On An Epistemic Cornerstone of Skeptical Theism: In Defense of CORNEA[1]

Timothy Perrine

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Abstract: Skeptical theism is a family of responses to arguments from evil. One important member of that family is Stephen Wykstra's CORNEA-based criticism of William Rowe's arguments from evil. A cornerstone of Wykstra's approach is his CORNEA principle. However, a number of authors have criticized CORNEA on various grounds, including that it has odd results, it cannot do the work it was meant to, and it problematically conflicts with so-called "Common Sense Epistemology." In this paper, I explicate and defend a CORNEA principle. After sketching a brief argument for it, I show how it can be acquitted of these recent charges.

Skeptical theism is a family of responses to arguments from evil. These responses have two components. First, skeptical theists normally propose some kind of general epistemological principle about reasonable inference, belief, or evidence. Second, they propose claims that are (crudely put) about our access to God's permission of evil, normally maintaining some sort of skepticism towards our ability to discern God's reasons for permitting evil. They use these claims together to undermine an argument from evil. As there are a variety of arguments from evil (see Draper (2009) for a good overview), different skeptical theists propose different kinds of epistemological principles and different claims about our access to God's permission of evil, custom tailoring their responses to the argument at hand. (For more on skeptical theism in general, see Perrine and Wykstra (2014) or Perrine (2019: 118-121).)

One version of skeptical theism can be found in Stephen Wykstra's work. Wykstra was critical of some arguments from evil due to William Rowe. In providing his criticism, Wykstra used an epistemological principle he dubbed 'CORNEA.' While Rowe himself tended to accept (or at least not contest) CORNEA, many other authors have argued against CORNEA on various grounds. If such authors are right, then Wykstra's criticism of Rowe's arguments fails. For skeptical theists to continue maintaining that Rowe's arguments fail, they would have to provide some new critique.

This paper defends CORNEA from recent criticisms. In section I, I briefly revisit Rowe's initial argument from evil that CORNEA was meant to apply to. In section II, I offer a formulation of CORNEA that I simply call CORNEA-1. I show how that principle is similar to Wykstra's original (1984) formulation. I then briefly develop an argument defending it. In section III, I consider a few arguments against CORNEA, focusing on some recent criticisms due to Matthew Benton, John Hawthorne, and Yoaav Isaacs. Finally, in section IV, I explore whether CORNEA is inconsistent with Common Sense Epistemology, specifically, principles such as Phenomenal Conservativism. I argue that there is a conflict, but this is unproblematic because,

[1] For help and encouragement while working on these topics, I thank David Crane, Jeffery Klarik, Stephen Wykstra, some participants of the now-defunct blog Prosblogian, and some reviewers.

despite its name, such principles are not very commonsensical and we have independent reason for rejecting principles like Phenomenal Conservativism.[2]

1. Rowe's Initial Argument in Brief

We can distill Rowe's early argument from evil—Rowe (1979, 1984, 1986)—as follows. (Subsequent work by Rowe, e.g., Rowe (1996), changes in ways I won't discuss extensively—but see Perrine and Wykstra (2017: 89-91.) Distilled, Rowe's main argument is:

(1) If God existed, then for any evil e God is justified in permitting e only if God's permission of e is necessary for some greater good.

(2) There exist instances of evil such that God's permission of them is not necessary for some greater good.

(3) Therefore, God does not exist.

Rowe gave a sub-argument for (2). After sustained reflection on some particular evils, E, Rowe argued:

(2A) It seems that there is no greater good that would justify God's permission of E.

(2B). Therefore, it appears that there is no greater good that would justify God's permission of E.

(2) Therefore, there exist instances of evil such that God's permission of them is not necessary for some greater good.

Rowe's inference is sometimes referred to as a "no see um" inference. From the fact that he "no sees" a God-justifying good he infers, ultimately, that there is no such God-justifying good.[3]

Rowe's main argument is deductively valid. Nonetheless, the reason why his argument is frequently classified as an "empirical" or "inductive" argument is this sub-argument. For this sub-argument tries to identify particular evils that seem unjustified and argue that we have strong inductive reason to existentially generalize to the claim that there are some evils that simply *are*

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[2] An anonymous reviewer has objected that this entire exercise is mute because Johnson (2013) refutes skeptical theism. I can't discuss Johnson's article in detail here. But I will say two things. First, Johnson (2013: 429) defines skeptical theism as the view that the existence of seemingly unjustified evils does not reduce the probability of theism at all. This is an incredibly demanding definition of skeptical theism and, for this reason, a particularly uninteresting one. For instance, as the discussion in section 2.A helps illustrate, skeptical theism, so defined, could be false and yet the existence of seemingly unjustified evils is never sufficient evidence to make it reasonable to believe atheism. Such a situation would mean skeptical theism is false; but that would be a pyrrhic victory, since it would not yet be reasonable to believe atheism on the basis of seemingly unjustified evils. Second, as Perrine (2015) points out, Johnson's attempted refutation of skeptical theism is unsuccessful because Johnson's paper does not include conditional probabilities that are necessary for using Bayes' theorem. In response to Perrine, Johnson (2017) does specify various conditional probabilities. But there are other problems. For instance, some of the values—for his case 3 (2017: 369) and 4 (2017: 370)—are given without any strong justification that I can find; the absence of strong justification is especially problematic as those are the probabilistic values that skeptical theists have spent a lot of time ruminating over. A more troublesome problem is that Johnson is arguing by cases, but his assignment of values to prior probabilities for those cases appears incoherent to me. For instance, his first case is one where God ensures both the existence and undetectability of a justifying reason for some specific evil E (cf. Johnson (2017: 268 fn. 3)). In this case, Johnson then goes to assign a value of .125 to the prior probability that there is a God-justifying reason for E that is detectable. However, this strikes me as incoherent. If we are considering a case where God ensures the undetectability of a justifying-reason for E, then the probability that there is a God-justifying reason for E that is detectable should be 0! While there might be ways around this problem, I don't have the space to explore them (and Johnson's own proposal in (2017: 268 fn. 2) is too nascent to respond to).

[3] Notice that, in Rowe's original arguments, he focused on one or two specific evils and argued that they provide what I'll call levering evidence that there are unjustified evils. However, when it comes to an application of CORNEA or CORNEA-1, it doesn't matter if the class of seemingly unjustified evils is widened to include many more seemingly unjustified evils. It would just mean that the body of evidence that is supposed to be levering evidence for Rowe's second premise is much larger than what Rowe himself used.

unjustified. In this way, his argument is classified as empirical because his support for the most contentious premise—(2)—is empirical in nature.

Rowe thought that this argument could be sufficient for one to reasonably or justifiedly become an atheist. That is, he thought that a reasonable person, starting in a position of agnosticism or even theism, could follow this argument and reasonably become an atheist. Yet, the argument did not force atheism; it was no *proof* of atheism. For instance, he thought that if theists had sufficient evidence for the existence of God, they could use a "G. E. Moore" shift and conclude that since (3) was false, (2) must also be false. To use terminology many are familiar with, Rowe seemed to have thought that his argument provided *prima facie* support for atheism, without necessarily providing *ultimate facie* support for atheism, depending upon the other evidence available.[4]

Stephen Wykstra, in an influential article (1984), provides a skeptical theistic critique of Rowe's sub-argument. Wyskstra's argument has two parts. The first is a principle he dubs 'CORNEA':

> On the basis of cognized situation s, human H is entitled to claim "It appears that p" only if it is reasonable for H to believe that, given her cognitive faculties and the use she has made of them, if p were not the case, s would likely be different then it is in some way discernible by her. (1984: 85).

Applying CORNEA to Rowe's inference from (2A) to (2B), Rowe is entitled to infer (2B) from (2A) only if it is reasonable for Rowe to believe that if there is a reason that justified God in permitting E, then it is likely that, after sustained reflection, it would be discernible to us in some way. The second part is Wykstra's claim that this was not reasonable for us to believe (1984: 87ff). It is by combining these two parts that Wykstra aimed to undermine Rowe's argument. (I will not be discussing this second part of Wykstra's critique here.)

Wykstra's CORNEA principle is thus one important part of his criticism of Rowe's argument. Rowe himself seems to accept—or at least not contest—this first part of Wykstra's criticism (see e.g. (1984: 97ff.; 1986: 237ff.)). He merely maintained that Wykstra is wrong about the second part. But if Wykstra's principle is false, it would undermine his criticism. This would be an important result, as many—including eventually Rowe himself—reformulated arguments of evil to explicitly avoid a CORNEA-based criticism.

2. CORNEA

Wykstra's CORNEA principle is a key element in Wykstra's skeptical theistic critique of Rowe's initial argument. To be sure, Wykstra's critique is tailored to Rowe's initial argument and it is an open question whether it applies to Rowe's later work or other arguments from evil—like Humean arguments from evil (though see below). And some skeptical theistic criticisms might not rely on CORNEA (see, e.g., Perrine (2019)). Thus, it may be misleading to imply that CORNEA is "*The* Foundations of Skeptical Theism" as the title of Wykstra and Perrine's (2012) article does. Nonetheless, it does form an important half of an important critique of an influential argument from evil.

[4] I will use 'justified' and 'reasonable' interchangeably. To say someone is *prima facie* justified in believing *p* will mean that S's believing that *p* is justified unless defeated. Some authors use the term '*pro tanto* justified.' I will not use that term to denote being reasonable or justified. I will say that something provides *prima facie* support for a proposition if it would, on its own, be sufficient to underwrite a reasonable or justified belief. *Pro tanto* support for a proposition is support that provides some support for a proposition but perhaps not enough for justified belief. Using this terminology, all *prima facie* support is *pro tanto* support, but not conversely.

However, CORNEA has come under a number of criticisms and I will defend it. Some have claimed that there are a variety of CORNEA principles not only in the general literature but in Wykstra's work as well. Perhaps that is true. What I am interested in is a CORNEA-like principle that can be used in a skeptical theistic critique of Rowe's argument. I will focus on the following salient features of such a critique. First, Rowe intended to provide evidence against theism sufficient for *prima facie* justification for atheism. Second, Rowe's initial argument uses an inference like one from (2A) to (2B) or (2A) to (2).

A. Epistemological Background

I will assume that there are three doxastic attitudes: belief, disbelief, suspended belief. Following Wykstra and Perrine (2012: 381), I will "associate" each of these states with an assignment of probability. Believing that p will be associated with assigning a probability of .99 or higher to *p*. Disbelieving that p will be associated with assigning a probability of .01 or lower to *p*. Suspended belief will be any assignment in between. However, it will be useful to introduce the concept of *squarely* suspended belief. I might assign a probability of .67 that a fair, six-sided dice will come up either 1 or 2 or 3 or 4. I certainly don't believe or disbelieve that. Yet, there is a certain sense in which I am not fully agnostic; I am definitely leaning one way over another. However, I am "squarely" suspended about *p* just when I associate a probability of .5 to *p*. Squarely suspended belief might be thought of as the purist version of agnosticism about *p*—hewing neither one way nor the other.

There are different ways of understanding this talk of "associate." Some might understand an assignment of probability as merely a credence or degree of belief. To associate a probability of (e.g.) .99 to p is to have a degree of belief of .99 in p. Thus, if believing p is to assign a probability of .99 to p, then on this approach believing p is to have a credence of .99 in p. There are well-known reasons—deriving from the lottery paradox—for rejecting this view. (See Kaplan (1996: 93ff.) for an illustrative exposition.)

I will instead understand this talk in terms of models. In saying that we can associate belief that p with an assignment of probability of .99 or higher, I mean that we can model a person's belief that p as an assignment of probability of .99 or higher. By modeling a person's belief in terms of probability assignments we can avail ourselves of helpful formal features of the probability calculus while avoiding odd metaphysical commitments of reducing beliefs to degree of beliefs over a fixed threshold.

Some will object to this kind of modeling. I'll briefly consider two objections. First, some might not object to modeling beliefs in terms of probability assignments, but object to setting the probability assignment as anything short of 1. However, there are several reasons why we should reject such a model. First, I believe that I am sitting right now and tomorrow the sun will rise. I am much more confident in the first belief than the second. A natural way of modeling that is to say that while both propositions have a probability above some threshold (e.g., .99), one of them has a probability assignment that is higher than the other. However, if all beliefs are given a probability assignment that is the same *and* the upper bound (e.g., 1), then we will not be able to model the difference between these beliefs in this natural way.

Second, I intend to use Bayes' theorem as a way of modeling reasonable changes of belief given new information.[5] A simple formulation of Bayes' theorem is this:

[5] I will use Bayes' theorem instead of conditionalization for four reasons. First, a pragmatic one: many philosophers of religion are more familiar with Bayes' theorem than conditinoalization. Second, conditionalization has the result that when one learns new information that information gets a probability of 1. I'd rather avoid that result. Third, conditionalization is a substantive diachronic constraint on rational credences, whereas I am interested in modeling

$$P(H|E) = P(H) * \frac{P(E|H)}{P(E|H) * P(H) + P(E|{\sim}H) * P({\sim}H)}$$

We can use P(H|E) to model the probability of H after learning E. We can then say that a person is reasonable in assigning some value, X, to P(H|E) only if that person is reasonable in assigning X to the complex expression on that right side. However, suppose we assign some belief a probability of 1, so that P(H) = 1. Then it will follow that it is never reasonable for a person to assign a lower probability to their beliefs upon learning new information.[6] But that is clearly absurd. So if we are to use Bayes' theorem to model, we should reject a model on which reasonable belief is always modeled with a probability assignment of 1.

A second objection. Some might object that .99 is a pretty precise assignment. Why not .99001 or .97677? It seems entirely *ad hoc* to pick .99. In response, I agree that there is some arbitrariness in associating belief with a .99 probability assignment. However, this is a general problem for modeling when we model some less precise thing (beliefs, disbeliefs, suspended beliefs) in terms of more precise things (probability functions). Oftentimes modeling with more precision comes at the cost of arbitrariness since the more precise thing one is using to model will draw finer distinctions than the less precise thing one is modeling. Whether arbitrariness in a model is problematic for the model *on the whole* is a complex issue. For here I think the usefulness of using probability theory outweighs the arbitrariness of elements in the model.[7]

So, on this approach, we can model reasonable belief in terms of reasonable associated probability assignments. On this approach, a belief that p is reasonable just when it is reasonable for the person to have a probability assignment of .99 or higher to p; analogously for disbelief, agnosticism, and square agnosticism.

Following Carnap (1962) and others (e.g., Swinburne (1976)), I assume that we can usefully explicate evidential relations probabilistically. First, a few words about explication. In general, one explicates a concept or term that, for some given purpose, has certain useful features but also some problematic features. An explication of that concept or term is a new term that is given a stipulative definition. The intent of the stipulative definition is that it retains the useful features of the original term while avoiding the problematic features of the original term for the relevant purpose. A particular concept might have several different explications. Such different explications need not be in competition with another; they may just be useful for different purposes. To illustrate, ecologists might be interested in whether certain microscopic fungi help plant health. Some ecologists, focusing on plant yields, might explicate the concept of plant health in terms of the concept of above ground bio-mass. Other ecologists, focusing on immunity to pathogens, might explicate the concept of plant health in terms of susceptibility to pathogens.

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full beliefs. Finally, Bayes' theorem is a theorem of probability. Conditionalization is not. Nonetheless, no major points turn on using Bayes' theorem to model reasonable changes instead of conditionalization.

[6] Suppose P(H) has an assignment of 1 and thus P(~H) has an assignment of 0:

$$P(H|E) = 1 * \frac{P(E|H)}{P(E|H) * 1 \ + P(E|{\sim}H) * 0}$$

Simplifying we get:

$$P(H|E) = \frac{P(E|H)}{P(E|H)}$$

This clearly has the result that P(H|E) has a value of 1. Thus, so long as P(H) has a value of 1 so too will P(H|E).

[7] We could also assign precise intervals to an agent's belief (e.g., Kaplan 1996) or intervals with "fuzzy" edges (e.g., Kaplan 2010). These proposals—specifically the second—might paint a more metaphysically realistic model, but would make some of the mathematics more difficult.

These are different explications, but this is unobjectionable as they are useful for different purposes. (For more on explication, see Fisher (2020).)

Carnap introduces several different explications of evidence. On one explication, e is evidence for H just when P(H|e) > P(H). This explication is particularly helpful in this context. Here we are interested in how evidence can reasonably change attitudes. But a change in attitude is modeled according to a raising or lowering of a probability assignment over certain thresholds. So to model how evidence can change a doxastic attitude we need an explication of evidence on which evidence increases or decreases the probability of a proposition. This explication does that.

However, Carnap's particular explication does not make evidence very interesting. A simple case. I draw a card; you draw a card. You reveal your card is the Ace of Spades; on this explication, learning your card is the Ace of Spades is evidence my card is the Eight of Hearts since the probability has increased from 1/52 to 1/51. But this is not particularly interesting or important evidence. For instance, it clearly wouldn't be reasonable to believe that my card was the Eight of Hearts on such slim evidence. However, Rowe's argument is meant to provide strong evidence for atheism, evidence sufficient to justify a change from agnosticism or even theism to atheism. Some sort of further refinement of this explication of evidence is needed for that purpose.

Wykstra (1996) and Wykstra and Perrine (2012) explicate Rowe's notion of strong evidence in terms of the introduced concept of "levering evidence." Crudely put, levering evidence is evidence that is sufficient to reasonably "lever" or change an agent from square agnosticism or disbelief to belief. More formally, e is levering evidence for H only if one can reasonably change a probability assignment from .5 or lower to a probability assignment of .99 or higher. Understood this way, levering evidence is clearly important. We'd clearly want to know if there was evidence that could justify a shift from a state of pure agnosticism—or greater—to belief.[8]

Of course, there may be other ways of explicating "strong evidence" that might be relevant to arguments from evil. (See Draper (2014).) And those other ways may be useful for various purposes. But insofar as we are interested in how certain arguments from evil can play a role in reasonably changing people's minds, explicating strong evidence in terms of levering evidence can be useful.

B. CORNEA and CORNEA-1

I will defend this principle, which I will call CORNEA-1:

> CORNEA-1 A person is *prima facie* justified in believing that e is levering evidence for H only if that person is *prima facie* justified in believing that P(e|~H) < .5.

At first blush, this principle seems far removed from Wykstra's original principle. However, there is closer affinity between the two then may be realized.

Both state necessary conditions. CORNEA-1 states a necessary condition on when a person is *prima facie* justified in believing that something is levering evidence. Wykstra's (1984) states a necessary condition on this: "On the basis of cognized situation s, human H is entitled to claim "It appears that p." However, the difference is not so grand. First, Wykstra's principle is a necessary condition on *claims* not *beliefs*. While claims and beliefs are different, the differences

[8] If evidence is sufficient to reasonably shift someone from (say) .5 or lower to .99, then it is presumably also sufficient to reasonably shift someone from (say) .6 to .99 as well. From the mere fact that someone acquires evidence that shifts then from *above* .5 to .99 or higher, it does not follow that the evidence they acquired is not levering evidence. It might be. It is just, in such a situation, the evidence doesn't do all that it could.

do not matter too much for most applications. So I'll ignore this difference. Second, Wykstra's principle is a necessary condition for a person to be *entitled* to a belief. However it is standard to interpret this phrase in terms of *prima facie* justification. To be entitled to believe that *p* means, for instance, that one is justified in believing *p* given the absence of defeaters. Third, Wykstra's principle is a necessary condition on claims of a certain form: "it appears that p." This element of Wykstra's principle has caused confusion. Many have implicitly understood Wykstra to understand "appears" in a purely phenomenological sense, in the way that many have understood the phrase "seems." However, as Wykstra (1984: 80ff.) makes clear, he has in mind something more than this. Specifically, as he understands the phrase, to say that it appears that p on the basis of some "cognized situation" s, implies that one takes s to be providing *prima facie* evidence for p (1984: 81). And latter (1996: 130-2), Wykstra makes clear that the kind of evidence at stake is levering evidence. Thus, despite initial differences in terminology, Wykstra's CORNEA is intended as a constraint on when a subject is *prima facie* justified in believing/claiming that something is levering evidence for some claim.

Second, Wykstra's (1984) constraint says "it is reasonable for H to believe that, given her cognitive faculties and the use she has made of them, if p were not the case, s would likely be different than it is in some way discernible by her." There is some agreement between Wykstra's (1984) CORNEA and CORNEA-1. Both impose a condition on what is reasonable for an agent to believe. There are two main differences. First, mine is expressed explicitly in terms of probability while Wykstra's (1984) utilizes a grammatical subjunctive. However, as Wykstra and Perrine (2012) makes clear, he does not understand that subjunctive as expressing a counterfactual conditional of the kind that Lewis and Stalnaker tried to analyze but rather as expressing a probabilistic expression. So there is no grand disagreement between us. The main difference concerns Wykstra's inclusion of the locution "given her cognitive faculties and the use she has made of them." However, I'm not sure this difference amounts to much. For as I see it what is reasonable for an agent to believe always depends upon her cognitive faculties and her use of them. So this addition may be gratuitous.

C. An Argument For CORNEA

My argument for CORNEA-1 makes a couple of assumptions.

First, I assume that we can model claims of new evidence using Bayes' theorem. That is, we can treat P(H|E) as modeling what probability assignment is reasonable to assign H upon learning E and formulations of Bayes' theorem state what that probability is equivalent to.

Second, I assume that if a probability assignment to certain expressions requires, for probabilistic consistency, a probability assignment to other expressions, then one is justified in having the first probability assignment only if one is, or would be, justified in having the second. To take a simple illustration, P(H) = .7 only if P(~H) = .3. Thus, one is justified in a probability assignment of .7 to H only if one is, or would be, justified in a probability assignment of .3 to ~H.

This assumption—or something like it—is made by most authors working in the problem of evil. Many authors begin with some initial probabilistic expression. They then identify some different expression it is equivalent to, perhaps by either direct proof or by using a general theorem (e.g. Bayes' theorem, total probability theorem, etc.). They then argue that we are justified (unjustified) in a probability assignment to the first expressions in virtue of what probability assignment we are justified (unjustified) in assigning the second. The underlying assumption behind such reasoning is *something like*: if an assignment to one expression requires for probabilistic consistency an assignment to a different expression—because, e.g., they are

equivalent—then agents are justified in the first assignment only if they are in the second as well. (For a representative sampling of this type of reasoning, see e.g., Bergmann (2001: 280ff.), Draper (1989: 335f.; 1992: 307ff.), Plantinga (1979: 13ff), Plantinga and Tooley (2008: 146ff.), Rowe (1996: 266ff.) Wykstra and Perrine (2012: 392ff.).)

To be clear, I don't take this assumption to mean that one must *already* has a justified assignment in whatever is probabilistically required. For any given probabilistic assignment to an expression, there is an infinite number of probabilistic assignments to other expressions that are required by consistency. I do not claim that to be justified in an assignment to one expression a person must already be justified in an infinite number of assignments to an infinite number of expressions. Rather, the requirement is weaker: that one is justified or would be. There are a number of ways of understanding the "would" here. For instance, a natural way of understanding it is that the person would be justified upon reflection or after competently following some mathematical derivation or argument. While it would be interesting to fine-tune the exact formulation of this assumption, such fine-tuning is not necessary for my purposes here or probabilistic reasoning in arguments from evil more generally. After all, virtually *all* authors working on this topic who use probabilistic reasoning need something like this assumption. And there is no reason for thinking that however we fill it in for their work would not also be adequate for the work here.

The argument for CORNEA now has two parts. First, a mathematical result, presented intuitively. Second, relating that result to reasonable belief.

Suppose P(H|E) > .99 and P(H) ≤ .5. Some simple calculations show that a probabilistically coherent function will assign those range of values only if it also assigns a value to P(E|~H) < .5. One formulation of Bayes' theorem is:

$$P(H|E) = \frac{P(E|H) * P(H)}{P(E|H) * P(H) + P(E|\sim H) * P(\sim H)}$$

Given P(H|E) > .99, we get:

$$.99 < \frac{P(E|H) * P(H)}{P(E|H) * P(H) + P(E|\sim H) * P(\sim H)}$$

Notice that the expression P(E|H) * P(H) appears as the numerator of this fraction as well as an addend in the denominator. Thus, for the entire expression to be close to 1—.99 or higher—it needs to be the case that the other addend is quite low. In fact, it needs to be that (rounding some):

$$.052 \geq \mathrm{P(E|\sim H)} * \mathrm{P(\sim H)}$$

But we already know that:

$$P(\sim H) > .5$$

So now assume, for *reductio*, that:

$$P(E|\sim H) \geq .5$$

Clearly, it would follow from our *reductio* assumption that P(E|~H) * P(~H) is at least as high as .25, which contradicts it being less than or equal to .052. So our *reductio* assumption is to be rejected. If P(H|E) > .99 and P(H) ≤ .5, then P(E|~H) < .5.

With this mathematical result in hand, we can now turn to reasonable belief. Given our first assumption, we can use Bayes' theorem to model how probability assignments can change given evidence, including levering evidence. So we can use it to model a case where P(H|E) > .99 and P(H) ≤ .5. From our second assumption, and the mathematical result, we can conclude that an

assignment of those values is reasonably only if it is reasonable to assign to P(E|~H) a value lower than .5. Thus, it is reasonable to believe that E is levering evidence for H only if it is reasonable to believe that P(E|~H) is below .5—which amounts to CORNEA-1.

3. Objections *to CORNEA*

Here I will briefly respond to some recent criticisms of CORNEA to see whether they apply to CORNEA-1.

A. Counterfactual Based Objections

Wykstra formulated his (1984) in terms of a grammatical subjunctive. For this reason many have interpreted his condition using a counterfactual conditional. Several have raised objections to Wykstra's CORNEA based on this understanding of the principle, including Howard-Snyder (1992), McBrayer (2009), and Almedia (2014).

However, Wykstra and Perrine (2012) plausibly claim that we need not interpret grammatical subjunctives as counterfactual conditionals. Rather, they can be used to express conditional probabilities. Thus, they propose an understanding of the CORNEA condition on which the phrase:

(4) "if A were false, then B would be different."

Should be understood as:

(5) the probability of B, given ~A, is less than .5.

Instead of :

(6) ~A counterfactually implies ~B.

I think this interpretation is plausible. But in and of itself, it does not undermine criticisms that turn on a counterfactual reading of CORNEA. What is needed is the further claim that statements like (5) can be true while (6) is false; i.e. (5) does not imply (6). After all, if (5) entails (6) then criticisms of CORNEA based on (6) may very well apply to ones based on (5).

However, it is not generally the case that statements like (5) imply statements like (6). A simple case. Suppose there are four balls in a urn—one crimson, one scarlet, one cream, one blue. Let 'A' be 'I pulled the crimson ball' and 'B' be 'I pulled a red ball.' P(B|~A) is below .5. Given that I did not pull the crimson ball, there is a .33 chance I pulled the only remaining red ball, the scarlet one. Thus, P(B|~A) is below .5. However, it is false that ~A counterfactually implies ~B. If I hadn't pulled the crimson ball I might have pulled a non-red ball. But then again I might have pulled a red one, namely, the scarlet one. To put this point assuming David Lewis' semantics, the closest worlds in which I do not pull the crimson ball contain worlds in which I pull a red ball as well as a non-red one. So (5) does not in general imply (6).

B. BHI on Levering Evidence

In a recent paper (2016), Matthew Benton, John Hawthorne, and Yoaav Isaacs (hereafter 'BHI') object to Wykstra and Perrine's notion of "levering evidence." The core of their objection is that the notion of levering evidence has several strange features (2016: 18-19). For instance, if an agent assigns .6 probability to a hypothesis, then no levering evidence could raise them to a .99 or higher probability associations. To be sure, some evidence might do that but it would not be levering evidence, as defined, because the initial starting point was not an assignment of .5 or lower. Or suppose an agent acquires evidence that raises their probability assignment from (e.g.) .1 to .9. Technically speaking, this is not levering evidence either, since the agent never shifted from a probability assignment outside the range of agnositicism. BHI, inspired by a comment of Wykstra and Perrine's, suggest a way around these issues, but criticize it as doing "no real work" (2016: 20).

If the concept of levering evidence was just the concept of strong evidence, then perhaps BHI's criticism would be persuasive. But it is not. It is meant, at least by me, as an *explication* of the concept of strong evidence. And it is a general fact about explications that they frequently lack all of the features that the explicated concept possesses. Thus, perhaps levering evidence, so defined, has some of the strange consequences BHI identify. But that does not show that there is something problematic about the concept.[9]

BHI should be sympathetic to this response. After all, their concept of "evidence" is best understood as an explication as well. They utilize a standard Bayesian concept of evidence on which e is evidence for H just in case P(H|e) > P(H) (2016: 3). But, understood as the ordinary concept of evidence, this account has strange results (cf. Achinstein 2001: 69ff.)). Recall the card case: drawing an Ace of Spades is evidence that the next drawn card will be the Eight of Hearts, since the probability of the latter is now slightly higher. Similarly, learning that Michael Phelps went swimming yesterday is evidence that he drowned yesterday, since swimming increases the chances of drowning even for such a decorated swimmer as Michael Phelps. BHI should not respond to these problems by maintaining that their probabilistic account of evidence is meant to capture the ordinary concept of evidence. Rather, they should say it is a useful explication of that concept.

To be sure, understanding levering evidence in this way does mean it is not applicable to all arguments from evil. But it was never meant to apply to all such arguments. And perhaps this account of levering evidence and the CORNEA principle can be folded into a more general account of reasonable attitudes, evidence, and probability. But even if it could be, that's no objection!

C. BHI on CORNEA

BHI also criticize CORNEA-like principles. Now BHI do not criticize CORNEA-1 as formulated here; perhaps this is because they are skeptical of the usefulness of the concept of levering evidence. In any case, they do criticize a principle similar to CORNEA-1. So I will consider whether their criticism applies to CORNEA-1, and write anachronistically as if they criticized CORNEA-1.

Their main criticism is that CORNEA-1"cannot do the work" intended for it to do (2016: 12-3). Suppose a doctor claims, on the basis of his visual experience, that a particular needle is free of pathogens. According to CORNEA-1, it is reasonable for the doctor to claim this only if it is reasonable for the doctor to believe that the probability of having that visual experience, given that the needle does contain pathogens, is below .5. Clearly that is not reasonable. But, BHI ask, suppose the doctor reasoned differently. Suppose the doctor rolled a die that came up 3. The doctor then reasoned, on the basis of his visual experience and the die coming up 3, that the particular needle is free of pathogens. BHI maintain—correctly—that CORNEA-1 would not imply that the doctor's inference is unreasonable. This is because the probability of a statement about the doctor's visual experience and the dice come up 3, given the needle has pathogens, is below .5. Thus, they claim, it cannot do the work it is intended to do, since Wykstra (and Perrine) see this kind of inference by the doctor as the kind CORNEA-1 should block.

BHI's criticism is odd. BHI is not maintaining that CORNEA-1 is false. Nor are they suggesting that this is a counterexample to CORNEA-1. Rather, the idea is that CORNEA-1 is

[9] An alternative response is suggested by fn. 6. In such a case as they describe, perhaps the person does have levering evidence, but it is not doing everything it could. I think this response could also succeed, but it is simply unnecessary.

intended to deem unreasonable certain claims about levering evidence and it cannot. But what are the claims about levering evidence that CORNEA-1 is intended to deem unreasonable?

CORNEA-1 is not pitched as providing both necessary and sufficient conditions for reasonably claiming something is levering evidence. It only provides a necessary condition. So there are many claims about levering evidence that are unreasonable because they fail some other necessary condition. Thus, it would be silly to object to CORNEA-1 that it fails to deem unreasonable *every* unreasonable claim about levering evidence. After all, CORNEA-1 was never intended to do that. So rendered this way, BHI's objection is unpersuasive. Now CORNEA-1 is intended to block Rowe's particular inference, summarized in section 1.[10] But BHI's objection does not concern that *particular* inference either. So BHI's objection couldn't show that CORNEA-1 fails to block that particular inference.

Rowe's particular inference does belong to a certain natural pattern of inferences. That same pattern of inference appears in Wykstra and Perrine's (2012: 379) doctor example. That pattern is:

It seems that P
Therefore, it appears that P
Therefore, P

The problem with BHI's example is that it does not follow this pattern. This is because the proposition that they start with—there are no pathogens on the needle and the dice came up 3—is not equivalent to the proposition they end with—there are no pathogens on the needle. So the reasoning they identify is not even an instance of this pattern of reasoning.

BHI object that CORNEA-1 can't do the work it is intended to do because it fails to deem unreasonable claims that it is intended to deem unreasonable. But BHI have failed to clearly identify a set of claims that CORNEA-1 is intended to deem unreasonable that it fails to do so.[11]

4. CORNEA and *Common Sense Epistemology*

Some recent work in the last decade has focused on a possible conflict between skeptical theism and "common sense epistemology." In this section, I argue that the there is a conflict between skeptical theism and common sense epistemology, specifically, between CORNEA and certain principles associated with common sense epistemology. Nonetheless, this is unproblematic because common sense epistemology is neither very common sensical nor very plausible.

A. Common Sense Epistemology

Common sense epistemology could be understood as a philosophical tradition. One of its leading contemporary figures was Roderick Chisholm, whose work is sometimes seen as a refinement and continuation of the epistemology of authors like G. E. Moore and Thomas Reid (see Lemos (2004) for this reading). Associated with this contemporary tradition is a number of epistemic principles, including Chisholm's own principles (1966, 1977), Swinburne's Principle of Credulity (2004), Huemer's Phenomenal Conservativism (2001, 2007, 2013a; cf. Tucker

[10] More cautiously, block it when combined with the second part of Wykstra's criticism.

[11] A further oddity. The dice coming up 3 is probabilistically independent of both the hypothesis—the needle is free of pathogens—and the other element of evidence—a description of the doctor's visual experience. Additionally, the doctor's visual experience is just as probable given the hypothesis as the negation of the hypothesis. From these facts it follows that the probability of the relevant evidence is the same given both the hypothesis and the negation of that hypothesis. (I've omitted the probabilistic reasoning here for reasons of brevity.) But a basic condition for something being levering evidence is that this does not happen. So BHI's case flunks a basic test for being levering evidence.

(2010)), and Pryor's Dogmatism (2000). There is a variety of subtle differences between these principles. Here I will work with two formulations of Phenomenal Conservativism:

> PC1: If it seems to S that P, then S is *prima facie* justified in believing P.
>
> PC2: If it seems to S that P, and S lacks any defeaters for believing P, then S is *ultimate facie* justified in believing P.

Some comments on PC1 and PC2. Though there is some dispute as to what seemings are (see Moretti (2015) for discussion), they are supposed to be phenomenal states whereby a proposition appears to one as true. PC1 forms the core element of a theory of justification—it tells us, at least in part, where justification "comes from," what can confer it, namely seemings. PC2 is an additional principle that tells us what it takes for the *prima facie* justification to become *ultimate facie* justification. The difference is the role of defeaters. Proponents of PC1 need not admit that a seeming automatically makes a belief justified—it may depend upon other defeaters. PC2 is sensitive to this issue. Finally, by 'defeaters' I have in mind mental states that an agent has or should have that call into question the propriety of a belief. I won't say more about what it takes to call into question the propriety of a belief, as little will turn on this below.

I focus on PC1 and PC2 as common sense epistemology principles for two reasons. First, a number of contemporary authors both in philosophy of religion and epistemology more generally focus on them. Second, they state sufficient conditions for beliefs to be justified, whereas CORNEA-1 states a necessary condition. This by no means guarantees a conflict, but it has the right logical form of a conflict. For it might be that the sufficient conditions proposed by these principles can be meet while the necessary condition proposed by CORNEA-1 is not.

There are several ways that PC1 and PC2 might conflict with skeptical theism. The most natural way would be for them to be inconsistent with the epistemological principles skeptical theists use. The epistemological principle I'm using is CORNEA-1. So a simple and straightforward way for PC1 and PC2 to conflict with skeptical theism is this:

> *Conflict Thesis*: PC1 and PC2 are inconsistent with CORNEA-1.

But there is a second, more subtle way PC1 and PC2 might conflict with skeptical theism. Suppose the following were true:

> *Failure Thesis*: There are arguments from evil which skeptical theism fails to undermine.

I call this the "*Failure Thesis*" since, if true, it would imply that skeptical theism fails to do something. The most straightforward way to defend the *Failure Thesis* would be to defend the *Conflict Thesis*. One might argue that skeptical theistic critiques succeed only if CORNEA-1 is correct. But it is false, since it conflicts with PC1 and PC2. But there are ways of defending the *Failure Thesis* that do not turn on defending the *Conflict Thesis*. (One might take no stand on the *Conflict Thesis* while arguing that there are arguments from evil that utilize PC1 or PC2 which are not undermined by appealing to CORNEA-1.) Nonetheless, my primary purpose here will not be with the *Failure Thesis* but the *Conflict Thesis*. (For a discussion of CORNEA and the Failure thesis, see Tweedt (2015).)

A final comment. Recent discussion on this issue can be traced to Dougherty (2008), where Dougherty motivates the problem partially by appealing to principles like PC1 and PC2. However, Dougherty himself (2011, 2014) uses the following principle:

> (RC): If it seems to S that p, then S thereby has a *pro tanto* reason to believe p. (2011: 333; 2014: 23).

However, in and of itself, (RC) does not conflict with principles like CORNEA-1. For CORNEA-1 says nothing about *pro tanto* reasons. One way of trying to generate a conflict is to

add to (RC) other principles about *pro tanto* reasons and *prima facie* justification. For instance, one such principle would be: if S has a *pro tanto* reason to believe p, then S is *prima facie* justified in believing p. But that principle is clearly false, as it ignores any other reasons S might have. A slightly different principle might be: if S has a *pro tanto* reason to believe p and S lacks any reason to believe ~p that is stronger than that *pro tanto* reason, then S is *prima facie* justified in believing p. The problem with this principle is that *pro tanto* reasons can be incredibly weak, too weak to support *prima facie* justification. To modify our card example, my drawing an Ace of Spades is a *pro tanto* reason for believing the next card with be red as the chance of the next card being red have gone up from .5 to roughly .51. But it would be absurd to conclude that I'm thereby *prima facie* justified in believing the next drawn card will be red. Perhaps there are other principles that could be added to (RC) to even generate the appearance of a conflict with CORNEA-1. But I will not consider any more and focus just on PC1 and PC2.

B. The Conflict Thesis is True

PC1 and PC2 apply to any proposition p. But CORNEA-1 does not. It applies only to claims of levering evidence. So if there is a conflict between CORNEA-1 and these principles, it will turn on claims of levering evidence. And there is a conflict. Suppose it seems to S that E is levering evidence for H. PC1 implies that S is *prima facie* justified in believing that E is levering evidence for H. But suppose that it is not reasonable for S to believe that the probability of E, given ~H, is less than .5. Then CORNEA-1 implies that S is not *prima facie* justified in believing that E is levering evidence for H. So CORNEA-1 is inconsistent with PC1. Suppose we add to the case the further claim that S lacks any defeaters for believing that E is levering evidence for H. Then PC2 will imply that S is justified in believing that E is levering evidence for H. So PC2 will also conflict with CORNEA-1.

There is one important way of responding to this argument. PC2 requires that S have no defeaters for her belief. One of way of responding is to maintain that, in the case so described, S does have defeaters for that belief.

Matheson (2011, 2014) uses this style of response. However, the particular way Matheson develops this response fails. Matheson develops this strategy only in the case where the relevant propositions concern arguments from evil. But CORNEA-1, as well as PC1 and PC2, are general epistemological principles that apply to *any* number of claims about levering evidence outside of philosophy of religion. So Matheson's particular response simply has the wrong scope. (Having said that, Matheson's argument might be more plausible as a criticism of the *Failure Thesis*. In fact, that is the more plausible way of interpreting the dispute between Matheson and Dougherty. Since I'm not concerned with the *Failure Thesis* here, I won't address that dispute.)

There's a more fundamental problem though. Suppose one had a theory of defeaters such that PC2 and CORNEA-1 never conflicted. It is still the case that CORNEA-1 conflicts with PC1. Further, that conflict is more fundamental. For what normally distinguishes theories of justification is not when they say justification is defeated—there is, in general, agreement on that. What distinguishes them is when justification is created or conferred. And PC1 is a theory of that. And PC1 conflicts with CORNEA-1.

C. *Against* PC1 and PC2

So the *Conflict Thesis* is true. This simply tells us that PC1 and PC2 are inconsistent with CORNEA-1. It does not tell us what to reject. Now I have already articulated one reason for thinking CORNEA-1 is true. In this section, I will argue we have reason for thinking PC1 and

PC2 are false. Together, these points indicate that when confronted with the conflict between PC1 and PC2 and CORNEA-1, we should reject them and retain CORNEA-1.[12]

We ordinarily think that beliefs formed in certain ways are not justified. Someone might believe that (e.g.) she'll get a promotion by consulting a fortune teller or a horoscope. But we do not think she is thereby justified. A person might come to endorse a conspiracy theory—e.g., that 9/11 was an inside job—on the basis of an online video produced by a conspiracy theorist, but we do not think the person's belief is reasonable. And there are all kinds of cognitive biases and heuristics that are unreliable that we do not normally think give rise to justified belief. For instance, students might commit the base-rate fallacy or gambler's fallacy in some reasoning problem and we normally think that keeps them from being justified. And, of course, philosophers have pulled our intuitions on more extreme cases. BonJour (1985) famously thought that beliefs formed through clairvoyance were not justified. Alvin Plantinga (1993) argues that beliefs formed as a result of a brain lesion are not justified, even if the brain lesion is very reliable. Jennifer Lackey (2006) suggests that testimony formed on the basis of hitherto unknown aliens could not be justified.

The problem with PC1 and PC2 is that they conflict with our ordinary judgments about these kinds of cases. This is because PC1 and PC2 do not place any kind of restrictions on the origins of one's beliefs. But we ordinarily think that, at least some of the time, the origins of the beliefs are relevant to whether the belief is justified. Specifically, epistemically impoverished origins of beliefs can keep such beliefs from being justified. In this way, PC1 and PC2 conflict with our ordinary epistemic commitments. Despite the title of "common sense," they do not appear to be very commonsensical principles![13]

There are three replies proponents of PC1 and PC2 might offer in defense of their position. The first is to deny that in these kinds of cases that the relevant subjects ever have the relevant seemings. If they do not have the relevant seemings, then PC1 and PC2 will fail to have any implications about justified belief. First, this response is desperate. Seemings are supposed to be these phenomenally accessible inclinations to believe things. And it certainly seems like in these kinds of cases agents either do or could have such seemings. Second, some of Huemer's defenses of his position turn on the claim that most, if not all, of our beliefs are formed on the basis of seemings (e.g., 2007: 39f.). So this response would have Huemer rejecting a core premise used in defense of his view.

Second, proponents of PC2 might maintain that in these cases subjects have defeaters. Now to successfully defend this response, proponents of PC2 will have to provide a general theory of defeaters that applied to all of these cases. And while that might be plausible for some of the more extreme cases involving clairvoyants and aliens, I think it will be hard to do that for all of these cases. But even if we stipulate that agents lack defeaters, it is still intuitively clear they lack *ultimate facie* justification. But even setting that aside, this response is explanatorily defective. If

[12] I give a more sophisticated criticism of principles like PC1 and PC2 in Perrine (2020). The arguments presented here are independent of those.

[13] The objection here is related to, but distinct from, the "cognitive penetration" objection. (For discussion of this objection and related issues, see Markie (2005: 356ff), Siegel (2012), Brogaard (2013), McGrath (2013a), Tucker (2014).) That objection holds that one's seemings can be caused by being cognitive penetrated by other mental states (e.g., wishful thinking). Since such penetration is an epistemically dubious way of forming beliefs, beliefs formed in accordance with the relevant seeming are not thereby *prima facie* justified. My objection can be understood as a generalization of such cases. For there are many epistemically dubious ways of forming beliefs that do not rely on cognitive penetration. For additional discussion of some of these issues, see the cluster of papers Siegel (2013a,b), Fumerton (2013), Huemer (2013b), McGrath (2013b).

a person told you that she believed she would get a promotion on the basis of (e.g.) the tea leaves at the bottom of her mug, you would not believe she was justified. You would, rightly, point to the way she formed her belief. But this response would maintain that your explanation would be wrong. The proper thing to say would be to point to other beliefs she has that questioned the propriety her belief. But that's the wrong explanation. Maybe she has other beliefs that call into question her belief; maybe she doesn't but she should. But most of us have an intuition that she is unjustified without having to fill in additional details about the case to make it clear that she has a defeater, e.g., a belief that she formed her belief in an epistemically dubious way. Even if proponents of PC1 and PC2 add further details to these cases to make sure that they get the right verdict of unjustified belief, they get the right verdict for the wrong reason.

Third, proponents of PC1 and PC2 may simply bite the bullet and just accept that in the kinds of cases I've pointed to the agents have or could have justified beliefs despite the fact that such beliefs originated in such defective sources. (Cf. Huemer (2013: 344ff.); Tucker (2010: 540f.)) But I don't see any reason why we should bite the bullet and go against our common sense epistemic practices.

D. Dialectical Standoff?

I've been around long enough to know that proponents of PC1 and PC2 will not like my criticism. Many will opt for the third response, perhaps even suggesting that it is common sensical to attribute justification in those cases! I'd like to briefly gesture towards one way of moving past a possible dialectical standoff. To be clear, I think the reasons given in the previous section provide good reason for rejecting PC1 and PC2. The point of this section is to briefly motivate a different criticism that does not turn on those specific intuitions. I don't have the space to fully develop discussion here. But I hope to provide enough meat to chew on for future discussion.

Following Alston (1989, 2005), let us say that there are different conceptions of justification. One conception is based solely around blameless belief. Specifically, let us say: S is justified-B in adopting a belief b if and only if S is blameless in adopting b. But it is clear that this is not the only conception of justification. Alston himself utilized a different conception of justification based around the idea of a belief being formed in a way that makes it likely to be true. Let us say, then, that S is justified-T in adopting belief b if and only if b is formed in a way that makes it likely to be true. (See also Goldman (1988) for a similar distinction between concepts of justification.) To be sure, a lot more could be said about both of these conceptions. But they are tolerably clear for my brief purpose here.

One way of defending PC1 and PC2 is this. First, one might argue that, recast as principles about justified-B, those principles are plausible. That is, one might maintain that when it seems to a subject that *p*, and the subject lacks any defeaters for believing *p*, then she is not to be blamed for believing *p* even if it is the case that the belief is silly or originating in an unreliable process. Second, one might argue that the concept of justification that fits most neatly with our ordinary conception of justification is the justified-B conception and not others like the justified-T conception. In this way, a proponent of PC1 and PC2 might *concede* that there are conceptions of justification on which seemings fail to provide *prima facie* justification. She might simply maintain that none of those conceptions is the ordinary conception of justification. Further, this approach does not just have to turn on intuitions on certain cases, but the ways certain concepts line up, and thus indicates one way for moving beyond a potential dialectical standoff.

I've only gestured as to how this argument would go; but I want to articulate one reason why it is likely to fail. I think this strategy will fail at the second step. There are certain roles

justification plays in our ordinary practice that sit better with justification understood as justified-T than justified-B. I will focus on one here involving disagreement.

Suppose I learn that someone disagrees with me regarding *p*. While I believe *p*, they believe ~*p*. To what degree should I take such disagreement as providing me with a reason that challenges my belief? That depends, in part, as to whether or not I think that person is justified in believing as they do. If I regard them as holding an entirely unjustified belief, then the fact that they disagree with me will normally give me no pause. However, if I take them to justifiedly believe ~*p* when I believe *p*, I will more naturally take this as a challenge to my belief. (Of course, the relative strength of this challenge is a hotly debated topic, and not something I can get into here.)

But suppose that all I mean when I said that someone is justified in believing ~*p* is that they are blameless in believing ~*p*. Then it is unclear why I should be inclined to take the fact that they disagree with me as providing a challenge to my belief. After all, their having a blameless belief is consistent with them forming it in utterly unreliable or silly ways. By contrast, suppose that all I meant when I said that they were justified in believing ~*p* is that they formed their belief in a way that was likely to be true. If that is what I meant, then it is much clearer why I would regard their belief as a challenge to mine. For if their belief that ~*p* is formed in a way that is likely to be true, then that gives me a reason to think that my belief that *p* is not true. And it is clear that having a reason for thinking my belief that *p* is not true is a challenge to that belief. So, (perceived) justified belief plays a role in generating challenges to our beliefs and this fact sits better with justification understood as justified-T than justified-B.

V. Application of CORNEA-1 to the Problem of Evil

In this paper, I've defended the following principle:

> CORNEA-1 A person is *prima facie* justified in believing that e is levering evidence for H only if that person is *prima facie* justified in believing that P(e|~H) < .5.

I will conclude with a discussion about the scope of this principle to arguments from evil. Specifically, I will briefly argue against two claims that try to *limit* the relevancy of CORNEA-1 to the problem of evil. The first claim is that CORNEA-1 cannot be used in Wykstra's criticism of Rowe's argument in the same way CORNEA can; that is, CORNEA-1 could not *replace* CORNEA in Wykstra's criticism. The second claim is that CORNEA-1 cannot even apply to arguments from evil that do not use nosseum inferences, like Rowe's early arguments.

As indicated above, Wykstra's original criticism of Rowe's argument has two parts: CORNEA and some claims in philosophy of religion. According to this first claim, CORNEA-1 cannot be used in Wykstra's criticism of Rowe's argument in the same way CORNEA can. This could be because either (i) CORNEA-1 does not apply to Rowe's argument or, (ii), it does apply to Rowe's argument but Wykstra's claims in the philosophy of religion are irrelevant to its application.

Now the specific portion of Rowe's argument that Wykstra criticized was Rowe's sub-argument:

> (2A) It seems that there is no greater good that would justify God's permission of E.
>
> (2B). Therefore, it appears that there is no greater good that would justify God's permission of E.
>
> (2) Therefore, there exist instances of evil such that God's permission of them is not necessary for some greater good.

If we apply CORNEA to Rowe's argument, then it is reasonable for a person to make this inference only if it is reasonable for that person to believe that the following condition is true:

> given her cognitive faculties and the use she made of them, if there were a greater good that would justify God's permission of E, then it would not seem to her that there is no greater good that would justify God's permission of E.

Clearly CORNEA-1 could also be applied to Rowe's argument. If we apply CORNEA-1 to Rowe's argument, then it is reasonable for a person to believe that (2A) is levering evidence for (2) only if it is reasonable for that person to believe that the following condition is true:

> the probability that it would seem that there is no good that justifies God's permission of E, given that there *is* a good that justifies God's permission of E, is less than .5.

So both Wykstra's original CORNEA and my CORNEA-1 could be applied to Rowe's argument.

Now Wykstra argued that the condition produced by CORNEA was not satisfied; that is, it was false. One of his main arguments was that God's wisdom for planning and securing goods for things far outstrips our own wisdom (see, e.g., Wykstra (1984: 88-9; 1996: 139ff.), Russell and Wykstra (1988: 145ff.)). However, there is no reason that the same line of reasoning could not also apply the condition produced by CORNEA-1. That is, there is no reason why the same line of reasoning could be used to argue that condition produced by CORNEA-1 is also false. So this first claim attempting to limit the relevance of CORNEA-1 is false: CORNEA-1 could be combined with Wykstra's claims in philosophy of religion to undermine Rowe's argument just as well as CORNEA could.

A different response is that CORNEA-like principles, such as CORNEA-1, *only* apply to arguments that use "noseeum" inferences such as those in Rowe's early arguments. Such principles could not apply to Rowe's later works, which uses more straightforward inductive inferences, or Humean arguments from evil, which frequently use abductive inferences. (I take Morriston (2014: 230) to be making this claim when he writes, "Even if reflections like these [of Wykstra's] derail the Rowe-style argument, they seem at first glance to be entirely irrelevant to the Humean Argument, since it doesn't make the noseeum inference that skeptical theists seek to undermine.")

This response is also mistaken. CORNEA-1 is not formulated in terms of "noseeum" inferences. It is formulated in terms of levering evidence. One way an author might try to provide levering evidence is by appealing to a "noseeum" inference. But she might also try appealing to more straightforward inductive or abductive inferences as well. Thus, so long as an argument from evil purports to provide levering evidence, CORNEA-1 applies to that argument. It does not matter what particular strategies that argument uses to generate that supposed levering evidence. To be sure, arguments from evil need not try to provide levering evidence—perhaps they can aim for mere *pro tanto* evidence of a certain strength or even provide reason for accepting atheism that does not turn on evidence. And from the mere fact that CORNEA-1 can be applied does not mean it undercuts the argument. It would only produce a necessary condition on a person being *prima facie* justified in accepting some claim about levering evidence.[14] But it

[14] An anonymous reviewer points out that Humean arguments from evil compare how well theism and some inconsistent rival to theism predicts some data about good and evil. But that data might appeal to very specific goods and evils. If it does, then the probability of that data, given the rival to theism, might be below .5 and thus it might "pass" the CORNEA-1 test for levering evidence. However, as I've argued elsewhere (Perrine and Wykstra (2014: 149 fn. 12), Perrine (2019: 117 fn. 5)), if the data is too specific, it will be close to equivalent on *both* theism and the

is a mistake to think that, because I've defended a CORNEA-like principle, that it can only apply to arguments from evil that turn on a "no see um" inference. We have to look and see.

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rival to theism. In such a case, it will likely fail some other test for levering evidence (see fn. 10). An adequate Humean argument will need to describe its data in such a way to avoid being too specific. But, again, CORNEA-1 is only one part of the skeptical theistic response to arguments from evil. I do not regard it as a profound objection that other epistemic principles will be more relevant to other formulations of other arguments. My point here is that just because Humean arguments do not appeal to a "nosseum" inference it doesn't *automatically* follow that CORNEA-1 is irrelevant.

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