to see a justification for the evils we observe to the (likely) falsity of theism is legitimate, and whether evil provides us with any evidence against theism at all. My focus in this essay is instead a simplified Bayesian argument from evil, which contends that the evils we observe are less likely given theism than atheism, and accordingly lower the probability of theism.[5] Sections 1–2 present this argument and the most popular skeptical theist response to it—namely, that the probability that God would allow the evils we observe is inscrutable. Sections 3–5 show that this response implies that the probability of theism on our evidence is itself mostly inscrutable, and section 6 contends that if this true, we should be agnostics. Section 7 concludes.

1. A Bayesian Argument from Evil

Call the proposition that God exists T (for theism). Different parts of our evidence are predicted to different degrees by T and ~T, and raise or lower the probability of T accordingly. These include the facts that a universe exists, that it is finely tuned for life, that it contains the evils we observe, that many people in it have religious experiences, that many people in it experience a sense of divine absence, and so on. We are interested here in the fact that the universe contains the evils we observe. Call this fact E. Some other parts of our evidence make a

[4] For example, this is the main argument targeted in Wykstra 1984, Alston 1991, Bergmann 2001, and Hendricks 2020a.

[5] This argument is similar in form to Draper's 1989 argument. Two differences are that I focus solely on known facts about evil, not good and evil, and I do not compare theism to an alternative explanatory hypothesis, but simply to the negation of theism (which I do not bother to distinguish from atheism). These choices are made for simplicity, as the skeptical theist response to Bayesian arguments that I go on to critique does not turn on these issues. There are later probabilistic arguments from evil in the literature by Rowe (1996) and Tooley (Plantinga and Tooley 2008, Tooley 2012). Tooley (2019: sec. 3.4) explains well why Rowe's 1996 argument is not the best formulation of an atheistic argument from evil, and Otte (2013: see especially pp. 92–93) explains well why Tooley's argument is not the best formulation of an atheistic argument from evil.

difference to whether E is true. For example, the universe could not contain evils if it did not exist, or did not allow for life. To the extent that T predicts the existence of a life-permitting universe more strongly than ~T, T may predict E more strongly than ~T, taking these hypotheses on their own. But it is often helpful to separate out parts of our evidence and consider their impact sequentially—noting, for example, that the existence of a life-permitting universe raises the probability of T, while the presence of evils in that universe then lowers the probability of T.[6] Let K stand for our "background evidence" that we take account of prior to E, and S stand for the rest of our evidence, which we consider subsequently to E.

Our total evidence is then S&E&K. Bayes' Theorem is a mathematical theorem of the probability calculus that lets us express P(T|S&E&K) in terms of P(T), P(S&E&K|T), and P(S&E&K|~T):

$$P(T|S\&E\&K) = \frac{P(T)P(S\&E\&K|T)}{P(T)P(S\&E\&K|T) + P(\sim T)P(S\&E\&K|\sim T)}$$

Here P(T|S&E&K) is sometimes called the *posterior probability*, with Bayes' Theorem letting us calculate this in terms of the *prior probability* P(T), and the degrees to which the evidence is made likely by T and ~T, P(S&E&K|T), and P(S&E&K|~T). We can also use Bayes' Theorem to represent the sequential impact of particular items of evidence on the probability of T. For example, after we have taken our background evidence K into account, but before we take our subsequent evidence S into account, we can use the following equation to understand how E impacts the probability of T:

$$P(T|E\&K) = \frac{P(T|K)P(E|T\&K)}{P(T|K)P(E|T\&K) + P(\sim T|K)P(E|\sim T\&K)}$$

Here P(T|K) is the prior probability and P(T|E&K) is the posterior probability.

[6] In their essay in this volume, Anderson and Russell (2021: section 1) also discuss the challenge of sensibly ordering our evidence in evaluating its impact on theism.

An alternate form of Bayes' Theorem expresses the *posterior odds* P(T|S&E&K) / P(~T|S&E&K) in terms of the *prior odds* P(T) / P(~T) and the *Bayes' factor* P(S&E&K|T) / P(S&E&K|~T). (The odds that a proposition is true is a ratio: it is the ratio of the probability that it is true to the probability that it is false. So if a hypothesis has "even odds" of being true, its probability is 1/2, and its odds 1:1. Probabilities are easily recoverable from odds; for example, if the odds of theism are 2:1, then the probability of theism is 2/(2+1) = 2/3.) According to the odds form of Bayes' Theorem:

$$\frac{P(T|S\&E\&K)}{P(\sim T|S\&E\&K)} = \frac{P(T)}{P(\sim T)} \times \frac{P(S\&E\&K|T)}{P(S\&E\&K|\sim T)}$$

An advantage of the odds form is that it lets us represent the cumulative impact of our individual items of evidence more straightforwardly. First we break down the Bayes' factor above as follows:

$$\frac{P(S\&E\&K|T)}{P(S\&E\&K|\sim T)} = \frac{P(K|T)}{P(K|\sim T)} \times \frac{P(E|T\&K)}{P(E|\sim T\&K)} \times \frac{P(S|T\&E\&K)}{P(S|\sim T\&E\&K)}$$

Substituting this for the second term on the right-hand side of the equation above, we have:

$$\frac{P(T|S\&E\&K)}{P(\sim T|S\&E\&K)} = \frac{P(T)}{P(\sim T)} \times \frac{P(K|T)}{P(K|\sim T)} \times \frac{P(E|T\&K)}{P(E|\sim T\&K)} \times \frac{P(S|T\&E\&K)}{P(S|\sim T\&E\&K)}$$

Multiplying the first two ratios on the right-hand side of this equation gives us the odds of T on K, P(T|K) / P(~T|K). Multiplying the first three gives us the odds of T on E&K, P(T|E&K) / P(~T|E&K). And multiplying all four gives us the odds of T on our total evidence S&E&K, P(T|S&E&K) / P(~T|S&E&K).

The basic idea behind a Bayesian argument from evil is that E is less probable given T than ~T, relative to our background evidence K. For instance, one might argue that E is unsurprising on ~T&K because K tells us that organic systems tend to aim at survival and reproduction, and most human and animal pain that E reports either contributes to these goals or is easily explained as a side effect of evolution selecting for these goals (Draper 1989: 338–339). E is more surprising on T&K, however, because although the above considerations still hold, the kinds of evils E describes also seem intrinsically bad, and we would expect God to avoid intrinsically bad states of affairs as much as possible.

It follows from E's being less probable on T&K than ~T&K that the third ratio in the final equation above—the Bayes' factor for E—is top-heavy, and multiplying through this ratio lowers the relative probability of T. Consequently, E is evidence against T, relative to K. This does not show that theism is improbable, all-things-considered. The overall probability of theism also depends on how probable T was given K, how much E lowers the probability of T, and how much S subsequently raises or lowers the probability of T. As such, many proponents of Bayesian arguments from evil make stronger claims than just that $P(E|T\&K)$ is lower than $P(E|{\sim}T\&K)$: for example, that it is so many times lower as to swamp other considerations relevant to the probability of theism. I will focus here only on the weaker claim that $P(E|T\&K) < P(E|{\sim}T\&K)$: that the evils we observe are *some* evidence against theism, relative to K.

This Bayesian argument from evil can be summed up as follows:

(1) $P(E|T\&K) < P(E|{\sim}T\&K)$.
(2) If $P(E|T\&K) < P(E|{\sim}T\&K)$, then $P(T|E\&K) < P(T|K)$.
(3) $P(T|E\&K) < P(T|K)$. [from (1)-(2)]

Since (2) is mathematically true (assuming that $P({\sim}T|K) > 0$), (1) is the only premise that can viably be challenged. One way to challenge (1) is to advance a theodicy, arguing that there are good reasons to expect God to allow the kinds of evils we observe (see, for example, Hick 1966, Adams 1999, and Swinburne 2004). The theist might also accept (1), and so accept the conclusion of this argument, but hold that, although evil is evidence against theism, this evidence is outweighed by other factors (e.g., the prior probability of T on K, or the evidence provided by

S).

2. The Inscrutability Response

As noted earlier, skeptical theists have tended to focus on Rowe-style arguments. As such, it is not immediately obvious how their skepticism bears on this Bayesian argument. However, Peter van Inwagen and Michael Bergmann have applied their skeptical theism to Bayesian arguments, focusing on Draper's 1989 argument.[7] Van Inwagen and Bergmann argue that we are radically ignorant about the probability of evil given theism, so that we are not in a position to say whether the probability of evil given theism is less than, equal to, or greater than the probability of evil given a rival hypothesis. Draper claims that our observations of pleasure and pain (O) are more likely given the "hypothesis of indifference" (HI)[8] than given theism. But according to Bergmann (2009), "we're in the dark about" the probability of O given theism and therefore about whether the probability of O given theism is less than the probability of O given HI (383); indeed, "there's no particular value or range (short of the range between 0 and 1) that the probability in question appears to be" (388). And according to van Inwagen (1991, 1995, 1996), we are "not in a position to assign any epistemic probability to S[9] on theism" (1991: 140), are not "in a position to know whether S is what one should expect if theism were true" (1995: 72), "do not know what to say about the probability of S on theism" (1991: 151), and should "refuse to make any judgments about the relation between the probabilities of S on theism and on HI" (1991: 142).

So van Inwagen and Bergmann do not argue that premise (1) above (or its analogue in

[7] Perrine and Wykstra (2014, 2017) offer a different skeptical theist response to Bayesian arguments from evil. For discussion, see Draper 2014, Buchak 2014, and Anderson and Russell 2021: section 3.

[8] This is the hypothesis that "neither the nature nor the condition of sentient beings on earth is the result of benevolent or malevolent actions performed by non-human persons" (Draper 1989: 332).

[9] This is "a proposition that describes in some detail the amount, kinds, and distribution of suffering—the suffering not only of human beings, but of all the sentient terrestrial creatures that there are or ever have been" (van Inwagen 1991: 137).

Draper's argument) is false; rather, they argue that we do not know whether it is true. According to this response to Bayesian arguments from evil, the probability of E given T&K is *inscrutable* to us—we have no idea what it is. This response thus endorses:

PE-SKEPTICISM The most we can tell about P(E|T&K) is that it is somewhere between 0 and 1.

If PE-SKEPTICISM is true, we cannot tell whether (1) is true. And since (1) is not only sufficient but also necessary for (3), this means that we cannot tell whether (3) is true either. So even if we can't say that evil is not evidence against theism, if PE-SKEPTICISM is true, then we also can't say that it *is* evidence against theism.

This result is already weaker than many skeptical theists want. Many skeptical theists have claimed that evil is *not* evidence against theism, not merely that we do not *know* that it is. In his influential 1984 essay defending skeptical theism (though not yet under that name), Wykstra wrote that "the suffering in the world … is not even weak evidence against [theism]" (74). Wykstra has since backed off from this claim, calling it "reckless" (1996: 148n14). But other skeptical theists' recklessness is unabated. According to van Inwagen, "the patterns of suffering we find in the actual world … do not … attain to the status of *evidence* that favors HI over theism" (1991: 161); and according to Rea (2008: 465), "the existence of evil does not count as evidence against the existence of God." Similarly, according to Howard-Snyder and Bergmann (2004a: 13), evil "doesn't so much as provide us with a reason for atheism in the first place." (See also Dougherty 2011: 388n12, 2016: section 1.2 and Hasker 2010: 15, which take the claim that evil does not provide evidence against theism to be a core commitment of skeptical theism.) It is unclear, though, how PE-SKEPTICISM could deliver this result. For it seems that PE-SKEPTICISM only implies that we *don't know* whether suffering is evidence against theism, not that it *is not* evidence against theism (Benton, Hawthorne, and Isaacs 2016: 14–15). Perhaps we could deliver this result with a non-standard analysis of evidential favoring—e.g., saying that P is evidence for Q only if we know that P raises the probability of Q. At any rate, my subsequent critique of PE-SKEPTICISM is orthogonal to the correct analysis of evidential favoring, so I will not pursue this issue further.

While some discussions, such as McBrayer 2010 and Draper 2016, take something like PE-SKEPTICISM to be definitive of skeptical theism, not all professed skeptical theists endorse PE-SKEPTICISM. Hendricks (2020b: 63) writes that "skeptical theism does not (at least obviously) entail that we are in the dark about the probability of God having a morally justifying reason for some action, since it (skeptical theism) is compatible with our knowing that there is no such reason for God to perform some action." Perrine and Wykstra's (2014, 2017) response to Bayesian arguments from evil and Poston's (2014) defense of skeptical theism's compatibility with Bayesian natural theological arguments suggest they would not endorse PE-SKEPTICISM either.

Nevertheless, many skeptical theists have made similar claims about other probabilities. Bergmann and Rea (2005) grant that skeptical theism implies that moral agents are "unable sensibly to assign any probability to" their actions having all-things-considered good or bad consequences (249–250). Concerning the probabilities in Tooley's argument from evil, Plantinga writes, "The right attitude, here, is abstention, withholding belief" (Plantinga and Tooley 2008: 173). Otte (2013: 95) agrees with Plantinga that we can rationally "withhold judgment on these probabilities." And Howard-Snyder and Bergmann (2004a, 2004b) defend skepticism about probabilistic judgments in a wide variety of arguments from evil, writing about a probability in one of Rowe's later arguments that "we are in the dark about what probability to assign" (2004b:

29).[10] Examples like these suggest that many self-identified skeptical theists would also endorse skepticism about our knowledge of P(E|T&K). Consequently, while my critique of PE-SKEPTICISM may not apply to all skeptical theists, it will apply to many of them.

Before I move on, two other clarificatory notes. First, some philosophers, in the tradition of Ramsey (1926/1990) and de Finetti (1931/1989), understand probabilities to be subjective degrees of confidence. But the probabilities under discussion in this debate are objective in the sense that they are not just a matter of one's own degrees of confidence. (As Benton, Hawthorne, and Isaacs (2016: 14–15) note, "If the probabilities at stake are subjective, then there's nothing substantial to be ignorant about.") Instead, they are "epistemic probabilities" (Draper 1989: 333; van Inwagen 1991: 137), which constrain what degrees of confidence it is rational to have.[11]

Second, PE-SKEPTICISM should be understood as making a strong inscrutability claim: we do not have any kind of epistemic access to P(E|T&K). It's not just that we cannot *know* that, say, P(E|T&K) is between 0 and .5—we cannot justifiably believe this, we cannot know/justifiably believe that this proposition has a (higher-order) probability of .5 (see Bergmann 2009: 384–385), and so on. With this clarification in mind, in my subsequent discussion I will follow skeptical theists who endorse the inscrutability response in moving freely back and forth between different epistemic locutions (what we can tell/say/know/see, what is epistemically possible for us, what we're in the dark about, etc.).

3. The Implications of the Inscrutability Response

In this section I will argue that PE-SKEPTICISM implies

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[10] Also, while in his 1994 response to Draper 1989 Howard-Snyder does not quite claim that the probabilities in Draper's argument are inscrutable, he does write that "a reasonable nontheist with a full understanding of Draper's arguments might well believe that P(O/HI) = P(O/theism), or that P(O/HI) ? P(O/theism)" (Howard-Snyder 1994: 465). He does not clarify what the latter means.

[11] There is much more to say about the nature of (epistemic) probabilities, and I say much of it elsewhere (see Climenhaga 2019, 2020b, 2021). For present purposes, this minimal characterization is sufficient.

PT-SKEPTICISM The most we can tell about P(T|E&K) and P(T|S&E&K) is that:

(a) P(T|E&K) is somewhere between 0 and *n*, and
(b) P(T|S&E&K) is somewhere between 0 and *m*,

where *n* = P(T|K) / [P(T|K) + P(~T|K)P(E|~T&K)] and *m* = P(T|K)P(S|T&E&K) / [P(T|K)P(S|T&E&K) + P(~T|K)P(E|~T&K)P(S|~T&E&K)].

Informally, this means that if we should be agnostic about the probability of evil given theism, (a) we should be largely agnostic about the probability of theism given evil, allowing that it could be anywhere from a lower bound of 0 to an upper bound determined by the prior probability of theism and the probability of evil given atheism, and (b) taking subsequent evidence into account can change the upper bound of this probability, but not its lower bound.[12]

Let's begin with (a). For illustration, suppose we have the following probabilities:

P(T|K) = 9/10
P(~T|K) = 1 – P(T|K) = 1/10
P(E|T&K) = 1/1000
P(E|~T&K) = 1/10

Then the regular form of Bayes' Theorem gives us:

$$P(T|E\&K) = \frac{(9/10)(1/1000)}{(9/10)(1/1000) + (1/10)(1/10)} = \frac{9/10{,}000}{9/10{,}000 + 1/100} = \frac{9}{109}$$

The odds form gives us:

$$\frac{P(T|E\&K)}{P(\sim T|E\&K)} = \frac{9/10}{1/10} \times \frac{1/1000}{1/10} = \frac{9}{1} \times \frac{1}{100} = \frac{9}{100}$$

Since the posterior odds of T are 9:100, the posterior probability of theism is 9/109, agreeing with our first calculation. The odds form is in some ways more illuminating, though, in that it illustrates that what matters for the posterior probability of T is not the absolute values of

[12] Benton, Hawthorne, and Isaacs (2016: 16n36) suggest something similar in passing, but do not develop the point or explore its consequences. They write: "Note also that given standard accounts of vagueness in probability assignments, maximal vagueness regarding the relationship between God and evil will, given evil, require maximal vagueness about God." (As we will see, their claim here is not quite right—P(E|T&K) being maximally inscrutable only implies that P(T|E&K) is *partially* inscrutable, not that it is maximally inscrutable.)

P(E|T&K) and P(E|~T&K), but their relative values—that is, how many times more or less likely evil is on theism than atheism. In the above calculation, evil is 100 times less likely on theism than on atheism, so that even though theism starts out 9 times more likely than atheism, it ends up about 11 times less likely.

This looks like bad news for the theist. The proponent of PE-SKEPTICISM responds to this bad news not by offering a specific higher value for P(E|T&K) (or even a somewhat imprecise range of values), but rather by insisting that our cognitive limitations make this probability inscrutable to us. All we can say about P(E|T&K) is that it is somewhere between 0 and 1.

The best-case scenario is that P(E|T&K) is equal to 1. This best-case scenario gives us an upper bound on P(T|E&K):

$$P(T|E\&K)_{high} = \frac{P(T|K)(1)}{P(T|K)(1) + P(\sim T|K)P(E|\sim T\&K)} = \frac{P(T|K)}{P(T|K) + P(\sim T|K)P(E|\sim T\&K)}$$

Filling in the numbers from above, we have:

$$P(T|E\&K)_{high} = \frac{(9/10)(1)}{(9/10)(1) + (1/10)(1/10)} = \frac{9/10}{9/10 + 1/100} = \frac{90}{91} \approx .989$$

But the worst-case scenario for P(T|E&K) is that P(E|T&K) is equal to 0. This worst-case scenario gives us a lower bound on P(T|E&K):

$$P(T|E\&K)_{low} = \frac{P(T|K)(0)}{P(T|K)(0) + P(\sim T|K)P(E|\sim T\&K)} = \frac{0}{P(\sim T|K)P(E|\sim T\&K)} = 0$$

Since, holding the other probabilities fixed, P(T|E&K) increases continuously as P(E|T&K) increases from 0 to 1, this shows that if P(E|T&K) could be anywhere between 0 and 1, then P(T|E&K) could be anywhere between 0 and P(T|K) / [P(T|K) + P(~T|K)P(E|~T&K)], which given the above numbers is equal to about .989. This outcome looks like bad news for the theist too. For it means that once we learn E, we cannot tell whether theism is probable. Maybe it is, but maybe it isn't; and we're not in a position to say which of these is the case.

Now turn to (b). One might initially think that while this argument shows that we can't tell whether the probability of theism given evil is high, we may still be able to tell that the probability of theism given *our total evidence* is high. Part (b) of PT-SKEPTICISM rules this out. The odds form of Bayes' Theorem makes it easy to see that adding S to our evidence does not increase the lower bound of the probability of theism:

$$\frac{P(T|E\&K)}{P(\sim T|E\&K)} = \frac{P(T|K)}{P(\sim T|K)} \times \frac{P(E|T\&K)}{P(E|\sim T\&K)}$$

$$\frac{P(T|S\&E\&K)}{P(\sim T|S\&E\&K)} = \frac{P(T|K)}{P(\sim T|K)} \times \frac{P(E|T\&K)}{P(E|\sim T\&K)} \times \frac{P(S|T\&E\&K)}{P(S|\sim T\&E\&K)}$$

If P(E|T&K) = 0, then the output of both these equations is 0. It doesn't matter how top-heavy the Bayes' factor for S is; multiplying 0 by any other number still yields a product of 0. So continuing to add more evidence will never make the odds (and so, probability) of theism greater than 0. Hence, $P(T|S\&E\&K)_{low} = 0$.

As for $P(T|S\&E\&K)_{high}$, whether this is higher or lower than $P(T|E\&K)_{high}$ depends on whether S is more likely on T&E&K or ~T&E&K—that is, whether the final ratio above is top-heavy or bottom-heavy. If the former, the upper bound goes up; if the latter, it goes down. The regular form of Bayes' Theorem gives us a more precise statement of this upper bound:

$$P(T|S\&E\&K)_{high} = \frac{P(T|K)(1)P(S|T\&E\&K)}{P(T|K)(1)P(S|T\&E\&K) + P(\sim T|K)P(E|\sim T\&K)P(S|\sim T\&E\&K)}$$

$$= \frac{P(T|K)P(S|T\&E\&K)}{P(T|K)P(S|T\&E\&K) + P(\sim T|K)P(E|\sim T\&K)P(S|\sim T\&E\&K)}$$

So, if the skeptical theist says that the probability of evil given theism relative to K is inscrutable, then the probability of theism given evil and the rest of our evidence will itself end up nearly inscrutable, with the lower bound of this probability being 0 and its upper bound depending on P(T|K), P(E|~T&K), P(S|T&E&K), and P(S|~T&E&K). The lower bound is 0 no matter what because, in the extreme case where P(E|T&K) = 0, E is (relative to K) inconsistent with T.[13] The best the theist can then do is to try to push the upper bound of this probability up, for example by arguing that S is more likely on T than ~T. Or he could perhaps hold that P(E|~T&K) is *also* inscrutable, so that it becomes possible that the value of P(E|~T&K) is 0. This would make the upper bound of P(T|E&K) and P(T|S&E&K) 1. This gives us a wider range than we had before—the probability of theism becomes completely rather than just nearly inscrutable. But we remain unable to rule out the possibility of theism being arbitrarily improbable, so long as we maintain that P(E|T&K) is inscrutable.

4. When is Knowledge of One Probability Necessary for Knowledge of Another?

In this section and the next I will consider two objections to my argument that PE-SKEPTICISM implies PT-SKEPTICISM. The first objection is that even if our ignorance of P(E|T&K) means we can't calculate the values of P(T|E&K) and P(T|S&E&K) using Bayes' Theorem, we could still come to know their values in some other way.

To see the force of this objection, consider the following example. Let H stand for the proposition that a fair coin lands heads on the next toss. I can know that P(H) = 1/2. But it is a theorem of the probability calculus that, for any X:

P(H) = P(X&H) + P(~X&H)

Now pick some X such that I am ignorant of P(X&H) and P(~X&H). For example, let X be the proposition that of the 100 tosses of the coin after this one, 53 will land heads. I do not know the probability that this coin will land heads on the next toss and on 53 of the following 100. I also

[13] One might argue that Plantinga (1974) has shown that E is not inconsistent with T. If this is true, then we should revise PE-SKEPTICISM to say that P(E|T&K) could be anywhere in the range (0,1], and PT-SKEPTICISM to say that P(T|E&K) could be anywhere in the range (0, *n*] and P(T|S&E&K) anywhere in the range (0, *m*]. In this case, we could know that P(T|E&K) is not 0, but we could not know that it is not arbitrarily close to 0. And adding in S does not help, because even if S includes evidence that raises the probability of God's existence, since we can't rule out P(T|E&K) being arbitrarily close to 0, we can't rule out P(T|S&E&K) being arbitrarily close to 0 either.

do not know the probability that this coin will land heads on the next toss and not on 53 of the following 100. Even so, I know that P(H) = 1/2.

So there are cases where a mathematical function relates probabilities, but we know the value of the output of the function (P(H)) without knowing the values of the inputs (P(X&H), P(~X&H)). In other cases, though, knowledge of the inputs to a function *does* seem necessary for knowledge of the output. Consider the following equivalence:

$$P(X\&H) = P(H)P(X|H)$$

Since X and H are independent, P(X|H) = P(X), and the above equation reduces to:

$$P(X\&H) = P(H)P(X)$$

In this case, if I don't know what P(X) is, I can't know what P(X&H) is either—for the only way I could figure out the value of P(X&H) is by calculating it by the above equation.[14]

What makes these two cases different? In Climenhaga 2020b: 3225–3228 and 2021: section 5, I argue that we need to calculate one probability in terms of another when the value of the former *depends* on the value of the latter.[15] The difference between the first and second cases above is that the value of P(X&H) depends on the value of P(X), while the value of P(X) does not depend on the value of P(X&H). Consequently, the second case expresses P(X&H) as a function of probabilities that are more epistemically accessible, like P(X), while the first case expresses P(H) as a function of probabilities that are less epistemically accessible. I do not need to know P(X&H) and P(~X&H) to calculate P(H); I can just directly see that P(H) = 1/2. But no

[14] Objection: I could know the value of P(X&H) through empirical means, e.g., testimony. Granted. But I do not know of any skeptical theists who have suggested that we can know the value of P(T|S&E&K) through empirical means like testimony or revelation. And if we *could* know the value of P(T|S&E&K) in this way, then PE-SKEPTICISM becomes unnecessary as a response to a Bayesian argument from evil. If we know on independent grounds that the probability of theism on my total evidence is high, then those independent grounds are the appropriate response to the Bayesian challenge: adding that P(E|T&K) is inscrutable does nothing to help respond to the Bayesian argument.

[15] There are few other discussions in the literature of when knowledge of one probability is necessary for knowledge of another. Dogramaci (2018: 15–16) discusses a very similar problem, but laments that he has no solution to it.

such direct knowledge of P(X&H) is available to me in the second case.

In Climenhaga 2020b, I develop a more general theory of the dependence relations that hold between different probabilities, which I call *Explanationism*. According to Explanationism, the dependence relations among probabilities are determined by the dependence relations among the propositions those probabilities relate. In particular, the most metaphysically fundamental probabilities are the probabilities of atomic propositions conditional on direct influences. (See Climenhaga 2020b: section 2.3 for a more precise statement of this idea.) For our purposes here, the most important aspect of Explanationism is that it agrees with standard expositions of Bayes' Theorem[16] that Bayes' Theorem is necessary to calculate what were historically called "inverse probabilities" (e.g., Venn 1866: section VI.9; this terminology survives in some contemporary texts, including Beaudoin 1998 and Poston 2014)—that is, the probabilities of causes given effects, or of explanantia given explananda.

Theism is a hypothesis about the ultimate origins of contingent things. Consequently, theism is explanatorily prior to all our empirical evidence, and to figure out the probability, or even approximate probability, of theism given this evidence, we need to employ Bayes' Theorem (cf. Swinburne 2004). The existence or non-existence of God is part of what explains, to a greater or lesser degree, evil, fine-tuning, religious experiences, divine hiddenness, miracle reports, and so on. So, in order to figure out how probable theism is, given these evidences, we need to employ Bayes' Theorem: looking at how probable theism is apart from these evidences, and how strongly theism and atheism predict these evidences.

As an analogy, consider a stock example of Bayesian reasoning. We have two urns, U_1 and U_2, that we choose between by coin flip. U_1 has one black ball and two white balls; U_2 has

[16] See Climenhaga 2020b: 3226–3227 for references on this point.

one black ball and one white ball. We draw a ball from the urn, set it aside, and draw a second ball. Our first draw is white (W_1) and our second draw black (B_2). Here there are several probabilities we can see directly. We can immediately see the probabilities of selecting one of two urns by coin flip (1/2), drawing white from an urn with one black and two white balls (2/3), drawing white from an urn with one black and one white ball (1/2), drawing black from an urn that now has one black and one white ball (1/2), and drawing black from an urn that now has one black ball (1). That is, we can see that:

$P(U_1) = 1/2$
$P(W_1|U_1) = 2/3$
$P(W_1|{\sim}U_1) = P(W_1|U_2) = 1/2$
$P(B_2|W_1\&U_1) = 1/2$
$P(B_2|W_1\&{\sim}U_1) = P(B_2|W_1\&U_2) = 1$

Now consider the probability of U_1 on our evidence after each draw. We cannot directly tell what $P(U_1|W_1)$ is. This is because W_1 is explanatorily downstream from U_1 and U_2. We need to employ Bayes' Theorem, which lets us calculate $P(U_1|W_1)$ in terms of the above probabilities. The odds form gives us:

$$\frac{P(U_1|W_1)}{P(U_2|W_1)} = \frac{P(U_1)}{P(U_2)} \times \frac{P(W_1|U_1)}{P(W_1|U_2)} = \frac{1/2}{1/2} \times \frac{2/3}{1/2} = \frac{1}{1} \times \frac{4}{3} = \frac{4}{3}$$

So $P(U_1|W_1) = 4/7$.

We cannot directly tell what $P(U_1|B_2\&W_1)$ is either. Since W_1 makes a difference to how strongly U_1 and U_2 predict B_2, we need to calculate the impact of B_2 relative to W_1, by first taking W_1 into account and then subsequently taking B_2 into account, giving us:

$$\frac{P(U_1|B_2\&W_1)}{P(U_2|B_2\&W_1)} = \frac{P(U_1)}{P(U_2)} \times \frac{P(W_1|U_1)}{P(W_1|U_2)} \times \frac{P(B_2|U_1\&W_1)}{P(B_2|U_2\&W_1)} = \frac{1}{1} \times \frac{4}{3} \times \frac{1/2}{1} = \frac{1}{1} \times \frac{4}{3} \times \frac{1}{2} = \frac{2}{3}$$

So $P(U_1|B_2\&W_1) = 2/5$.

If we did not know all the probabilities on the right-hand side of these equations, then we could not know the posterior probabilities on the left-hand side. Our application of Bayes' Theorem to theism in sections 1–2 gave us equations analogous to the above, with the multiple draws W_1 and B_2 replaced by our multiple evidences K, E, and S.[17] In that case, ignorance about P(E|T&K) makes us ignorant about P(T|E&K) and P(T|S&E&K), because there is no other way for us to determine the value of these probabilities except by calculating them in terms of P(E|T&K).

We have seen that ignorance of one probability does not always lead to ignorance of other probabilities it is mathematically related to. But I have argued, both from first principles and from analogy, that ignorance of the probability of evil given theism leads to ignorance of the probability of theism given evidence that includes evil.

One might worry that this argument proves too much. Let's suppose that I can calculate the probability of theism on my current total evidence S&E&K. Aren't there other propositions I could easily learn that I don't know the probability of, relative to theism? An anonymous referee suggests the following example: I tie my left shoe first this morning. Call this proposition Y. According to the odds form of Bayes' Theorem:

$$\frac{P(T|Y\&S\&E\&K)}{P(\sim T|Y\&S\&E\&K)} = \frac{P(T|S\&E\&K)}{P(\sim T|S\&E\&K)} \times \frac{P(Y|T\&S\&E\&K)}{P(Y|\sim T\&S\&E\&K)}$$

If the probability of Y given theism and my background evidence is inscrutable to me, then doesn't my argument imply that the probability of theism on my new total evidence (which includes Y) is similarly inscrutable? And isn't this an implausible result?

[17] Perhaps this division of our evidence is still too coarse, and we need to break it down further. (Callahan (2016) argues that improperly carving up our evidence can lead us to misevaluate the impact of learning about evil on the probability of theism.) But this will not help the skeptical theist. For the advocate of a Bayesian argument from evil will then argue that more specific facts about evil are less likely given theism than atheism. If the skeptical theist replies that the relevant probabilities are inscrutable, he will face the same problem. If at any point in our calculation the probability of some part of E given T and our background evidence is inscrutable, it will not matter what subsequent evidence we add: we will never be able to rule out the possibility that the posterior probability of T is arbitrarily low.

I agree that this would be an implausible result, but I don't think my argument commits me to it. Let's grant, for the sake of argument, that I don't know, even approximately, what the probability of Y given T&S&E&K is. Perhaps my old evidence (S&E&K) includes some subtle information (about handedness, how which shoe I tie first is impacted by which shoe I put on first, the fact that we write left to right in my culture, etc.) that I can see is relevant to Y, but I can't quite see how (does my being right-handed make it more or less likely that I tie my left shoe first?). Even so, while in this case I cannot give a very precise estimate of P(Y|T&S&E&K), I think I *can* say something much more precise about the Bayes' factor P(Y|T&S&E&K) / P(Y|~T&S&E&K): namely, it is equal to 1. Whatever the probability is on my background evidence that I tie my left shoe first this morning, theism does not raise or lower that probability. Consequently, the probability of theism on my new evidence is the same as it was on my old evidence.

This situation is not unusual (cf. McGrew 2003: 560). We can often discern the relative value of two quantities without knowing their absolute values. For example, I might be able to tell that one tree is about twice as tall as another without having any idea what their absolute heights are. Similarly, even if I do not know even the approximate value of P(Y|T&S&E&K), I might still be able to tell that it is equal to P(Y|~T&S&E&K).[18]

Note too that nothing I have said implies that my knowledge of the equality of P(Y|T&S&E&K) and P(Y|~T&S&E&K) must be consciously articulated or made explicit for me to know something about the probability of theism on my total evidence. We often have an

[18] This example illustrates why we often do not need to explicitly account for every detail of our evidence in calculating the probabilities of hypotheses: many of these details are irrelevant, because (relative to the evidence we have already taken into account) they are equally likely on the different hypotheses under consideration. For instance, once we have noted that many non-human animals experience apparently biologically useless pain (Draper 1989), T and ~T plausibly do not make different predictions about which animals will experience which pains, and so we can safely ignore these details in calculating the evidential impact of facts about non-human animal pain on theism.

implicit sense of how strongly different parts of our evidence are predicted by various explanatory theories, and on this basis make rough judgments about the comparative probabilities of those theories on that evidence. But PE-SKEPTICISM rules out even rough, implicit, comparative knowledge of P(E|T&K). It says we are completely in the dark about this probability, and not in any position to compare it to other probabilities, such as P(E|~T&K). Consequently, it leaves us no way to come to knowledge of P(T|E&K) or P(T|S&E&K).

To be clear: calculating the probability of theism on our total evidence is a difficult task, and other propositions will pose greater challenges to this task than Y. But many probabilities are more scrutable than initial intuition might suggest, and we often only need approximate and comparative knowledge of how probable different theories make our evidence to have some knowledge of how probable that evidence makes those theories. Substantive conclusions about the probability of theism on our total evidence are possible if we resist the siren song of radical skepticism about the probability of evil on theism.

5. A Different Way to Understand Inscrutability?

The second objection to my argument is that my interpretation of the claim that P(E|T&K) is inscrutable is not the most charitable one. Instead of understanding this as the claim that we do not *know* what P(E|T&K) is, we should understand it as the claim that this probability *does not exist*. E simply has no probability relative to T&K. Consequently, we do not need to take uncertainty about the value of P(E|T&K) into account in our reasoning, because there is nothing there to be uncertain about.

Murphy (2017) endorses this view, although he does not see it as a form of skeptical theism. Murphy thinks that God has justifying reasons, but not requiring reasons, to prevent creaturely evils. Because of this, Murphy says, "the probability of this distribution of pains [that we observe] is just *inscrutable* given my account of the Anselmian being's ethics" (Murphy 2017: 109). But he goes on to clarify that (unlike skeptical theists) by this he means not that we cannot *tell* what the actual probability is: rather, "there is no such probability to detect. As the features of the created world are a matter of divine discretion, there are no such reasons that so much as dispose, however mildly, the Anselmian being to create one way or another."[19]

If P(E|T&K) does not exist, though, we have to consider what this means for P(T|S&E&K). Consider again the odds form of Bayes' Theorem from section 1:

$$\frac{P(T|S\&E\&K)}{P(\sim T|S\&E\&K)} = \frac{P(T)}{P(\sim T)} \times \frac{P(K|T)}{P(K|\sim T)} \times \frac{P(E|T\&K)}{P(E|\sim T\&K)} \times \frac{P(S|T\&E\&K)}{P(S|\sim T\&E\&K)}$$

This equation expresses the odds of theism on our total evidence S&E&K as a function of the intrinsic odds of theism and the relative degrees to which theism and atheism predict K, E, and S, in turn. According to the theory developed in Climenhaga 2020b, these latter quantities are not merely more epistemically accessible than the former—the former are *grounded* in the latter. That is, the probability theism gives to the features of the created world being the way they are is not only necessary to calculate the probability of theism given those features—it is part of what determines that probability. This is because the truth or falsity of theism influences what the world is like. Consequently, if P(E|T&K) does not exist, then neither does P(T|S&E&K). In this case, it's not that we cannot tell what probability theism has relative to our total evidence. There *is* no probability that theism has relative to our total evidence.[20] Whereas on our initial

[19] See Climenhaga 2020a for some reasons to think that this argument is not valid—that is, that the existence of divine discretion in choosing between different options does not imply that the probability of choosing one option rather than another is non-existent.

[20] Some libertarians view free human actions similarly to the way Murphy views divine actions: as having no antecedent probability of occurring (Hájek 2003: 303–305, Buchak 2013, Vicens 2016). An anonymous referee points out that this view may have similar skeptical consequences. For example, suppose that the writing of *Hamlet* is a free action. The probability that Shakespeare existed, given our total evidence (which includes the fact that *Hamlet* was written), is partially determined by the probability that *Hamlet* was written, given that Shakespeare existed. So, if this latter probability does not exist, neither does the former. Inasmuch as we think that the probability

interpretation of inscrutability it was at least epistemically possible that theism is highly probable on our evidence, on this interpretation we can know that theism is *not* probable on our evidence (albeit not improbable either). This doesn't seem to make it easier to rationally believe theism.

Perhaps, instead of saying that P(E|T&K) does not exist at all, the skeptical theist could say that P(E|T&K) does exist, but is *imprecise*—in particular, vague from 0 to 1.[21] On this interpretation of inscrutability, it's not that we do not know where in the range [0,1] P(E|T&K) falls. Rather, P(E|T&K) is spread out over this whole range.

If P(E|T&K) is vague from 0 to 1, then the argument of section 3 will imply that P(T|E&K) is similarly vague from 0 to *n*, and P(T|S&E&K) vague from 0 to *m*, where *n* and *m* are defined as in section 3. Again, this doesn't seem to put the theist in a better position than just not knowing where in these ranges these probabilities fall.

If P(T|K) was not already imprecise, then P(T|E&K) ending up vague from 0 to *n* is an example of *dilation*—a phenomenon where conditionalizing on additional evidence makes the probability of a proposition less precise. And moving from knowledge of the precise value of P(T|K) to ignorance of where in the range from 0 to *n* P(T|E&K) lies, while not strictly speaking dilation, is formally analogous to dilation—metaphysical vagueness is just replaced by epistemic uncertainty. There is extensive discussion of dilation in the literature on imprecise probability (Good 1974, Seidenfeld and Wasserman 1993, White 2010, Joyce 2011, Rinard 2013, Bradley 2019).[22] The debate in that literature, though, is not over whether imprecise probabilities lead to dilation. Everyone agrees that, as one imprecise probabilist puts it, dilation "is entirely

that Shakespeare existed, given our total evidence, is high (rather than nonexistent), this gives us reason to reject views on which there is no antecedent probability that Shakespeare would write *Hamlet*.

[21] Plantinga (1993: 168) suggests that some epistemic probabilities are imprecise, so perhaps he would endorse this version of the inscrutability response. Roughly, Plantinga's suggestion is that P(Q|P) is vague from *x* to *y* iff this is the range of credences that a rational person with P as evidence could have in Q.

[22] This literature tends to interpret probabilities as degrees of belief, making the debate about whether credences can (or should be) imprecise. This does not make a difference to the formal results, though.

unavoidable on any view that allows imprecise probabilities" (Joyce 2011: 299). The debate is over whether this is an acceptable result. Defenders of imprecise probabilities think that if "you do not know how to interpret [a proposition's] evidential relevance you do not know how your probability should change. The proper result is dilation" (Joyce 2011: 310). Similarly, it is hard to avoid the conclusion that PE-SKEPTICISM (or a metaphysical analogue) implies PT-SKEPTICISM (or a metaphysical analogue). But it remains an open question whether this is an acceptable result. It is to this question I now turn.

6. Inscrutable Probabilities and Rational Theistic Belief

I have argued that if we are unable to tell how probable evil is, given theism, then we are unable to tell how probable theism is, given evidence that includes evil. In this section, I will argue that if we are unable to tell how probable theism is, given our evidence—in particular, if we are unable to tell that the probability of theism on our evidence is high—then we cannot rationally believe that God exists. This is because rational belief in a proposition not only requires that one's evidence support that proposition; it also requires that one's belief be responsive to that evidential support.

Our total evidence is S&E&K. I take it that there is some $t > 0$ such that theistic belief is rational only if $P(T|S\&E\&K) > t$.[23] Let's suppose that this condition is met. Even so, this condition is not yet sufficient for rational theistic belief. Consider Andy. Andy decides what to believe by flipping a coin: if it lands heads, he believes theism; if tails, atheism. It lands heads, and Andy believes theism. Even though theism is probable on Andy's evidence, Andy's belief is not rational. This is because Andy's belief violates a *basing* condition on rational belief: it is not

[23] This is a weak assumption: it is compatible with the threshold for rational belief being below .5, and with this threshold varying according to contextual factors—such as the stakes or what rival hypotheses one has considered. This assumption also does not imply that natural theological evidence is necessary to rationally believe theism. For example, perhaps the probability of T given S&E&K is above t because the intrinsic probability of T is above t, or because S&E&K includes experiential facts that confirm T.

based on his evidence.

Merely being caused by one's evidence is not enough for a belief to meet the relevant basing condition. Consider Beth. Beth decides what conclusions to infer from what evidence by drawing a labeled ball from an urn. Each label randomly specifies what propositions to infer from different possible bodies of evidence. Beth draws a ball that tells her (among other things) to infer that God exists from evidence S&E&K. Since S&E&K is her actual evidence, she infers that God exists. Beth's theistic belief is caused by evidence that makes theism probable, but Beth's belief is also not rational. This is because Beth's belief is not connected to her evidence *in the right way*: she forms her belief in response to evidence S&E&K not because S&E&K makes her belief probable, but because the ball she drew tells her to do this.

These examples suggest that for theistic belief based on S&E&K to be rational, this basing must somehow be connected to the fact that $P(T|S\&E\&K) > t$. Exactly what this connection amounts to is a difficult question.[24] It may not need to involve conscious recognition that $P(T|S\&E\&K) > t$. But it is plausible that if this probabilistic fact (if it is a fact) is obscured from us in the way that PT-SKEPTICISM implies, then our beliefs cannot be properly responsive to it, and we cannot believe theism in a way that satisfies this basing requirement. It is also plausible that if we are unable to rationally φ, then it's not the case that we ought to φ. So, if PT-SKEPTICISM is true, then we cannot rationally believe theism, and it's not the case that we ought to believe theism. The same will plausibly be true for atheism, if the upper bound for the probability of theism on our evidence is quite high. So, we ought to be agnostic.

This argument is more open to dispute than the argument that PE-SKEPTICISM implies PT-SKEPTICISM, turning as it does on a particular view of epistemic basing and rational belief. Still,

[24] See Dogramaci 2018 for exploration of a similar question about basing for rational credences.

rejecting it is not without cost. Suppose the proponent of PT-SKEPTICISM holds that theistic belief can be rational provided that theism is sufficiently probable on one's evidence, even if one is unable to tell that this is so. In this case, even if we can rationally believe that God exists, we cannot rationally believe that our belief is rational. If someone asks us, "Do you think that God exists?" we could say "Yes," but if she then asks, "Is it reasonable for you to think that?" we would have to say "I have no idea." This is an undesirable result. Moreover, it is not guaranteed that we *can* rationally believe that God exists. It depends on what the unknown probabilities are. This is a weaker result than most skeptical theists want—most skeptical theists want to say, not merely that our cognitive limitations mean that, *for all we know*, the evils we observe do not make theistic belief irrational, but that, *in fact*, they do not make theistic belief irrational.

A more promising way to resist the above argument is to hold that rational belief is *permissive* in that it does not require that the believed proposition be sufficiently probable on one's evidence, but only that it be epistemically possible that this proposition is sufficiently probable on one's evidence.[25] This permissive skeptical theist can claim that, for all he knows, the probability of theism on his evidence is quite high, and that it's thus permissible for him to believe that theism is true.

This is at best a partial victory for the theist. For the atheist could apply the same reasoning to conclude that, since for all she knows the probability of theism given evil is arbitrarily low, she can believe that theism is false. Moreover, since no new evidence can raise the lower bound of the probability of theism, the atheist could make this same move after being presented with any further evidences for theism. She could, in other words, not only reject theism on the basis of evil, but ignore any other evidences for theism on this same basis—since, for all

[25] Alternatively, our permissivist could hold that the probability of theism on our evidence is *imprecise* from 0 to *m* (see section 5 above), that we are permitted to adopt any credence in this range, and that full belief is rational if our credence is sufficiently high.

she knows, the probability of theism relative to evil and these further evidences is still arbitrarily low.

This particular permissive epistemology also has counterintuitive consequences. Consider the proposition M: a meteorite will strike Earth tomorrow, with the fallout wiping out most of the human race. M would be a great evil, the kind of thing that would have been included in E had it already occurred. This suggests that if the probability of E given theism and our background evidence is inscrutable, the probability of M given theism and our background evidence is similarly inscrutable. But this implies that the probability of M on our evidence could be at least as high as the probability of T on our evidence. For if P(T|S&E&K) could be as high as m, and P(M|T&S&E&K) could be as high as 1, then P(M|S&E&K) could be at least as high as:[26]

$$P(M|S\&E\&K) = P(T|S\&E\&K)P(M|T\&S\&E\&K) + P({\sim}T|S\&E\&K)P(M|{\sim}T\&S\&E\&K)$$

$$= (m)(1) + (1-m)P(M|{\sim}T\&S\&E\&K) > m$$

Hence, if the upper bound for P(T|S&E&K) is high enough to justify belief in T, the upper bound for P(M|S&E&K) is high enough to justify belief in M—even though M is intuitively something we should be very confident is false.

Perhaps a more complicated permissivism could avoid this result—e.g., by varying the threshold for sufficient probability according to contextual factors, or adding other criteria propositions must meet to be rationally believable. Still, filling out the details of this more complicated permissivism in a way that delivers the desired results is a non-trivial task. For example, the most common pragmatic arguments for belief in God, such as Pascal's wager, involve expected utility calculations. But expected utility calculations require both utilities and probabilities. If we have no idea what the relevant probabilities are, it is difficult to see how one

[26] This is the Theorem of Total Probability, which lets us calculate the probability of M as a weighted average of its probability on different hypotheses (see Climenhaga 2020b: 3221).

could argue that theistic belief has higher expected utility than atheistic belief.[27]

Finally, even if PT-SKEPTICISM does not demand agnosticism about the existence of God, it still implies an implausible degree of probabilistic skepticism. PT-SKEPTICISM does not imply just that we can't tell whether *our* total evidence makes theism probable. It implies that we can't tell whether *any* evidence that includes E makes theism probable. Imagine you prayed to God for a sign, and saw the stars above you spontaneously rearrange to spell out the words of the Nicene Creed. Surely your total evidence in this scenario makes it probable that God exists. But according to PT-SKEPTICISM, since your total evidence also includes evil with inscrutable probability on theism, we can't rule out the probability of theism on your total evidence being arbitrarily low. So according to PT-SKEPTICISM, we *can't* say that your total evidence in this scenario makes it probable that God exists.[28] This consequence provides strong reason to think that PT-SKEPTICISM, and so PE-SKEPTICISM, is false.

7. Conclusion

In this paper, I have argued that if PE-SKEPTICISM is true—if the probability of evil given theism is completely inscrutable—then PT-SKEPTICISM is true—the probability of theism given evidence that includes evil is largely inscrutable. Intuitively, the idea is just this. Suppose we have no idea how likely it is that God would bring about or allow E, because we cannot fathom the kinds of reasons God might have for acting, or the means that might be necessary for God's ends. Then for all we know, E does not disconfirm theism at all, which is what the skeptical

[27] If we know that $P(T|E\&K) \neq 0$ (see note 13 above), then even if, for all we know, $P(T|E\&K)$ is arbitrarily close to 0, one could argue that the expected utility of theistic belief is still infinite, and the expected utility of atheistic belief finite. Many people, though, find Pascalian reasoning more persuasive when we can say that the probability of theism is reasonably high (see, for example, Rota 2016; on more general worries about expected utility reasoning with extremely small probabilities, see Bostrom 2009). In addition, if the probabilities of particular *versions* of theism on our total evidence—such as Christian theism or Islamic theism—are similarly inscrutable, it will be hard to defeat the traditional objection to the wager that it cannot justify belief in a particular religion. For if the probabilities of (say) Christianity and Islam are both inscrutable, we cannot tell which is more probable, and so cannot tell whether Christian belief or Muslim belief has higher expected utility.

[28] Hawthorne and Isaacs (2017) give a similar reductio of several objections to the fine-tuning argument for theism.

theist wants. It may even confirm it, if (unbeknownst to us) God is actually quite likely to bring about E. But just as, for all we know, E does not disconfirm theism, so, for all we know, it *does* disconfirm it. Indeed, for all we know it maximally disconfirms it—i.e., entails its falsity. Since we have no idea which of these obtains, we have no idea whether, given evil, it is likely or unlikely that God exists. Given our radical ignorance about the probability of E given theism, we just can't know whether it is probable that God exists. We are simply in the dark.

I then argued that if PT-SKEPTICISM is true, we ought to be agnostic about whether God exists, so that skeptical theists who endorse PE-SKEPTICISM are being inconsistent in maintaining their theism. I also argued that the range of skepticism that PT-SKEPTICISM would imply about our knowledge of probabilities is implausibly strong—implying that we can't know that *any* evidence that includes E makes theism probable.

These consequences of PE-SKEPTICISM give skeptical theists reason to reject this thesis. This doesn't mean, though, that there is nothing skeptical theists can say in response to Bayesian arguments from evil. For example, instead of saying that our ignorance of the reasons God might have for allowing evil makes the probability of evil given theism *inscrutable*, skeptical theists might instead say that this ignorance should lead us to judge this probability to *not be as low* as we might otherwise have thought.[29]

But this is only suggestive. A full assessment of the impact of our cognitive limitations on Bayesian arguments from evil is a project for another time. However, I have given reason to think that such a project is necessary, if skeptical theists want to say anything interesting about Bayesian arguments. Skeptical theists have tried to avoid the difficult task of arguing for (at least

[29] Benton, Hawthorne, and Isaacs (2016: 2) make a similar suggestion, writing that although skeptical theists are right to point to our cognitive limitations as relevant to the problem of evil, "skeptical theists often go on to argue that evil provides no evidence against the existence of God. They deny that the problem of evil is a problem at all. This is, to our minds, a mistake. Instead, skeptical theists should deny that the problem of evil is *as much* of a problem as it is often alleged to be."

approximate comparative) probabilities for evil given theism and atheism by using our cognitive limitations as a “get out of jail free” card. I have argued that in so doing they have been their own worst enemies. Those interested in defending theism against the problem of evil instead need to do the dirty work of arguing that (due to human cognitive limitations, plausible theodicies, or some other factor) the evils we experience are more likely on theism than proponents of the argument from evil maintain, or else show that other evidence we have for theism outweighs the evidence that evils provide against it.[30]

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