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Debunking arguments

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Abstract

Debunking arguments—also known as etiological arguments, genealogical arguments, access problems, isolation objections, and reliability challenges—arise in philosophical debates about a diverse range of topics, including causation, chance, color, consciousness, epistemic reasons, free will, grounding, laws of nature, logic, mathematics, modality, morality, natural kinds, ordinary objects, religion, and time. What unifies the arguments is the transition from a premise about what does or doesn't explain why we have certain mental states to a negative assessment of their epistemic status. I examine the common, underlying structure of the arguments and the different strategies for motivating and resisting the premises of debunking arguments.

1 | INTRODUCTION

You have been reading a book that details events occurring on a distant planet, and you believe what it says. I then try to convince you that it was written as a work of fiction, whose author has no access to any information about what is actually happening on any distant planets, and that you therefore shouldn't believe what you've read. I am attempting to "debunk" your beliefs, by showing there to be no appropriate explanatory connection between your beliefs and their putative subject matter.

Arguments with this same underlying structure arise in a wide variety of domains, including causation, chance, color, consciousness, epistemic reasons, free will, grounding, laws of nature, logic, mathematics, modality, morality, natural kinds, ordinary objects, religion, and time. What unifies these arguments—variously called debunking arguments, etiological arguments, genealogical arguments, access problems, isolation objections, and reliability challenges—is the transition from a premise about what does or doesn't explain why we have certain mental states to a negative assessment of their epistemic status.

The underlying similarities between the various arguments—both across domains and even within a single domain—are often obscured by the numerous differences in how the details are filled in. My aim here will be to take a bird's eye view on the debunking arguments, in order to show how these differences are really variations on the

same underlying schema. (As we shall see, it's not just the structure of the arguments that's shared across the different debates but also the sorts of challenges that arise.) My hope is that exposing the shared structure of the debates, together with the extensive citations that I provide in the endnotes, will help facilitate progress and communication across the different domains and help the uninitiated navigate the sprawling debunking literature.

In Section 2, I sketch how debunking arguments arise in the aforementioned domains. In Section 3, I identify the general structure of debunking arguments. In Section 4, I examine strategies for resisting the arguments that involve identifying an explanatory connection between our attitudes and the associated facts. In Section 5, I examine a further range of strategies, which involve denying that the absence of explanatory connections is cause for epistemic concern.

2 | THE VARIETIES OF DEBUNKING ARGUMENTS

I'll begin by illustrating how debunking arguments arise in different domains, beginning with morality. One common strategy for debunking moral beliefs and intuitions is to point to their evolutionary origins. We have the moral attitudes that we do, the debunker might say, because those attitudes motivated our ancestors to perform actions that tended to enhance reproductive success. Moral facts have no role to play in such explanations; it is not as if we need to suppose that we really *are* obligated to feed our children in order to explain why it's adaptive to *believe* that we are. Accordingly, it could only be a coincidence if evolutionary forces led us to moral beliefs that line up with the moral facts. Since we have no rational grounds for believing that we got lucky, we shouldn't think that we did, and so we should suspend all of our moral beliefs.

So formulated, this is an argument for moral skepticism, but such arguments can also be wielded in a more targeted way as a challenge for moral realists—that they must abandon their commitment to realism on pain of moral skepticism—or against some specific range of moral beliefs, for instance deontological beliefs or beliefs about political authority, eating animals, or moral luck.[1]

Debunking arguments also arise in the philosophy of mathematics. Suppose that, as Platonists think, mathematical beliefs are about mind-independent abstract objects (numbers, sets, etc.). Since such objects would be causally inert and have no way of influencing our beliefs, there would evidently be no conceivable explanation of our accuracy about them. Upon recognizing this, the Platonist must either suspend her mathematical beliefs or else reject the Platonist conception of mathematics that generates the problem in the first place.[2] It is easy to see how this sort of argument will generalize to other abstract domains, for instance logic and modality.[3]

The list goes on. Beliefs about the colors of objects are meant to be debunked by the observation that colors themselves (if there are any) have no role to play in explaining our color experiences.[4] Intuitions that laws of nature "govern," invoked in defense of non-Humean conceptions of laws, are meant to be debunked by tracing them to theological thinking.[5] Theological thinking is meant to be debunked by evolutionary explanations of religious belief.[6] The belief that time "flows," commonly invoked in support of A-theory, has been held to be debunked by explanations from cognitive science, as have intuitions about grounding, the essences of natural kinds, and free will.[7] Anti-physicalist intuitions in the philosophy of mind—explained by this or that cognitive mechanism—have also been the targets of debunking arguments, as has the belief that we are conscious at all.[8] Realist conceptions of causation, chance, epistemic reasons, and words have been said to be debunked by their inability to secure an explanatory connection between our beliefs and the associated facts.[9] Not even our perceptual beliefs about ordinary objects are safe from debunking: after all, given our hard wiring, atoms arranged treewise are bound to produce an experience as of a tree, regardless of whether atoms so arranged in fact do compose a single object.[10]

Debunking arguments can also take the form of global challenges to the reliability of all belief-forming methods. Given that our belief-forming methods are the products of natural selection, the idea goes, we ought to think it is highly unlikely that any of those methods reliably produce accurate beliefs. Why? Because the evolutionary

explanation for why some method yields the beliefs it does will have little if anything to do with the *accuracy* of those beliefs and everything to do with which sorts of beliefs enhance reproductive success.[11]

One might naturally wonder how some beliefs or experiences could manage to be adaptive without being accurate. The answer is that they could still be "reliably misrepresenting" the world. As an illustration, the regions that we visually represent as empty are not actually empty. They are filled with gaseous matter. So we misrepresent those regions; the experiences are inaccurate. But our "empty" and "filled" representations are nevertheless adaptive, despite the harmless misrepresentation, because they are systematically ("reliably") tracking a genuine difference—namely, the difference between regions that are and aren't filled by non-gaseous matter. Similarly, even if there are no colors on the surfaces of objects, our color experiences would still be adaptive insofar as they reliably track a genuine difference worth tracking, for instance the different spectral reflectance properties of different surfaces. Similarly for our perceptual representations of ordinary objects, even if there are no tigers but only atoms arranged tigerwise, our tiger experiences would still be adaptive insofar as they reliably track the real difference between atoms that are and atoms that aren't arranged tigerwise.[12]

3 | THE STRUCTURE OF DEBUNKING ARGUMENTS

The debunking arguments just sketched differ in all sorts of ways. Some focus on beliefs, while others target experiences or intuitions. Some aim to establish a conclusion about what we know; others concern what we are justified in believing; others concern what this or that theory is committed to saying about what's known or justified. Some emphasize what *does* explain our beliefs about a given domain; others, what *doesn't* or *couldn't* explain them. Some turn on the claim that we would have had the same beliefs even had the facts been different; others, on the claim that it would be a massive coincidence if we had ended up with accurate beliefs.

Still, it should be evident from the preceding section that there is *something* that these arguments all have in common. So let us see if we can bring some order to this chaos.

Let's begin by distinguishing two broad types of debunking arguments: skeptical and conditional. *Skeptical* debunking arguments aim to establish that beliefs or other propositional attitudes concerning a given domain D have a certain negative epistemic status. Schematically,

(SD1) Our D-attitudes and the D-facts do not stand in explanatory relation E
(SD2) If so, then our D-attitudes have negative epistemic status S
(SD3) So, our D-attitudes have negative epistemic status S

As an illustration, a skeptical moral debunker might argue that our moral beliefs are not explained by moral facts and are therefore unjustified or that the realization that our moral intuitions are not explained by moral facts renders them unable to justify moral beliefs.

Conditional debunking arguments aim to establish only that a certain sort of theorist is committed to the attitudes' having a negative epistemic status:

(CD1) Theorist T is rationally committed to believing that her D-attitudes and the D-facts do not stand in explanatory relation E
(CD2) If so, then T is rationally committed to taking her D-attitudes to have negative epistemic status S
(CD3) So, T is rationally committed to taking her D-attitudes to have negative epistemic status S

As an illustration, a conditional moral debunker may agree that our moral beliefs are justified, but argue that *moral realists* are committed to denying that the beliefs are justified on account of their commitment to the mind-independence of moral facts.

Instances of either schema will specify four things:

i. A domain D, for instance morality, mathematics, or color
ii. The explanatory relation E that is said to be absent, for instance that D-facts don't explain D-attitudes or (more ambitiously) that D-facts neither explain nor are explained by D-attitudes
iii. The type of attitude in question, for instance belief, intuition, or experience
iv. The status S that the attitude is said to have, for instance being unjustified (in the case of belief) or being unable to bestow justification (in the case of intuition and experience)

A conditional debunking argument will also specify the range of theorists T whose attitudes are being said to be debunked, for instance realists, Platonists, or naturalists.

Each debunking argument has an *explanatory* premise (SD1 or CD1) and an *epistemic* premise (SD2 or CD2). Approaches to defending the explanatory premise, and in particular the claim that D-facts don't explain D-attitudes, may be categorized as either *negative* or *positive*.

The negative approach to defending the explanatory premise is to argue that D-facts (as conceived by theorist T) aren't the sorts of things that *could* enter into an explanation of D-attitudes. For instance, a mathematical debunker may insist that the mathematical facts (as conceived by Platonists) can't explain our mathematical beliefs insofar as they purport to be facts about abstract and causally inert objects or properties.

The positive approach to defending the explanatory premise is to provide a "sparse" explanation of our D-attitudes, one that makes no reference to D-facts. Debunkers may point to an evolutionary explanation of our D-attitudes, entirely in terms of the adaptive advantage of having such attitudes (like the moral debunker described in Section 2). Alternatively, they may point to more proximate explanations, in terms of facts about worldly objects or features that are not among the D-facts. (For instance, a color debunker may insist that our color experiences are entirely explained by the chemical surface properties of perceived objects.) Either way, the idea would then be that, given the adequacy of the proffered sparse explanation, competing explanations of D-attitudes that do make reference to D-facts would be unparsimonious or otherwise objectionable.[13]

The idea behind the epistemic premise is that the explanatory revelation operates as a *defeater*, undermining the attitudes in question. Once you acknowledge that you have the D-beliefs that you do for reasons having nothing to do with what the putative D-facts are like, the idea goes, that realization undermines those beliefs. Debunkers needn't say that our D-beliefs, or those of the targeted theorists, were *never* justified, or that D-intuitions or D-experiences were never sources of justification. Treating the explanatory revelations as defeaters is entirely compatible with saying that, prior to encountering the defeaters, our D-beliefs were justified by D-experiences or intuitions. Accordingly, debunkers may wish to understand the arguments as implicitly restricted to those who have been exposed to the debunking arguments.[14]

It is worth emphasizing that debunking arguments are by themselves insufficient to establish that our D-attitudes are inaccurate or that there are no D-facts.[15] For all the debunking arguments have shown, there may still be a range of D-facts lying beyond our epistemic reach, and our D-attitudes may, by sheer chance, be entirely accurate. Still, debunking arguments can serve as a powerful supplement to arguments for eliminativism or error theory, insofar as they threaten to neutralize any motivation we might have had (e.g., moral intuitions, color experiences, religious experiences) for resisting such views in the first place.

4 | EXPLANATIONIST RESPONSES

Let's turn now to strategies for resisting debunking arguments. These divide into two categories. First, there are *explanationist* strategies, which challenge the explanatory premise by insisting that the specified explanatory relation does obtain between D-facts and D-attitudes. Second, there are *minimalist* strategies, which challenge the epistemic

premise, maintaining that the recognized absence of the specified explanatory relation is not sufficient to undermine our D-attitudes.

Because the exact explanatory relation at issue may vary from one formulation to the next—depending on what the debunker fills in for *E* in the argument schema—a strategy will count as explanationist or minimalist only relative to a formulation. For concreteness, we'll focus on responses to the following partial completion of the schematic premise SD1:

(SD1*) Our D-attitudes neither explain nor are explained by the D-facts

There will then be two sorts of explanationist strategies. First, there are *alethic* explanationist strategies, which affirm that the D-facts do explain our D-attitudes. Second, there are *doxastic* explanationist strategies, on which it is the D-attitudes that explain the D-facts. We'll consider the possibility of a more attenuated explanatory connection at the end of this section.

Alethic strategies come in many different varieties. *Reductionist* strategies identify the D-facts with some range of facts that straightforwardly figure in the explanation of D-attitudes. For instance, one might insist that colors just are the very chemical surface properties or spectral reflectance distributions that the color debunker cites in her explanation of our color experiences or that the facts about rightness or wrongness just are facts about what does and doesn't promote the flourishing of our species.[16]

Other alethic strategies involve working (unreduced) D-facts into the causal, constitutive, semantic, or evolutionary explanations of D-beliefs.[17] For instance, one might insist that both moral facts and natural facts figure in causal explanations or moral beliefs, albeit at different levels. Or one might insist that mathematical facts explain mathematical intuitions not causally but constitutively: the intuitions are partly constituted by mathematical facts. Or one might insist (on semantic externalist grounds) that our color concept *blue* represents the color that it does in virtue of the fact that blue experiences covary with the presence of blue things, thereby working blueness-facts into the explanation of blueness-beliefs. Finally, there are *theistic* strategies: an omniscient deity, who of course is aware of the D-facts, arranged for us to have accurate beliefs about them, perhaps via interventions in our evolutionary history.[18]

Doxastic strategies are available to certain sorts of anti-realists in the relevant domains. One might hold, for instance, that the moral facts are as they are because we have the moral attitudes that we do or that things have the colors that they do in virtue of our being disposed to have certain sorts of color experiences in their presence.[19] Those anti-realists (or less-than-full-blooded realists) who reject doxastic explanations—for instance, quasi-realists and quantifier variantists—must look elsewhere for a response to the debunking arguments.[20]

Even if D-facts neither explain nor are explained by D-attitudes, there could still be a more attenuated explanatory connection between them. According to *third-factor* strategies, there is some further fact that explains both the D-attitudes and the D-facts. The fact that feeding one's children promotes their survival, for instance, may be cited as the third factor that figures both in the (evolutionary) explanation of why we believe it's good to feed them and in the (moral) explanation of why it *is* good to feed them. Or one might say that, even if our tree experiences are entirely explained by atoms arranged treewise—and not by the trees they compose—the facts about treewise arrangements of atoms are a third factor, both (causally) explaining why we have tree experiences and (metaphysically) explaining why there are trees.[21] (As indicated above, whether this qualifies as an explanationist or a minimalist strategy depends on the exact formulation of the argument. If the explanatory premise affirms the absence of a third-factor explanation, then this is an explanationist strategy; if it doesn't, as in SD1*, it's a minimalist strategy.)

5 | MINIMALIST RESPONSES

Let's turn now to the epistemic premise of the debunking arguments. I'll call responses to the debunking arguments that challenge the epistemic premise "minimalist responses," since they are designed to block the debunking arguments with minimal explanatory or metaphysical commitments.

The idea behind the epistemic premise, again, is that the recognized absence of the specified explanatory connection between D-facts and D-attitudes operates as a defeater, robbing the attitudes of some positive epistemic status. Defenses of the epistemic premise can be separated into two categories, according to *how* the explanatory revelations are meant to undermine the D-attitudes. *Indirect* defenses take the revelations to undermine D-attitudes indirectly, by way of revealing them to have some other, more fundamental deficiency, for instance that they are unsafe or insensitive or at best coincidentally accurate. *Direct* defenses take the revelations to undermine D-attitudes directly: it is directly in virtue of the recognition or concession that your attitudes aren't appropriately connected to associated facts that those attitudes are undermined. Since the different styles of defense invite different strategies for resistance, we'll consider them separately.

5.1 | Indirect defenses of the epistemic premise

According to the indirect debunker, explanatory revelations debunk by revealing D-attitudes to be in one way or another "precarious." Such a debunker might contend that, if indeed the factors responsible for our D-attitudes were in no way influenced by the D-facts, then our D-attitudes are unsafe: we could easily have ended up with inaccurate D-attitudes. Or that our D-attitudes are insensitive: we would have had the same D-attitudes even had the D-facts been different. Or that the D-attitudes are unreliable, or that it could only be a coincidence or an accident or a stroke of luck if we ended up with accurate D-attitudes. And it's meant to be the recognition that the attitudes, even if accurate, are precarious in some such way that ultimately does the defeating.[22]

Minimalist responses to indirect defenses divide into two categories: *stable* and *unstable*. Unstable minimalists grant that the D-attitudes are precarious, but deny that this concession undermines their D-attitudes.[23] After all, they will say, one can sometimes have good evidence that something unlikely or massively coincidental has occurred. I can check my roster and find that every one of the 30 students enrolled in my class next term is named "Sam." Realizing that it would be a massive coincidence if they all had the same name doesn't undermine my belief that they do, since I have good evidence (the roster) that the coincidence did occur.

Suppose, then, that the debunker insists that we would have to have gotten massively lucky to end up with accurate moral beliefs. The unstable moral minimalist will grant the point. But she will insist that we *did* get massively lucky and that there is good evidence that we did. After all, we can check whether those actions that we believe to be wrong really are wrong, for instance by consulting our intuitions about whether the actions are right or wrong, or by checking whether the actions have the natural features that (intuitively) make right actions right and wrong actions wrong. And when we do, we find that, as luck would have it, those actions that we believe to be right are indeed right, and that those we believe to be wrong are wrong. (One may complain that this line of reasoning is question-begging or circular. More on this shortly.)

Stable minimalists grant the absence of the relevant explanatory connection but deny that our D-attitudes are precarious, pointing to some features of D-attitudes or D-facts that secure their accuracy—no luck or coincidence required.[24] As an illustration, take the question of whether your belief that 1 + 1 = 2 is safe. Are you mistaken in any nearby worlds about whether 1 + 1 = 2? No, says the stable minimalist. After all, it's not just true but *necessarily* true that 1 + 1 = 2, so (a fortiori) it's true in all nearby worlds. Moreover, you believe that 1 + 1 = 2 in all the nearby worlds; perhaps the evolution of mathematical cognition could have taken a different course but, given the evident adaptive value of our mathematical beliefs, this isn't something that could *easily* have happened. Putting the pieces together, you have a true belief about whether 1 + 1 = 2 in all nearby worlds. In other words, you couldn't easily have been mistaken; the belief is safe.

Or consider whether our moral beliefs are sensitive. Suppose we see some kids setting fire to a cat and we believe that they're doing something wrong. Would we have had that same moral belief if they hadn't been doing something wrong? No, says the stable minimalist. After all, the closest worlds in which they aren't doing

anything wrong are ones in which they aren't setting fire to a cat but rather having some innocent fun (e.g., racing their bikes), and when we see them having some innocent fun in those worlds, we're not going to think that they're doing anything wrong. So the relevant conditional *had it been false that the kids are doing something wrong, we wouldn't have believed that they were doing something wrong* comes out true, which means that the belief is sensitive. Or take some moral necessity, for instance that it's wrong to inflict gratuitous harm. Since it's not just true but necessarily true that it's wrong to inflict gratuitous harm, the relevant conditional *had it been false that it's wrong to inflict gratuitous harm, I wouldn't have believed that it's wrong to inflict gratuitous harm* has a necessarily false antecedent. On the standard (Lewis–Stalnaker) analysis of counterfactuals, such counterfactuals all come out vacuously true. So the belief is sensitive: I wouldn't have believed it if it had been false.[25]

One might naturally complain that these minimalist lines of reasoning are question-begging or circular. After all, the reasoning involves relying on the very D-attitudes that the debunker means to be calling into question (e.g., moral intuitions or mathematical beliefs), in an attempt to vindicate those very attitudes.

Minimalists typically respond that there is nothing illicit about relying on these attitudes. They will likely insist that some amount of epistemic circularity and question-begging is inescapable, on pain of global skepticism. And they will likely insist that their D-attitudes have not *yet* been debunked simply by the revelation that they bear no appropriate explanatory connection to the D-facts. By the indirect debunker's own lights, explanatory revelations defeat only by way of convincing one of the precariousness of the attitudes, in which case there should be nothing wrong with relying on the not-yet-impugned attitudes to check whether the explanatory disconnect renders the attitudes precarious.[26]

Let's consider one last minimalist strategy, which is a special version of stable minimalism. According to *plenitudinists*, there is a plenitude of D-facts, with some range of D-facts answering to pretty much any way we might have conceptualized the domain. To see how this strategy works, take an object debunker who maintains that our way of "dividing up" perceived matter into objects could easily have been different. It's a biological or cultural accident, she'll say, that we think of a trunk and the branches attached to it as composing a single object (a tree), and we could instead have taken the trunk and the dog sitting beside it to compose a single object: a "trog." But according to an object plenitudinist, there actually are trogs, as well as countless other such arbitrary fusions of objects. Accordingly, even if it's an accident that we believe in trees rather than trogs, it's no accident that we have accurate beliefs about which objects there are. After all, had we had trog-beliefs rather than tree-beliefs, we would still have had true beliefs, just about a different range of objects. So beliefs about which objects there are aren't precarious.[27]

Other plenitudinist strategies involve affirming that there are mathematical entities or consequence relations answering to pretty much any (coherent) mathematical or logical beliefs we might have ended up with, or that every color is simultaneously instantiated by every colored object. The plenitude of candidate referents ensures that, for pretty much any D-attitudes we might have ended up with, there is *something* for us to be right about.[28]

5.2 | Direct defenses of the epistemic premise

According to direct debunkers, the epistemic premise is underwritten by a more general explanatory constraint. Here are some candidate formulations of such a constraint:

(C_1) If S believes that the fact that p does not explain her belief that p, then S is thereby rationally committed to withholding from believing p

(C_2) If S believes that the fact that p neither explains nor is explained by her belief that p, then S is thereby rationally committed to withholding from believing p

The conclusion that some beliefs have the relevant negative epistemic status would then be an immediate consequence of the concession that those beliefs lack the appropriate explanatory connection to the associated facts.[29]

Direct defenses circumvent the minimalist responses considered in the previous subsection (with the possible exception of plenitudinists). As we saw, the minimalist's vindication of her D-attitudes relies on those very attitudes, which (she will insist) is unobjectionable so long as the attitudes have not yet been defeated merely by her explanatory concession. But if the direct debunker is right, then the minimalists' D-attitudes have already been defeated by their explanatory concession, and it is neither here nor there that they can reason from the impugned attitudes to the conclusion that the attitudes aren't precarious or that they are luckily accurate. The minimalist must therefore reject the direct debunker's explanatory constraint.[30]

One common objection to such constraints is that they are *self-refuting*. To see the problem, take C_1. Does C_1 itself—that is, the putative fact expressed by the sentence labeled "C_1"—explain one's belief in C_1? The debunker will likely concede that it doesn't; after all, C_1 looks to be precisely the sort of abstract, normative fact that according to debunkers doesn't or can't explain our beliefs. But then, given C_1, the debunker's belief in C_1 is undermined, thereby undermining her reasons for accepting the premises of her own debunking argument.[31]

What this reasoning shows is that a certain sort of skeptical debunker cannot make use of C_1 or C_2—specifically, a debunker whose reasons for rejecting explanationist accounts of D-attitudes also preclude explanationist accounts of beliefs about C_1 and C_2. However, the reasoning does not show that principles like C_1 and C_2 are false, nor does it show that *no one* can rationally accept them. Anti-realists who embrace doxastic explanations of moral facts, for instance, are well-positioned to embrace C_2 and launch *conditional* debunking arguments against realism that are driven by C_2, so long as they are willing extend their anti-realism to epistemic facts like C_2.

A second objection to explanatory constraints is that they overgeneralize and end up undermining our beliefs about the future and other inductive beliefs. After all, the fact that the sun will rise tomorrow surely is no part of the explanation of my belief that it will rise tomorrow, for that would seem to require some sort of backwards causation. Nor does my believing it to be so make it so. By C_1 and C_2, then, I ought to withhold from believing that the sun will rise tomorrow. This is plausibly regarded as a reductio of those constraints.[32]

It is in principle open to direct debunkers to bite the bullet and insist that inductive beliefs are just one more casualty of debunking arguments. Indeed, the absence of explanatory "connexions" figures crucially in Hume's own presentation of the problem of induction.[33] But direct debunkers and other friends of explanatory constraints will likely concede that C_1 and C_2 are too demanding and will attempt to weaken the explanatory constraint to make room for justified beliefs about the future.[34] As an illustration, one might weaken the explanatory constraint as follows:

> (C_3) If S believes that the fact that p neither explains nor is explained by her belief that p *and that there is no further fact that explains both the fact that p and the belief that p*, then S is thereby rationally committed to withholding from believing p

Supposing that the laws of nature figure in the explanation of both the facts about future sunrises and our beliefs about them, C_3 will not prescribe withholding belief about future sunrises.

A debunker who weakens the explanatory constraint in some such way—in an attempt to accommodate inductive beliefs—will of course have to make sure that she has not weakened it *so* much that the D-attitudes she is trying to debunk end up satisfying the weakened constraint. C_3, for instance, leaves the door wide open for the third-factor responses to debunking arguments that we considered at the end of Section 4.

6 | CONCLUSION

We have seen how debunking arguments arise in many different domains—sometimes as arguments for skepticism about that domain, other times as arguments that a certain conception of the domain drives one to skepti-

cism. We have seen that each such argument rests on an explanatory premise, affirming the absence of some explanatory relation between our attitudes and associated facts (at least by the lights of this or that theory), and an epistemic premise to the effect that the recognized absence of such a relation undermines those attitudes.

We saw that the explanatory premise may be resisted by embracing an anti-realist view on which the attitudes determine the associated facts and that there are a variety of options for forging an explanatory connection without abandoning realism. And we saw that the epistemic premise may be motivated either indirectly, inviting a range of minimalist responses, or directly, resting it on a controversial explanatory constraint.

My own view is that the most important question for the debunking literature at present concerns the viability of a direct defense of the epistemic premise and, relatedly, the possibility of formulating a viable (induction-friendly) explanatory constraint. If such a defense is possible, then, as we saw in Section 5.2, the debunker may be able to circumvent the minimalist responses. This would then mean that anyone wishing to resist the debunking arguments would have to go in for one or another explanationist response, and the substantial metaphysical and explanatory commitments that come with it.

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ENDNOTES

[1] On **moral** debunking arguments, see (among a great many others) Harman (1977: ch. 1), Ruse (1986: ch. 6), Sayre-McCord (1988), Sturgeon (1988), Harman and Thomson (1996: chs. 6 and 9.2), Kitcher (2005), Joyce (2006: ch. 6), Street (2006), Bedke (2009, 2014), Tropman (2013), Vavova (2014, 2015), Bogardus (2016), Isserow (forthcoming), and Kumar and May (forthcoming). See Singer (2005), Greene (2008, 2014), Kahane (2011), Vavova (2014: §7), Rini (2016), and Wiegman (2017) on restricting the argument to deontological beliefs, see Huemer (2013: ch. 6) on political authority, see Jaquet (forthcoming) on speciesist intuitions, and see Statman (forthcoming) on moral luck. See Cosmides et al. (2018) for an illuminating discussion of the evolution of moral cognition.

[2] On **mathematical** debunking arguments, see (among a great many others) Benacerraf (1973), Maddy (1980), Field (1989: 25-30, ch. 7.2), Balaguer (1995), Liggins (2010), Donaldson (2014), Bengson (2015), De Cruz (2016), Nutting (2016), Kovacs (2019), and Leng (forthcoming). See Clarke-Doane (2012, 2014, 2015), Berry (2018), and Woods (2018) on the connection between debunking arguments in ethics and mathematics.

[3] On **logic**, see Ruse (1986: 160-174), Field (2005: §6), Schechter (2010, 2013), and Woods (2019). On **modality**, see Adams (1983), Lewis (1986: ch. 2.4), Goldman (1992: ch. 3), Stroud (2000), Rea (2002: chs. 4 and 8), Sosa (2002), Pust (2004), Schechter (2010: 455-56), and Thomasson (forthcoming); cf. Crisp (2016) on metaphysical theorizing.

[4] On **color**, see, for example, Goldman (1992: chs. 2.3 and 3.1), Chalmers (2006: §6), Pautz (2011: §3), Schaffer (2016: §2), and Cutter (2018: §3). In the color literature, debunking arguments are far less common than arguments from variation in color experience, but interestingly the range of responses to variation arguments (dispositionalism, reductionism, externalism, pluralism) double as responses to debunking arguments.

[5] On **laws**, see Bird (2004: 273-275) and Schaffer (2008: 95); cf. Beebee (2000: 580-581).

[6] On **religious belief**, see Plantinga (2000: ch. 5), Barrett (2004), Schloss and Murray (2009), Mason (2010), Leech and Visala (2011), Wilkins and Griffiths (2012), Pigden (2013), Thurow (2013b), Braddock (2016), De Cruz (2018), and McBrayer (2018).

[7] On **temporal experience**, see Goldman (1992: ch. 3.2), Le Poidevin (2007: ch. 6), Paul (2010, 2016), Benovsky (2015: §3), Schaffer (2016: §3.2), and Baron (2017). See Miller and Norton (2017) on grounding, Leslie (2013) on natural kinds, and Deery (2015) on free will.

[8] On **consciousness**, see Chalmers (1996: ch. 5, 2018: §§5-7) and Frankish (2016: §2.3).

[9] On **causation**, see Price and Weslake (2008: §1.3), Paul (2016: §3), and Weaver (2019: ch. 4). On **chance**, see Handfield (2012: ch. 12, 2016) and Meacham (2013). On **epistemic reasons**, see Nozick (1981: 332-341), Street (2009), Vavova (2014: §5), and Evers (2015). On **words**, see Wetzel (2009: ch. 2.3).

[10] On **objects**, see Goldman (1992: ch. 2), Merricks (2001: 72-76, 2003: §3), Ladyman and Ross (2007: ch. 1.2.1), Sider (2013: §§5-6), Korman (2014, 2019), Benovsky (2015: §2), Hofweber (2016: §7.3), Osborne (2016), Schaffer (2016: §3.2), Korman and Carmichael (2017), Rose and Schaffer (2017), Sattig (2017), Fairchild and Hawthorne (2018: §§2-3), Barker (forthcoming), and Kovacs (forthcoming).

[11] See Plantinga (1993: ch. 12, 2011) for a **global** debunking argument targeting naturalists. See Fitelson and Sober (1998) and the papers in Beilby (2002) for critical discussion, and see Mirza (2011) for an overview of this literature. For a nearly-global skeptical debunking argument, see Hoffman, Singh, and Prakash (2015). See Crow (2016) and Moon (2017) on the connection between Plantinga's argument and evolutionary moral debunking arguments.

[12] On the **adaptive value of misrepresentations**, see Stich (1990: ch. 3), Mendelovici (2013)—from whom I borrow the label "reliable misrepresentation"—and Korman (2019: §4). See Wilkins and Griffiths (2012) and Kyriacou (2019) for discussion of when, in general, evolutionary explanations have debunking potential.

[13] On appeals to **parsimony**, see Goldman (1992: 46), Chalmers (2006: 67), Joyce (2006: 188-189), Street (2006: §6), Murray (2009: 175-176), Paul (2010: 358), White (2010: 583-584), Cutter (2018: §3), and Korman (2019: §§3-5). See Mogensen (2015) and FitzPatrick (2016) on the **proximate/ultimate** distinction.

[14] On framing the debate in terms of **defeaters**, see Plantinga (1993: ch. 12), Merricks (2003), Thurow (2013a), and Barker (forthcoming). On justification prior to debunking, see Field (1989: 25-26), Merricks (2001: 74-75), Bedke (2009: 200-201), and White (2010: 580-581). Those advancing conditional debunking arguments may wish to think of explanatory concessions as *rationally obstructing* as opposed to *defeating* D-beliefs; see Pryor (2004: 364-366) on the distinction.

[15] For more on the connection between debunking arguments and **error theory**, see Lillehammer (2003), Leslie (2013: 108-109), Locke (2017: §2), and Machuca (2018: §§2-3).

[16] On **reductionist** strategies, see Sturgeon (1988: 238-243), Copp (2008), Street (2008), Plantinga (2011: §1), Setiya (2012: 112-113), Locke (2014), Srinivasan (2015: 331-332), Schaffer (2016), Lott (2018), and Barker (forthcoming: §§3-4).

[17] On **causal** explanations, see Maddy (1980), Campbell (1993: §§3-4), Oddie (2005: ch. 7), Leech and Visala (2011: §6), Shafer-Landau (2012: 25-29), Setiya (2012: 113-114), Korman (2014: §3, 2019: §§5-6), and Cutter (2018: §3). On **constitutive** explanations, see Bengson (2015). On semantic explanations, see Plantinga (2011: §3), Setiya (2012: chs. 3-4), Korman (2014: §6), Fairchild and Hawthorne (2018: 50-51), Cutter (2018: §3), and Thomasson (forthcoming). On working D-facts into evolutionary explanations, see Nozick (1981: 336-338), Street (2006: §6), Schechter (2013), FitzPatrick (2015), and Korman (2019: §§3-4).

[18] On **theistic** responses, see Adams (1983), Plantinga (1993: ch. 12), Rea (2002: ch. 9), Wielenberg (2014: 173-175), Bogardus (2016: 659), Crisp (2016), Baras (2017a), Jeffrey (2019: ch. 3), and Brenner (forthcoming).

[19] On **doxastic** strategies, see Ruse (1986: chs. 5-6), Goldman (1992: chs. 2-3), Divers and Miller (1999), Lillehammer (2003), Street (2006: §10, 2009), Setiya (2012: ch. 3.3), Shafer-Landau (2012: 13-14), Berker (2014), Srinivasan (2015: §3.2) and Dunaway (2018).

[20] On **quasi-realist** responses, see Gibbard (2003: ch. 13, 2011), Street (2011), Dreier (2012), and Golub (2017); see Tropman (2013) and Korman and Locke (forthcoming-b) on relativist responses; and see Hirsch (2002) and Korman (2014) on quantifier variantism.

[21] On **third-factor** strategies, see Nozick (1981: 342-348), Huemer (2005: 218-219), Enoch (2010), Wielenberg (2010), Brosnan (2011: 60-63), Skarsaune (2011: §3), Berker (2014), Fraser (2014: 471), Locke (2014: §5), Talbott (2015), Joyce (2016: 152-156), Lott (2018: §2.2), Lutz (2018: §5), Dyke (forthcoming), Klenk (forthcoming), and Korman and Locke (forthcoming-a: §8).

[22] On **indirect** defenses, see Street (2006), Clarke-Doane (2015), Bogardus (2016), Braddock (2017), Warren (2017), and Fairchild and Hawthorne (2018: §2). I borrow the term "precarious" from section IV of Hume's *Enquiry*.

[23] On **unstable** minimalist strategies, see Dworkin (1996: 125-127), Bergmann (2002), White (2010: 589), Setiya (2012: ch. 2.2), Vavova (2014: 80-82), Srinivasan (2015: §3.1), and McBee (2018).

[24] On **stable** minimalist strategies, see Lewis (1986: ch. 2.4), Field (1989: 333-339), Sosa (2002), Pust (2004), Huemer (2005: 123), Cuneo and Shafer-Landau (2014: 424-428), Clarke-Doane (2015), Hofweber (2016: ch. 7.3), Baras (2017b), Jonas (2017), Woods (2018), Faraci (2019: §5), Korman (2019: §7.2), and Korman and Locke (forthcoming-a). As indicated above, third-factor strategies may count as minimalist, and are often advanced in a way that is minimalist in spirit, emphasizing the role of third factors in rendering D-attitudes nonprecarious.

[25] See Clarke-Doane (2015: §4) on sensitivity. This treatment of the cat example is drawn from Sturgeon's (1988) reply to Harman (1977). Sturgeon is not himself a minimalist, as he defends the sensitivity of moral belief in the context of advancing an explanationist response to Harman's debunking argument.

[26] On **begging questions** and circularity, see Van Cleve (2003), Williamson (2007: ch.7), Schafer (2010: 475-476), Street (2011: §6), Setiya (2012: ch. 2.3), Locke (2014: §5), Vavova (2014), Moon (2017), Lott (2018: §2), Morton (2018), Korman (2019: §5), Copp (forthcoming), Dyke (forthcoming) and Korman and Locke (forthcoming-a: §4).

[27] On **plenitudinist** responses to object debunking arguments, see Korman (2014: §3), Fairchild and Hawthorne (2018), and Kovacs (forthcoming: §5).

[28] For discussion of other **plenitudinist** strategies—directed in some cases at arguments from variation rather than debunking arguments—see Balaguer (1995), Johnston (2001: 185), Mandik and Clark (2002), Field (2005: §5), Huemer (2005: 126), Mizrahi (2006), Kalderon (2007), Schechter (2010 439-440), and Clarke-Doane (2017, forthcoming).

[29] For **direct** defenses, see Benacerraf (1973), Harman (1977), Lutz (2018), and Faraci (2019).

[30] See Korman and Locke (forthcoming-a).

[31] On **self-defeat**, see Korsgaard (1996: 45-46), Pust (2001), White (2010: 582-583), De Cruz, Boudry, de Smedt, and Blancke (2011), Srinivasan (2015: 332), Sterpetti (2015), and Kyriacou (2016). See Fumerton (1995: 50-51) for more on self-refuting arguments.

[32] On the **future**, see White (2010: 582-583), Setiya (2012: 104-109), Dogramaci (2017), and Fairchild and Hawthorne (2018: 52).

[33] See section VII of Hume's *Enquiry*, and see Jacobson (1987) for discussion.

[34] For other candidate formulations of **explanatory constraints**, see Goldman (1967: 364-366), Setiya (2012: 96), Locke (2014: 232), Lutz (2018: §2), Schechter (2017: §3), and Korman (2019: §8).

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