KNOWING WHAT'S NECESSARY:
HOW MODAL CONDITIONS THREATEN TO TRIVIALIZE ETHICAL (AND OTHER) KNOWLEDGE

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For us to *know,* our beliefs must not only be true, their truth must be appropriately *non-accidental* (non-coincidental, non-lucky). The most popular strategy for characterizing such non-accidentality is by appeal to modal conditions. The basic idea is that insofar as our beliefs (if true) track the truth across some suitable set of metaphysically possible worlds, while those beliefs might be false or unjustified, they are immune to the Gettier (1963) problem.[1]

In this paper, I argue that modal conditions trivialize non-accidentality for beliefs in necessary truths. This does not mean that modal conditions are not useful or important, only that they do not 'Gettier-proof' all beliefs, and therefore (for one) cannot play the role some have hoped in offering a unified theory of knowledge as justified, non-accidentally true belief.

This project is animated by concerns about the relationship between modal theories of non-accidentality and a fundamental challenge in metaethics: to explain how our ethical beliefs come to correspond with the ethical truth ('the Explanatory Challenge').[2] The Explanatory Challenge looms

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[1] Proponents of modal conditions include Black (2008), Black & Murphy (2007), Clarke-Doane (2012; 2014; 2015; 2016), DeRose (1995), Dretske (1971), Ichikawa (2011), Luper-Foy (1984), Nozick (1981), Pritchard (2007; 2009), Roush (2005), Sainsbury (1997), Sosa (1999b; 1999a; 2007; 2009), and Williamson (2002), among others. While all of these authors take some favored condition to be necessary for knowledge, not all take that condition to be among some set of jointly sufficient conditions for knowledge.

[2] The Explanatory Challenge is an instance of a broader challenge to explain how our beliefs come to explain the truth in any domain, most famously represented by the so-called Benacerraf-Field Challenge in the philosophy of mathematics. (I will sometimes use 'Explanatory Challenge' to refer to this broader class.) Most of the points made herein regarding ethics can be extended to the analogous challenge in mathematics, logic

large because given the apparent abstract nature of ethical truths, it has seemed to many that no such

explanation is possible.[3] Our beliefs might be true, but their sources (e.g., evolutionarily or culturally

produced intuitions) do not *reflect* that truth, and thus, at best, our beliefs correspond to that truth

accidentally.

Despite its intuitive force, a number of philosophers have argued that given the necessity of

the (fundamental[4]) ethical truths, our ethical beliefs are guaranteed to meet some modal condition

that entails (or at least provides powerful evidence of) non-accidentality, and thus the Explanatory

Challenge poses no threat to ethical knowledge.[5] As Eric Wielenberg (2010, 461) puts it, "where

there is no contingency, there are no coincidences." Call this the Modal Strategy. My thesis is that

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and other domains of necessary truth. Note that Benacerraf and Field—like many proponents of the
Explanatory Challenge—deploy it to defend anti-realism, not skepticism.

[3] In metaethics, the challenge takes many forms. For instance, as discussed below, 'evolutionary debunking
arguments' (e.g., Street 2006) are frequently read as relatives of the Explanatory Challenge. Others more
closely match my framing—e.g., Enoch (2011, chap. 7) talks of explaining correlations between beliefs and
truth. As in other domains, the challenge is frequently raised not as an argument for skepticism, but to
undermine various theories in the metaphysics of ethics (e.g., realism) that, it is argued, make the challenge
impossible to meet.

[4] The precise distinction between fundamental and non-fundamental ethical truths is contentious, but for our
purposes a full theory is unnecessary; exemplars should suffice. For a utilitarian, the goodness of utility is a
fundamental ethical truth, while the goodness of petting Fido is not, because it depends on the non-ethical
truth that Fido gets utility from being pet. From here, all references to ethical truths should be understood as
referring to fundamental ethical truths (the same goes for mathematical and logical truths).

[5] I take no position on whether the Explanatory Challenge poses a threat to justification. But even if it does,
this does not undermine my view that the challenge ultimately concerns non-accidentality. Those who take
the challenge to threaten justification (e.g., Field 1989) treat it as an *undercutting defeater*: the thought is that even
granting that our beliefs are *prima facie* justified, discovering that our beliefs are at best accidentally true would
tend to undercut the force of any such justification. This suggests that the threat to justification is parasitic on
the threat to non-accidentality.

the Modal Strategy fails; necessary coincidences *are* possible, and this possibility exposes the limits of modal theories of non-accidentality.

I proceed as follows. In §1, I recount an argument from Justin Clarke-Doane who, in a series of papers (2012; 2014; 2015; 2016) offers arguably the most sophisticated development of the Modal Strategy to date. In §2, I offer an intuitive argument against the Modal Strategy, first targeting Clarke-Doane's version, then extending my objection to all possible variations. Following the literature on the Explanatory Challenge, I next propose a necessary condition on non-accidentality: the presence of a non-trivial explanation for belief-truth correspondence at the actual world. My argument in §2 shows that modal conditions do not *entail* such an explanation; in §3, I argue that modal conditions' role in this context is instead to provide *abductive evidence* that there is such an explanation. This illuminates the core problem with the Modal Strategy: in the context of the Explanatory Challenge, modal conditions matter insofar as our beliefs' meeting them is best explained by the presence of an explanation for actual belief-truth correspondence. But the whole point of the Modal Strategy is to show that the relevant modal conditions are met *without* the need to appeal to such an explanation. This undercuts those conditions' role as abductive evidence.

Finally, in §4, I address the worry that even if my arguments are successful at the level of intuition, practically speaking modal conditions are the best we can do. I close with discussion of two non-modal strategies for developing the Explanatory Challenge, both of which are sufficiently promising to undercut this worry.

1. The Lewis and Clarke-Doane Expedition

The philosopher most commonly associated with the Modal Strategy is David Lewis, largely due to the following passage:

> [I]f it is a necessary truth that so-and-so, then believing that so-and-so is an infallible method of being right. If what I believe is a necessary truth, then there is no possibility of being wrong. That is so whatever the subject matter of the necessary truth and no matter how it came to be believed. (Lewis 1986, 114–15)

This is the passage as Clarke-Doane and many others quote it. But as a matter of exegesis, this is troublingly misleading. If we place the passage in context, it becomes clear that Lewis' position was much closer to my own; he held that modal theories are inappropriate for knowledge of necessary truths:

> Probably the right thing to say is that the demand for an infallible method does not make very good sense for knowledge of non-contingent matters, because it is too easily trivialised. For if it is a necessary truth that so-and-so, then believing that so-and-so is an infallible method of being right. If what I believe is a necessary truth, then there is no possibility of being wrong. That is so whatever the subject matter of the necessary truth and no matter how it came to be believed. (Lewis 1986, 114–15)

This is ironic, but it is not an argument.[6] The question remains whether the Modal Strategy is successful, whether meeting certain modal conditions—even trivially—inoculates our beliefs against the Explanatory Challenge.

Clarke-Doane focuses on two modal conditions in his development of the Modal Strategy. The first is the very condition Lewis seems to be alluding to here; Clarke-Doane takes Lewis' point to be that our beliefs in necessary truths "are vacuously *sensitive* on a standard semantics" (Clarke-

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[6] To be clear, Lewis does resist the Explanatory Challenge, and some of the reasons he gives for doing so concern the necessity of mathematical (and modal) truth. Lewis addresses Benacerraf's original challenge, which explicitly depends on the causal theory of knowledge. As I read Lewis, his central reason for rejecting it is his view that "[o]ur knowledge of mathematics is ever so much more secure than our knowledge of the epistemology that seeks to cast doubt on mathematics" (Lewis 1986, 109). Lewis bolsters this by suggesting that we should have different standards for knowledge of contingent and necessary truths, anyway. Nevertheless, he acknowledges that we should hope for an overarching theory of knowledge that encompasses knowledge of both the contingent and the necessary.

Doane 2016, 26, emphasis mine).[7] Beliefs are sensitive just in case they are true and, had the relevant truths been different, those beliefs would have been correspondingly different.[8] Since our true ethical beliefs are *necessarily* true (de re), the relevant counterfactual—if the truth had been different, our beliefs would have been correspondingly different—is true across metaphysically possible worlds.[9] Thus, our ethical beliefs are sensitive whether or not they reflect the truth in any other sense.

The second condition Clarke-Doane discusses is *safety*. Beliefs are safe (in Clarke-Doane's sense[10]) just in case they are true and could not easily have been false. And safety, it is widely thought, does not trivialize knowledge of necessary truths the way sensitivity does:

> [I]t is pretty easy to see how one might go about extending the account of safety to [necessary] propositions, even if the details might be tricky. . . . For example, if one forms one's belief that 2 + 2 = 4 by tossing a coin, then while there are no near-by

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[7] An earlier passage makes it even clearer that Lewis is talking about sensitivity, and that he dismisses its relevance to knowledge of necessary truths: "If I know by seeing, for instance, my visual experience depends on the scene before my eyes; *if the scene had been different,* within limits, my experience and *my subsequent belief would have been correspondingly different* . . . But nothing can depend counterfactually on non-contingent matters. Nothing sensible can be said about how our opinions would be different if there were no number seventeen . . . All counterfactuals with impossible antecedents may indeed be vacuously true. But even so, *it is seldom sensible to affirm them*" (Lewis 1986, 111, emphases mine).

[8] The original sensitivity condition is Nozick's (1981). It should be noted that Nozick, too, rejected the relevance of sensitivity to knowledge of necessary truths.

[9] To make sense of this, we need some account of beliefs' counterparts (with different contents) at various worlds. For our purposes, we need speak about such counterparts only at the level of domains. Assuming a (at least partially) content-independent account of what places a belief in a particular domain can be given, this will be fairly simple. For example, suppose ethical beliefs are beliefs about what is fundamentally valuable. Our ethical beliefs (e.g., that pleasure is valuable) would fail to be safe if at nearby worlds where the ethical truth is the same, we have different beliefs about what is fundamentally valuable (e.g., that preference-satisfaction is valuable). Thanks to Daniel Waxman for highlighting the need to address this.

[10] There are a number of different notions of 'safety' in the literature. Clarke-Doane's is closer—though not identical—to Williamson's (2002) than to Sosa's (1999b) original formulation.

possible worlds where that belief is false, there is a wide class of near-by possible worlds where that belief-forming process brings about a doxastic result which is false (e.g., a possible world in which one in this way forms the belief that 2 + 2 = 5). (Pritchard 2009, 34)

In short, while the necessity of the ethical truths means that there will be no nearby worlds where our *actual* beliefs are false, there may well be nearby worlds where our beliefs' counterparts are false because they are *different*.[11] If, parroting Pritchard's example, we came to believe that lying is wrong (as opposed to permissible) by flipping a coin, then our belief could easily have been false, had the coin come down the other way.

But, as Clarke-Doane recognizes, this suggests that the question of our ethical beliefs' safety is just the question of how easy it would be for those beliefs to have been *different*. So long as our belief-forming method would give the same results at nearby worlds, our beliefs are safe. Ironically, help may come from the challengers here. Clarke-Doane, like many others, interprets 'evolutionary debunking arguments'[12] as relatives of the Explanatory Challenge. These arguments begin with the premise that there is an evolutionary explanation for our ethical beliefs. Assuming there is no reason to believe that evolution tracks the ethical truth, it seems it would be a 'cosmic coincidence'[13] if our beliefs corresponded to that truth. But, Clarke-Doane argues, the robustness of this evolutionary

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[11] How we understand the 'nearby' here depends on how we understand the 'easily' in the demand that our beliefs 'could not easily have been false'. More precision is unnecessary for our purposes.

[12] The primary focus as of late has been Sharon Street (2006). But Street's challenge follows a long line of what Russ Shafer-Landau (2012) calls 'genealogical challenges'. Famous examples include Nietzsche (1887) and Mackie (1977).

[13] I borrow this phrase from Matt Bedke (2009), though others have put things similarly; e.g., William Kneale (1950, 123) talks of "historical accidents on the cosmic scale" (though in a slightly different context).

explanation may well ensure that our ethical beliefs couldn't easily have been different, and thus that

they are safe.[14]

     With these arguments in hand, Clarke-Doane proposes:

> **Modal Security**   If information calls into question the non-accidental truth of
> our beliefs of a kind *F*, "it does so by giving us reason to doubt that our *F*-beliefs are
> both sensitive and safe" (Clarke-Doane 2016, 30).[15]

     His defense of Modal Security is largely intuitive. He suggests that "it is hard to see" how

our beliefs could be accidentally true if they are both safe and sensitive. After all, if they *are* both safe

and sensitive, then they "were (all but) *bound* to be true" (Clarke-Doane 2016, 33).

     Of course, all of this depends on the assumption that our beliefs are true in the first place.

And Clarke-Doane recognizes that some may object to this assumption. However, it is widely

accepted that one may assume the truth of one's beliefs in responding to certain epistemological

challenges.[16] He maintains that this applies to the Explanatory Challenge. His evidence is that if we

were required *not* to assume the truth of our beliefs, we would not even be able to meet the

analogous challenge to our perceptual beliefs:

> Notoriously, it appears in principle impossible (for us realists) to offer an explanation
> of the reliability of our perceptual beliefs that would convince a perceptual skeptic.
> What we can arguably offer is an explanation of the reliability of our perceptual

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[14] To be clear, Clarke-Doane is not *committed* to their being safe. Rather, his point is that this argument for
their safety seems promising, regardless of our ability to explain their correspondence with the truth in any
other sense. "This argument for the safety of our mathematical beliefs obviously turns on speculative
empirical hypotheses. . . . But the point is that there is a promising argument here—one that it does not
appear 'in principle impossible' to make" (Clarke-Doane 2016, 24).

[15] Clarke-Doane statement of the principle concerns "undermining our beliefs," following Field's (1989, 26)
statement of the problem. I avoid this because I take the challenge to be primarily about non-accidentality,
and only derivatively (if at all) a threat to justification. See note 5. In any case, as can be seen from the final
quotation in this section, it is in keeping with the spirit of Clarke-Doane's argument to reframe Modal
Security in this way.

[16] See, e.g., Berker (2015), Enoch (2011, chap. 7) and Vavova (2014).

beliefs that assumes the reliability of our perceptual beliefs. We can arguably offer an evolutionary explanation of how we came to have reliable cognitive mechanisms for perceptual belief, and a neurophysical explanation of how those mechanisms work such that they are reliable. (Clarke-Doane 2016, 21)

Given the apparent legitimacy of assuming the truth of our beliefs, the apparent safety and sensitivity of our ethical beliefs on that assumption, and his rejection of certain alternative interpretations of the challenge (some of which are discussed in what follows), Clarke-Doane dismisses the Explanatory Challenge as either unthreatening or easy to meet.

Finally, mirroring my own framing of the challenge, Clarke-Doane suggests that his argument might naturally be taken to show that our ethical beliefs are immune to charges of accidentality, and thus that our justified true ethical beliefs are guaranteed to be knowledge:

> [T]he argument offered here may suggest that we have [ethical] knowledge . . . [M]any philosophers would hold that a justified true belief which is both safe and sensitive qualifies as knowledge . . . Perhaps the present discussion helps to explain why. "Gettiered" beliefs—justified and true beliefs which fail to qualify as knowledge—are plausibly beliefs whose truth is coincidental in a malignant sense. . . . If this is correct, then there is a "translation scheme" between the claim that it is impossible to relevantly explain the reliability of our *F*-beliefs, given their truth, and the claim that those beliefs are Gettiered. (Clarke-Doane 2016, 36)

2. An Intuitive Argument Against the Modal Strategy

Consider the following case:

> **Generic**   Donald is (presumptively) justified in forming beliefs by consulting a crystal ball.[17] Donald consults the crystal ball to form some beliefs. There is a highly stable explanation for the particular outputs of the crystal ball, and for Donald's consulting it. All of Donald's resultant beliefs are true.

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[17] Perhaps using it was recommended to him by a typically trustworthy friend, and Donald has no reason to believe crystal balls are not typically accurate.

It seems to me, and I hope to you, that **Generic** might be a Gettier case. Crucially, this intuition does not seem to depend on what Donald is consulting the crystal ball about.[18] Whatever the topic, the crystal ball's showing Donald the truth might be *accidental*. This calls Modal Security into question; for if Modal Security is true, when Donald's beliefs concern necessary truths, their truth is guaranteed to be non-accidental.

Consider specific versions of **Generic**. In **Contingent Weather**, Donald consults the crystal ball to form beliefs about next week's weather. **Contingent Weather** might be a Gettier case, because Donald's beliefs are justified and true, but might not be safe or sensitive. Now contrast this with **Necessary Weather**, in which Donald's story is the same, but also an all-powerful being decides that next week's weather will be the same at all metaphysically possible worlds. According to Modal Security, Donald's beliefs in **Necessary Weather** are non-accidentally true. His beliefs are sensitive, because the relevant weather-truths are necessary. And his beliefs are safe, because the stability of the explanation for his having them means that he would continue to have them at all nearby possible worlds. This is highly counterintuitive: surely it is possible that in both cases, the crystal ball shows the truth about the weather, but not *because* it is the truth. Intuitively, Donald is just as likely to be Gettiered in **Necessary Weather** as in **Contingent Weather**.

And, of course, we get the same result if Donald's beliefs are about ethics. In **Ethics**, Donald consults the crystal ball to form beliefs about what is fundamentally valuable. Again, Modal Security entails that Donald's resultant beliefs are non-accidentally true. And again this is counterintuitive, for a crystal ball is no more guaranteed to reflect the truth about ethics than about the weather.

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[18] There might be exceptions, such as if Donald is forming beliefs about whether he is currently consulting a crystal ball, but it should be clear that these are irrelevant here.

At this point, one might suspect that the problem is not with the Modal Strategy, but with Clarke-Doane's understanding of the relevant modal conditions.[19] Perhaps there is still some relevant set of possible worlds at which Donald does not track the ethical truth. But notice that I did not specify *how* stable the explanation is for the outputs of the crystal ball, or for Donald's consulting it. Suppose we fill in the details as follows:

> **Maximally Stable Ethics**   Donald is (presumptively) justified in forming beliefs by consulting a crystal ball. Donald consults the crystal ball to form beliefs about what is fundamentally valuable. All of Donald's resultant beliefs are true. For some reason, an all-powerful being decides to make it the case that (i) at every possible world, Donald's counterpart forms ethical beliefs by consulting the crystal ball's counterpart, and (ii) at every possible world, the crystal ball's counterpart delivers the same answers as at the actual world.

I have, and again hope you share, the intuition that **Maximally Stable Ethics** might be a Gettier case. After all, we have no reason to think that the all-powerful being's reasons for stabilizing Donald's beliefs have anything to do with those beliefs' being true. Yet in this case, there is no possible world where Donald's ethical beliefs fail to track the truth, and thus no relevant modal condition he fails to meet.[20]

Maximally Stable Ethics represents the core of my rejection of the Modal Strategy, and of modal theories of non-accidentality. Our intuitions about **Maximally Stable Ethics** indicate that there can be necessary accidents, and thus that no amount of modal correspondence entails non-accidental truth-tracking.[21]

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[19] Warren and Waxman (m.s.) raise important worries along these lines.

[20] He would, of course, fail to meet a modal condition that requires him *not* to track the truth at certain worlds. But this suggests, implausibly, that Donald might lack knowledge because he tracks the truth *too well*.

[21] In more technical terms, our intuitions suggest that the 'non-accidental tracking' relation is *hyperintensional*. This might be taken to recommend expanding our view to counterpossible worlds. I discuss this possibility in §4. My own view (which I will not defend here) is that the relation is partly *explanatory*; this fits with wide agreement that explanation is likewise hyperintensional.

It is beyond the scope of this paper to offer a replacement theory of non-accidentality.[22] But

it will be helpful to specify a necessary condition on non-accidentality that accords with the intuitive

roots of the Explanatory Challenge. My original framing of the challenge holds that what is required

is *an explanation for belief-truth correspondence*; in this I follow Field's canonical discussion:

> [T]he phenomenon that our beliefs about (say) electrons are reliable is not *simply* that
> our 'electron' beliefs counterfactually depend on the facts about electrons: it is that
> our beliefs depend on the facts about electrons *in such a way that* the correlation of
> our believing the sentence 'p' and its being the case that p would be maintained given
> a variation in the facts about electrons. It is *this type of* counterfactual dependence that
> needs explaining, not counterfactual dependence by itself. But now, if the
> intelligibility of talk of 'varying the facts' is challenged . . . it can easily be dropped
> without much loss to the problem: **there is still the problem of explaining the
> *actual* correlation between our believing 'p' and its being the case that p.**
> (Field 1989, 238, bolding mine)

Field offers a crucial clarification here: our fundamental concern is *actual* belief-truth

correspondence. This is important, because given the preponderance of modal conditions in

epistemology, one might naturally think that the fundamental concern is our beliefs' correspondence

at *other* worlds, *given* correspondence at the actual world. That way lies the Modal Strategy.

It would be convenient if we could stop here, and hold that the relevant necessary condition

on non-accidentality is simply there being some explanation for actual belief-truth correspondence.

Unfortunately, things are not so simple. For there is an explanation: correspondence between beliefs

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[22] It is entirely possible that non-accidentality is not a single phenomenon. John Bengson (2015, n. 10) distinguishes two forms of accidentality: "source accidentality" and "doxastic accidentality." Veridical hallucination cases exemplify source accidentality: hallucinations never connect one to the truth in the right way. Fake barn cases exemplify doxastic accidentality: the source of your belief (the real barn) is of precisely the right kind to connect you to the truth, but you are problematically lucky to have this as your source of knowledge, given the high number of fake barns in the area. The concern behind the Explanatory Challenge seems to be source accidentality: the question is whether the sources of ethical belief ever connect us to the ethical truth in the right way. I take no position here on whether the two forms of accidentality are instances of some broader, single kind.

and truth can always be explained by the conjunction of the origins of those beliefs and the fact that they are true.

This is clearly not the sort of explanation we are looking for, especially given that such explanations are available for *any* true belief. If they could be used to meet the Explanatory Challenge, we could bypass the Modal Strategy and simply argue as follows:

P1   Our ethical beliefs are by-and-large true.

P2   If our beliefs are by-and-large true, this can be explained by the conjunction of the origins of those beliefs and the fact that they are true.

C   Therefore, there is an explanation for the correspondence between our beliefs and the truth in ethics.

I submit that our rejection of this argument stems from the *merely conjunctive* nature of the explanation offered in P2. The conjunction of the origins of our beliefs and those beliefs' being true is an explanation of the wrong kind precisely because it fails to illuminate a *connection* (as opposed to a mere correlation) between our beliefs and the truth.

This language is still largely suggestive; I haven't said what it is for there to be such a connection, except that it requires more than mere correlation.[23] In §4, I consider one way of understanding such connections.[24] But the devil is in the details, and it would behoove us to hold off summoning him; for our purposes, we need only a minimal condition that rules out trivial explanations like those just discussed:

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[23] I am far from the first to use such language; many have framed the Explanatory Challenge in terms of finding a 'connection' or 'link' between our beliefs and the truth, including Benacerraf himself: "[I]f I know that Cleveland is between New York and Chicago, it is because there exists a certain relation between the truth conditions for that statement and my present 'subjective' state of belief (whatever may be our accounts of truth and knowledge, they must **connect** with each other in this way). Similarly, in mathematics, it must be possible to **link up** what it is for *p* to be true with my belief that *p*" (Benacerraf 1973, 667, bolding mine).

[24] For another promising account, see Lutz (m.s. b).

> **Connection**   Beliefs are non-accidentally true only if there is an explanation for their correspondence to the truth at the actual world beyond a trivial explanation such as that provided by the mere conjunction of the origin of those beliefs and the fact that they are true.

In what follows, I will say that there is a CONNECTION between beliefs and truth insofar as there is a non-trivial explanation for their correspondence at the actual world. The absence of a CONNECTION is one kind of accidentality, one way in which true, justified beliefs can fail to be knowledge. This undergirds the Explanatory Challenge: if a CONNECTION between ethical beliefs and ethical truth is in principle impossible, then even if our ethical beliefs are true, they are so only accidentally, and are therefore Gettiered *at best*.

Before moving on, one further avenue of response needs to be closed off. If you find out that some beliefs of yours *are* Gettiered, this gives you a new avenue to knowledge, since learning that your beliefs are Gettiered means learning that they are true.[25] And the Modal Strategy relies on the assumption that our beliefs are true. Does it follow that the modal strategist can be newly confident in our ethical knowledge? No. The assumption of truth is legitimate when the goal is to meet the challenge by *offering an explanation*—i.e., explicating the relevant CONNECTION. After all, in order to explain X, one must assume X obtains. This is why, as Clarke-Doane insists, it is legitimate to answer the challenge with the claim that *if* our perceptual beliefs are by-and-large true, *then* the explanation is some evolutionary/neurophysical story. But the assumption that our beliefs are true cannot be used as *evidence* of a CONNECTION. Compare: Philosophers sometimes motivate the Explanatory Challenge by pointing out that brute belief-truth correspondence is highly improbable.[26]

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[25] Thanks to Aaron Elliott for helpful discussion on this point.

[26] E.g.: "If it was accidental that we came to have a reliable deductive mechanism, it was presumably highly unlikely for us to have ended up with a reliable mechanism; there are far more ways to be unreliable than to be reliable. Accepting that our reliability came about by accident would therefore put pressure on our overall view of the world" (Schechter 2010, 446–47).

It would clearly be question-begging for the modal strategist to agree that brute belief-truth correspondence is highly improbable, then argue on this basis that the assumed truth of our beliefs provides probabilistic evidence that they are CONNECTED to the truth.

3. How the Proper Role of Modal Conditions Explains the Failure of the Modal Strategy

I have argued that our intuitions regarding **Maximally Stable Ethics** suggest that no modal condition entails that there is a CONNECTION between beliefs and truth. Nevertheless, it seems clear that modal conditions play *some* important role here.

We can illuminate that role by returning to a case of contingent truth. In **Contingent Weather**, Donald justifiably believes (say) that it will rain next week. And it will, in fact, rain next week. But we aren't sure if he is really CONNECTED to that truth, or if he is just getting lucky. A natural way to test this is to ask what would happen to Donald's belief if it were to snow next week instead. Would he now believe it will snow? This is just to ask whether Donald is *sensitive* to the truth about next week's weather. We might also ask whether Donald could easily have had false beliefs, whether his beliefs are *safe*. If his beliefs are indeed safe or sensitive, the *best explanation* is almost certainly that he is CONNECTED to the fact that it will rain. After all, if there were no non-trivial explanation for his beliefs' correspondence with the truth, it is highly unlikely that correspondence would persist counterfactually.

The upshot here is that in addressing the Explanatory Challenge, modal conditions serve as *abductive evidence* of a CONNECTION between beliefs and truth. If Donald's beliefs in **Contingent Weather** are safe and sensitive, arguably the best explanation is that there is a CONNECTION between the deliverances of the crystal ball and the truth. This makes good on another part of Field's comments above: his claim that counterfactual dependence *needs explaining*. In the context of the Explanatory Challenge, modal conditions are *explananda,* not *explanantia*. They do not *serve* as

CONNECTIONS between beliefs and truth; rather they are potentially *best explained by* the presence of such CONNECTIONS.

Once we understand that, where the Explanatory Challenge is concerned, modal conditions serve as abductive evidence, it becomes clear why the Modal Strategy fails. The Modal Strategy holds:

(a) Being a true ethical belief is sufficient for meeting some modal condition C.

(b) Beliefs' meeting condition C inoculates them against the Explanatory Challenge.

We have seen that beliefs face the Explanatory Challenge so long as there are doubts about their being CONNECTED to the truth. It follows that a modal condition can inoculate beliefs against the Explanatory Challenge only if it either entails or provides good evidence of such a CONNECTION. We have seen that no modal condition entails a CONNECTION. Instead, I have argued, modal conditions' role *is* to provide evidence—specifically, abductive evidence. Given this, we can reframe the Modal Strategy as:

(a) Being a true ethical belief is sufficient for meeting some modal condition C.

(c) Beliefs' meeting condition C is best explained by there being a non-trivial explanation for their correspondence with the truth at the actual world.

But (a) and (c) are straightforwardly incompatible. If one can fully explain why our ethical beliefs meet some modal condition just by appealing to their being *true* ethical beliefs (a trivial explanation), then one clearly cannot infer to the best explanation that those beliefs are CONNECTED to the truth.[27] Data that can be fully explained by a mere correlation cannot be used to confirm the

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[27] One could claim that it is *constitutive* of being a true ethical belief that it is CONNECTED to the truth. But in that case, it would be this feature of ethical belief that would provide evidence of a CONNECTION, not the relevant modal condition. In any case, it is hard to see how one could maintain this position, at least insofar as ethics is a domain of mind-independent truth (by contrast, one might take this to explain the apparent (but contentious, see Williamson (2002)) luminosity of certain *de se* facts).

hypothesis that that correlation is non-accidental. Thus, if (a) is true, (c) is not: modal conditions'

role as abductive evidence is defeated.[28]

Before moving on, it may be useful to consider how all this applies to Clarke-Doane's

discussion of Modal Security. Consider any version of **Generic** where Donald's beliefs concern

some necessary truth. Begin with the sensitivity-relevant status: *at nearby worlds where the truth is*

different, Donald's beliefs are correspondingly different. Given the necessity of the relevant truths, this will be

the case regardless of whether there is a CONNECTION between Donald's beliefs and those truths.

We therefore cannot infer to the best explanation that Donald's beliefs are CONNECTED to the truth.

This is not surprising. Surely there can fail to be a CONNECTION between beliefs and necessary

truths just as easily as contingent ones.

Next consider the safety-relevant status: *at nearby worlds where the truth is the same as at the actual*

world, Donald's beliefs are also the same. Again, in many cases, a belief's having this modal status is

evidence of its being CONNECTED to the truth. But *precisely the point* of evolutionary debunking

arguments is that the best explanation for our ethical beliefs' having this modal status is *not* their

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Crucially, this is *not* the same as the view that the connection between certain of our beliefs and the truth is a constitutive one. See, e.g., Bengson (2015). This is used to *meet* the Explanatory Challenge, not to dismiss it as the modal strategist does. Indeed, Bengson begins precisely by arguing that only *some* true beliefs in necessary truths are (partly) constituted by the truth.

[28] The failure of the Modal Strategy mirrors an issue in a another, related debate in the moral epistemology. In response to Harman (1977), Sturgeon (1986) famously argues that moral properties pass a counterfactual test for causation of natural properties: if we remove some wrongness from a situation (e.g., start petting a cat instead of torturing it) the appearance of wrongness vanishes. But since we can fully account for these results by appealing to the supervenience of the relevant moral properties on non-moral properties that *are* causally efficacious, we cannot conclude that the moral properties themselves have causal powers—unless, that is, we were to adopt a view on which causation *just is* counterfactual dependence. In my view, confusing simple counterfactual dependence for causation is much the same mistake as confusing some modal condition for an explanatory connection between beliefs and truth. For better tests for causal impact of moral properties on our beliefs, see my (2015) and Slutsky (2001).

being CONNECTED to the truth. Rather, the explanation for our ethical beliefs' being the same at nearby worlds is that they are explained by stable evolutionary forces (and are therefore true at those worlds given the necessity of the relevant truths). Such beliefs will be safe regardless of whether they are CONNECTED to the truth.[29] The same goes for any cases where Donald's beliefs concern necessary truths, given the highly stable explanation for the deliverances of the crystal ball, and for Donald's using it. In these cases, the abductive evidence safety provides is also defeated.

Again, this is unsurprising. The modal stability of a belief-forming mechanism alone does nothing to guarantee that it CONNECTS us to the truth. A misleading belief-forming method is no better for our being guaranteed to use it; indeed, arguably, just the opposite. As Clarke-Doane says, if our ethical beliefs are true, then they "were (all but) bound to be true." But it is equally the case that if they are false, then they were (all but) bound to be false.

It follows that the only evidence that there is a CONNECTION here is *the assumption that our beliefs are true.* But, as already argued, such an assumption cannot be used to provide abductive evidence in this way. This would just be to argue that because brute belief-truth correspondence is improbable, the best explanation for *assumed* belief-truth correspondence is a belief-truth CONNECTION. That is baldly question-begging.

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[29] Some might worry that necessary truths' relation to contingent ones can't vary. But this is neither intuitive nor clear upon reflection. It is natural to think that the fact that 2+2=4 bears a stronger connection to what happened when I put these two coins with those two coins than it is to what happened when I put a coin on the table by itself. One possible line on this stems from a recent view that mathematical truths can explain contingent facts by constraining the causal order so as to make those facts more inevitable. See Lange (2012). If the mathematical truths don't make it more inevitable that evolution guides us as it does—or, say, do so only to the minimal extent that they make *all* contingent facts more inevitable—this may allow us to clarify the intuitive sense in which evolutionary forces fail to connect us to those facts. Of course, if the mathematical truths *do* make it more inevitable that evolution guides us as it does, this may provide a potential avenue for *responding* to the Explanatory Challenge. (Arguably, this strategy is much more promising in mathematics than it is in ethics.)

4. Are Modal Conditions the Best We Can Do?

I have argued that establishing that our beliefs meet certain modal conditions is insufficient for meeting the Explanatory Challenge, and therefore cannot guarantee non-accidentality. But, here, the modal strategist might bite the bullet, agreeing that beliefs that meet their favored modal condition *don't* always meet our intuitive criteria for non-accidentality, but maintaining that there is no way, in practice, to demand more. In this section, I discuss two non-modal ways of developing the Explanatory Challenge, and argue that neither has been sufficiently undermined to warrant such pessimism. This serves to bolster both the importance of the challenge, as well as my position on its intuitive roots.

First, some authors characterize the challenge directly in terms of an explanatory question. Consider two examples:

> *The Etiological Question:* How is it that we have a cognitive mechanism for deductive inference that is reliable? (Schechter 2010, 444)[30]

> *The Non-accidental Relation Question*: What relation does a thinker's mental state—her intuition—bear to an abstract fact that explains how the state can be non-accidentally correct with respect to that fact, hence able to serve as a source of knowledge of it? (Bengson 2015, 8)

Our discussion motivates a similar question: What relation do our ethical beliefs bear to the ethical truth such that their correspondence at the actual world admits of a non-trivial explanation? Here, the modal strategist might worry that in order to answer these questions, we are again left looking to counterfactuals with necessarily false antecedents.[31] But this is far from obvious. It is

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[30] Schechter's discussion concerns the epistemology of logic. He quotes the limited version of the passage from Lewis discussed in the introduction and develops his version of the challenge with the aim of responding to it (Schechter 2010, 443).

[31] This is how Clarke-Doane responds. He claims that Schechter needs to distinguish our being "selected to have a reliable mechanism for mathematical belief" from our "being selected to have a mechanism for mathematical belief with *property F which is in fact reliable.*" But, Clarke-Doane charges, in order to do this, "we

perfectly sensible to think that we may be able to directly characterize the form(s) legitimate answers to these questions can take, and then look for evidence that these do (not) obtain. For example, Schechter suggests that non-trivial explanations of belief-truth correspondence take one of three forms: the facts explain the beliefs, or vice versa, or some third factor explains their correspondence (Schechter 2010, 440).[32] Perhaps *all* explanations that can meet the Explanatory Challenge take one of these forms, but in ethics (at least on some views of the metaphysics of ethics[33]) such explanations are impossible.[34]

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would seem to need to have to decide what mechanism it would have benefited our ancestors to have had *had the mathematical truths been different*" (Clarke-Doane 2016, 33).

[32] Schechter mentions a fourth option, that reliability in certain domains might be trivial. But this is only an option in 'plenitudinous' domains where all coherent theories are true. Since it is clear that not all coherent ethical theories are true (e.g., disutilitiarianism), I set this possibility aside. It is worth noting, however, that some take this to be the solution to the Explanatory Challenge in mathematics (e.g., Balaguer 1998); though Bengson (2015) argues that plenitude alone leaves the challenge intact (and would thus presumably reject Schechter's fourth option).

[33] This relates to the current debate in moral epistemology over the (il)legitimacy of so-called 'third-factor explanations'. Most agree that non-naturalism rules out explanations of the first two forms, which is why the focus has been on third-factor explanations. For example, David Enoch (2011, chap. 7) argues that if survival is good, then evolution (which 'tracks' survival) might give us true moral beliefs, since the causal explanation for our beliefs (evolution) is necessarily correlated with the moral truth (goodness). (Enoch suggests that correlations admit of the same three forms of explanation as Schechter.) Does this constitute a CONNECTION? Enoch and others seem to think so. The roots of my response can be found in my arguments in the previous section. I (we) address third-factor solutions directly in Elliott & Faraci (m.s.). See also Lutz (m.s. a).

[34] This also relates to the popular view that the Explanatory Challenge is a demand to show that the truth factors into the best explanation of our beliefs. This is a significant rabbit hole, one I will not travel down here. I'll just offer one dialectical note: This reading of the challenge is frequently raised in ethics, which is precisely the area in which indispensability arguments seem least plausible (again, especially for non-naturalists, against whom the Explanatory Challenge is most frequently raised; though see Enoch (2011, chap. 3)).

Second, even if counterfactuals are required, all is not lost. Many have suggested that the set of metaphysically possible worlds is not the relevant one within which to consider such counterfactuals. Field has precisely this reaction to Lewis' claim that "nothing can depend counterfactually on non-contingent matters":

> Lewis is assuming a controversial connection between counterfactuals and necessity . . . [E]ven those who think that there is some sort of "absolute necessity" to mathematics may find counter-mathematical conditionals perfectly intelligible in certain contexts. (Field 1989, 237)

Following this line of thought, a promising strategy may be to consider what beliefs or belief-forming mechanisms we would have had at certain *counterpossible* worlds.[35]

Before concluding, it will be instructive to consider the motivations for this 'hypermodal' strategy, as these bolster both my view on the intuitive underpinnings of the Explanatory Challenge and my view that modal conditions' role in this context is to provide (defeasible) abductive evidence of belief-truth CONNECTIONS. One potential barrier to development of hypermodal tests is the need to show that the counterpossible worlds appealed to by the test are closer to the actual world than those possible worlds that are too far to be relevant (or argue that the standards are different for counterpossible worlds).[36] This is a more technical way of putting an intuitive worry. If it shouldn't

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[35] This is often proposed as a test for sensitivity, e.g., "The truths of pure mathematics are presumably metaphysically necessary truths, but we can coherently suppose many of them to be false by considering worlds in which there are no mathematical objects of any sort, worlds in which all sets are finite, and so on. Many of our mathematical beliefs will then fail the sensitivity test: if there had been no numbers (or infinite sets), these beliefs would have been just as they are" (Rosen m.s.). Could this be used to resurrect the Modal Strategy? It is hard to see how. Even if some hypermodal condition can be shown to be sufficient for non-accidentality, there is no reason to think that beliefs in necessary truths would meet that condition any more readily than beliefs in contingent ones.

[36] For discussions regarding modal distance and counterpossible worlds see, e.g., Lange (2009) and Nolan (1997).

concern me that I would fail to track the truth at some distantly possible worlds, why should it concern me that I would fail to track the truth at some *impossible* ones?

Again, Field tells us the answer. The point of looking to counterfactuals is to find out what happens to our beliefs *at worlds where the truth differs*. If those are only counterpossible worlds, then that's where we need to look. But *why* is that the point? Indeed, what motivates *any* choice of worlds when developing (hyper)modal tests? The answer is their role providing abductive evidence for the presence of a CONNECTION. I have already explained why merely modal tests fail to provide such evidence in ethics. Surely the intuitiveness of turning to counterpossible worlds (at least once one is already used to thinking in modal terms) is rooted in the fact that counterpossible worlds are the next obvious place to look for evidence about what's going on at the *actual* world: CONNECTION or coincidence. If, instead, concerns about accidentality really were direct concerns about local counterfactuals, there would be no motivation for looking to counterpossible worlds at all.[37]

5. Conclusion

Typically, the reason beliefs track the truth counterfactually is that our belief-forming methods successfully CONNECT us to those truths. Modal tests therefore provide powerful evidence of such CONNECTIONS. But as Lewis recognized, modal tests can be trivialized. Trivialization occurs when the test is passed, but *not* because its results are best explained by the phenomenon it was meant to

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[37] Notably, in response to both avenues for development of the Explanatory Challenge, Clarke-Doane ultimately falls back on Modal Security. "Even if there is some hyperintensional sense of 'explanation' according to which one can intelligibly request an explanation of the 'merely actual correlation' between our mathematical beliefs and the truths, it is unclear how the apparent in principle impossibility of offering that could undermine those beliefs—given that we may still be able to show that they are safe and sensitive. . . . [E]ven if Schechter were correct, it is hard to see how the apparent in principle impossibility of explaining the reliability of our mathematical beliefs in *his* sense could undermine them. For all that has been said, we might still be able to show that our mathematical beliefs are safe and sensitive" (Clarke-Doane 2016, 33).

test *for*. The Modal Strategy fails because it relies explicitly on such trivialization, attempting to show that ethical beliefs pass relevant modal tests whether or not they bear any relation to the truth at the actual world beyond correspondence.

It is not hard to guess at the roots of this mistake. Constant focus on counterfactual correspondence has led many of us to think of it as an end in itself—as the non-accidentality we seek to ensure. But it is not; it is a means to the end of determining whether there is a non-trivial explanation for our beliefs' correspondence with the truth at the actual world. It ceases to serve that end as soon as it is trivialized, and the lesson of **Maximally Stable Ethics** is that *any* modal condition can be trivialized in this way.

I conclude that the Modal Strategy fails, and thus that the Explanatory Challenge remains a serious concern in metaethics, as well as in other domains of necessary truth. I conclude, further, that the importance of modal conditions is more limited than some might have hoped. Knowledge may be justified, non-accidentally true belief, but non-accidentality is not a modal phenomenon.

References

Balaguer, M. 1998. *Platonism and Anti-Platonism in Mathematics*. Oxford University Press.
Bedke, M. S. 2009. "Intuitive Non-Naturalism Meets Cosmic Coincidence." *Pacific Philosophical Quarterly* 90 (2): 188–209.

Benacerraf, P. 1973. "Mathematical Truth." *The Journal of Philosophy*, 661–679.

Bengson, J. 2015. "Grasping the Third Realm." In *Oxford Studies in Epistemology*, 5:1–38. Oxford University Press.

Berker, S. 2015. "Does Evolutionary Psychology Show That Normativity Is Mind-Dependent?" In *Moral Psychology and Human Agency: Philosophical Essays on the Science of Ethics*, edited by J. D'Arms and D. Jacobson, 215–52. Oxford University Press.

Black, T. 2008. "Defending a Sensitive Neo-Moorean Invariantism." In *New Waves in Epistemology*, edited by V.F. Hendricks and D.H. Pritchard, 8–27. Palgrave Macmillan.

Black, T., and P. Murphy. 2007. "In Defense of Sensitivity." *Synthese* 154 (1): 53–71.

Clarke-Doane, J. 2012. "Morality and Mathematics: The Evolutionary Challenge." *Ethics* 122 (2): 313–40.

———. 2014. "Moral Epistemology: The Mathematics Analogy." *Noûs* 48 (2): 238–55.

———. 2015. "Justification and Explanation in Mathematics and Morality." In *Oxford Studies in Metaethics*, edited by R. Shafer-Landau. Vol. 10. Oxford University Press.

———. 2016. "What Is the Benacerraf Problem?" In *New Perspectives on the Philosophy of Paul Benacerraf: Truth, Objects, Infinity*, edited by F. Pataut, 17–43. Springer.

DeRose, K. 1995. "Solving the Skeptical Problem." *The Philosophical Review* 104 (1): 1–52.

Dretske, F. 1971. "Conclusive Reasons." *Australasian Journal of Philosophy* 49 (1): 1–22.

Elliott, A., and D. Faraci. m.s. "Normative Non-Naturalism and the 'Third-Factor' Gambit."

Enoch, D. 2011. *Taking Morality Seriously: A Defense of Robust Realism*. Oxford University Press.

Faraci, D. 2015. "A Hard Look at Moral Perception." *Philosophical Studies*, no. 172: 2055–2072.

Field, H. 1989. *Realism, Mathematics, and Modality*. Oxford, UK ; New York, NY, USA: Blackwell.

Gettier, E. L. 1963. "Is Justified True Belief Knowledge?" *Analysis*, 121–123.

Harman, G. 1977. *The Nature of Morality: An Introduction to Ethics*. Oxford University Press, USA.

Ichikawa, J. J. 2011. "Quantifiers, Knowledge, and Counterfactuals." *Philosophy and Phenomenological Research* 82: 287–313.

Kneale, W. 1950. "Natural Laws and Contrary-to-Fact Conditionals." *Analysis* 10 (6): 121–25.

Lange, M. 2009. *Laws and Lawmakers: Science, Metaphysics, and the Laws of Nature*. Oxford; New York: Oxford University Press.

———. 2012. "What Makes a Scientific Explanation Distinctively Mathematical?" *The British Journal for the Philosophy of Science*, October.

Lewis, D. 1986. *On the Plurality of Worlds*. Cambridge University Press.

Luper-Foy, S. 1984. "The Epistemic Predicament: Knowledge, Nozickian Tracking, and Scepticism." *Australasian Journal of Philosophy* 62 (1): 26–49.

Lutz, M. m.s. "Moral Non-Naturalism's Gettier Problem."

———. m.s. "What Makes Evolution a Defeater?"

Mackie, J. L. 1977. *Ethics: Inventing Right and Wrong*. Penguin.

Nietzsche, F. 1887. *On the Genealogy of Morals*.

Nolan, D. 1997. "Impossible Worlds: A Modest Approach." *Notre Dame Journal for Formal Logic* 38 (4): 535–72.

Nozick, R. 1981. *Philosophical Explanations*. Belknap Press of Harvard University Press.

Pritchard, D. H. 2007. "Anti-Luck Epistemology." *Synthese* 158: 277–98.

———. 2009. "Safety-Based Epistemology: Whither Now?" *Journal of Philosophical Research* 34: 33–45.

Rosen, G. m.s. "Normative Necessity."

Roush, S. 2005. *Tracking Truth: Knowledge, Evidence and Science*. Oxford University Press.

Sainsbury, R. M. 1997. "Easy Possibilities." *Philosophy and Phenomenological Research* 57: 907–19.

Schechter, J. 2010. "The Reliability Challenge and the Epistemology of Logic." *Philosophical Perspectives* 24 (1): 437–464.

Shafer-Landau, R. 2012. "Evolutionary Debunking, Moral Realism and Moral Knowledge." *Journal of Ethics and Social Philosophy*.

Slutsky, D. 2001. "Causally Inefficacious Moral Properties." *Southern Journal of Philosophy* 39 (4): 595–610.

Sosa, E. 1999a. "How Must Knowledge Be Modally Related to What Is Known?" *Philosophical Topics* 26 (1&2): 373–84.

———. 1999b. "How to Defeat Opposition to Moore." *Noûs* 33: 141–53.

———. 2007. *A Virtue Epistemology: Apt Belief and Reflective Knowledge*. Vol. I. Oxford University Press.

———. 2009. *Reflective Knowledge: Apt Belief and Reflective Knowledge*. Vol. II. Oxford University Press.

Street, S. 2006. "A Darwinian Dilemma for Realist Theories of Value." *Philosophical Studies* 127 (1): 109–166.

Sturgeon, N. 1986. "Harman on Moral Explanations of Natural Facts." *Southern Journal of Philosophy* 24 (S1): 69–78.

Vavova, K. 2014. "Debunking Evolutionary Debunking." In *Oxford Studies in Metaethics*, edited by R. Shafer-Landau, 9:76–101.

Warren, J., and D. Waxman. m.s. "Reliability, Explanation, and the Failure of Mathematical Realism."

Wielenberg, E. J. 2010. "On the Evolutionary Debunking of Morality." *Ethics* 120 (3): 441–464.

Williamson, T. 2002. *Knowledge and Its Limits*. Oxford; New York: Oxford University Press.