Mathematics, Morality, and Self-Effacement[*]

Jack Woods

forthcoming in *Noûs*

please cite the published version when it appears

June 3, 2016

Abstract: I argue that certain species of belief, such as mathematical, logical, and normative beliefs, are insulated from a form of Harman-style debunking argument whereas moral beliefs, the primary target of such arguments, are not. Harman-style arguments have been misunderstood as attempts to directly undermine our moral beliefs. They are rather best given as burden-shifting arguments, concluding that we need additional reasons to maintain our moral beliefs. If we understand them this way, then we can see why moral beliefs are vulnerable to such arguments while mathematical, logical, and normative beliefs are not—the very construction of Harman-style skeptical arguments requires the truth of significant fragments of our mathematical, logical, and normative beliefs, but requires no such thing of our moral beliefs. Given this property, Harman-style skeptical arguments against logical, mathematical, and normative beliefs are self-effacing; doubting these beliefs on the basis of such arguments results in the loss of our reasons for doubt. But we can cleanly doubt the truth of morality.

1

1. Introduction

There has recently been increased focus on the analogies between mathematical, logical, and moral beliefs, especially regarding their justification. Much of the contemporary discussion focuses on the issue of whether *genealogical debunking* arguments (Street 2006) are effective in undermining the justification of our moral beliefs and, if they are, whether the same style of argument impugns mathematical and logical beliefs. Debunking arguments tell a story about the causal origins of our beliefs in some subject matter that is independent of their truth, such as an evolutionary story about the origin of our moral beliefs.[1] Debunking stories do not show that these beliefs are false. Rather, they purport to show that our beliefs (interpreted realistically) stand in need of further justification.[2]

Whether genealogical debunking arguments work has been a matter of some dispute.[3] There are, in particular, various contentious ways to move from the genealogical story to the claim that our beliefs are unjustified without additional justification. My aim is not to offer a full defense of all such arguments, but only to (a) sympathetically explicate a particular debunking argument against our moral beliefs, and (b) show that analogous arguments against logical, mathematical, and some normative beliefs do not work.[4]

Our mathematical, logical, and some of our normative beliefs, even taken realistically (in the particular fashion discussed below), are not threatened by this style of argument. The reason is that these arguments presuppose the truth of our mathematical, logical, and some of our normative beliefs (presuming that the relevant normative beliefs are non-moral. See below.) This fact itself supplies a reason to maintain our mathematical, logical, and normative beliefs in the presence of a debunking story. Since moral beliefs need not be assumed true in order

---

[1]These stories might also involve testimony from others, conventional indoctrination, psychological tendencies to believe, and the like (Street 2006).

[2]Note that this weak construal of debunking arguments allows that they might only undermine belief in the absence of further justification. I believe that this is the right way to understand debunking arguments in general, but I won't argue for it here.

[3]See (Clarke-Doane 2014), (Enoch 2010), and (Vavova 2014) for criticism and (Schafer 2010) which offers an independent and plausible line of defense.

[4]My concern here is only with arguments against the *robust realist*—the realist who does not take moral properties and facts to be reducible to or to be constituted by natural facts. For a useful discussion of debunking arguments in the context of naturalist realism, see (Barkhausen forthcoming).

to construct the argument against them, there is no similar reason to persist in our moral beliefs. This explicates a sense in which mathematics, logic, and normativity are *insulated* from skeptical debunking arguments, as opposed to morality, which is not. There is thus an epistemic disanalogy between our moral beliefs and our mathematical, logical, and normative beliefs.

This particular disanalogy has gone unnoticed in recent work due to this work's focus on the *reliability* of our moral beliefs (Clarke-Doane 2012, 2014, forthcoming-a, -b, -c), (Joyce 2008), etc.. The problem with reliability, though of interest, isn't where all of the action is. An equally important question is whether we can argue that the best explanation of our possession of moral or mathematical beliefs does not involve their truth without presuming that the beliefs under investigation are generally true. In the case of morality, yes. In the case of (significant fragments of) mathematics and logic, no.[5] We need significant fragments of mathematics and logic to make sense of the case for the superiority of one explanation over another because we rely on mathematical and logical facts in two ways in assessing an explanation's *goodness*. First, we rely upon mathematical and logical facts in assessing how well an account meets the individual criteria for explanatory goodness (simplicity, strength, etc.). Second, we rely upon mathematical and logical facts in weighing these criteria against each other to get an overall measure of explanatory goodness. We also need some fragment of normativity in order to motivate the claim that we *ought* to believe the explanation that best meets these criteria. We need nothing of morality, however, to make the case for the superiority of the debunking explanation of our moral beliefs.

This fact is closely related to the better known disanalogy between mathematics and morality suggested in (Harman 1977) and discussed in (Clarke-Doane forthcoming-a). Mathematics and logic are indispensably appealed to in the course of our explanatory theorizing about empirical matters whereas morality is not. So we need mathematics and logic in order to explain our best scientific beliefs and, since we are entitled to presume the truth of things so required, debunking arguments against mathematics and logic have little probative force against them. Debunking arguments have rather more probative force against morality

---

[5]We need to presume that kind of beliefs in question are generally true, not that any particular belief is true. We *can* sometimes question individual logical, mathematical, and normative claims on a similar basis by presupposing the truth of other mathematical, logical, and normative beliefs. This does not affect my general point. See below and fn. 54.

since morality is not indispensable to our best science.[6]

So interpreted, Harman's argument relies on something's dispensability to our best science being sufficient reason to not believe in it, a view associated with Quinean empiricism.[7] Clarke-Doane rejects Quinean empiricism on behalf of the moral realist, and goes on to see whether Harman's argument still has some force. His verdict is negative, but this strains credulity; Harman's style of argument still seems intuitively probative. If we want to do justice to our intuition, we should explicitly reconstruct these arguments without relying on contentious epistemological assumptions like the claim about dispensability just mentioned. That is, we should see whether we can construct a Harman-style argument, without contentious assumptions like the just mentioned claim about dispensability, which has force against morality, but not against logic and mathematics. I will do so shortly (see §3.1 for discussion of the epistemological assumptions of my reconstruction).

I take the target of Harman-style arguments—robust moral realists—to hold that moral properties and facts are causally isolated from us; I likewise take robust mathematical, normative, and logical realists to believe analogous things about mathematical, normative, and logical properties and facts. Theorists who accept naturalistic reductions of moral, mathematical, normative, and logical facts and properties to something causally efficacious are not counted as robust realists. Neither are the Cornell realists who accept that moral facts and properties are constituted by, but not reducible to, clusters of causally efficacious properties (Boyd 1988).[8] What, then, is robust realism?

Robust normative realists, such as Fitzpatrick (2008) and Enoch (2011), claim that moral properties are *sui generis* properties isolated from the causally efficacious properties that shape the content of our beliefs about the empirical world.

> ...the non-naturalist [robust realist] thinks that at least some norma
> tive properties aren't identical with any natural or supernatural prop
> erties, nor do they have a real definition, metaphysical reduction, or
> any other such tight metaphysical explanation wholly in terms of nat-

---

[6]See (Quine 1951). Note that if we replaced 'morality' with 'normativity', it is much less obvious that the disanalogy holds.

[7]I take no stand on whether this is the correct reading of Quine. It is not an uncommon reading.

[8]Discussing the applicability of Harman-style arguments to all kinds of Cornell realism would take us astray. I bracket the issue as my focus is Harman-style arguments against the robust realist.

ural or supernatural properties. Normative properties are, in short, discontinuous with natural and supernatural properties. (Väyrynen forthcoming)

Robust realists are reluctant to accept the metaphorical charge that these *sui generis* properties float around in the aether; that is, that they are π-in-the-sky type properties. This is strongly suggested by their denial that these properties are *supernatural* properties like "being favored by the Almighty", though the line between non-natural properties and supernatural properties is notoriously difficult to draw (Väyrynen forthcoming).[9] How to flesh out robust realist views, given that such views are often explained in terms of what they are not, is important, but not something I can undertake here.

I will understand, then, robust realism as committed to the claim that the content of moral, mathematical, normative, and logical beliefs describes properties and facts which are isolated from causally efficacious properties. The relevant sort of isolation also requires, as noted above, thinking that these facts and properties are not constituted by causally efficacious properties. Such a view might avoid the argument given below as it might then be that the best explanation of our moral, mathematical, normative, or logical beliefs involved their truth.[10]

I assume that there is a class of normative beliefs that are not moral beliefs for reasons that will become apparent shortly. This is intuitively plausible though; there are normative claims, like the claim that we ought to believe the theory best supported by evidence, which do not seem to be moral in the requisite sense. This is not to deny that moral properties are normative or even that morality is a subspecies of the normative. It is only to claim that there is more to normativity than morality.

---

[9]Quietist non-naturalists (Scanlon 2008) avoid making explicit commitments like the ones just described. Nearly all of what I say here, however, holds for their views as well. This is especially true for the defense of mathematical, logical, and normative realism—as is to be expected.

[10]Perhaps it also excludes grounding moral properties in causally efficacious properties, but this depends on the details of grounding. Deciding this would thus take us away from our main point, so I will bracket it. Thanks to an anonymous reviewer for discussion.

2. Clarke-Doane on Harman-style Arguments

Clarke-Doane's defense against Harman's argument, inspired by (Field 1989) and (Enoch 2010), connects challenges involving the justification of our moral beliefs with challenges concerning how we can explain the reliability of our moral beliefs. He accuses debunking theorists, like (Joyce 2008) and (Street 2006), of conflating two related challenges: the challenge to justify our beliefs and the challenge of explaining their reliability:

> They have confused what I will call the justificatory challenge for realism about an area, D—the challenge to justify our D-beliefs—with the reliability challenge for D-realism—the challenge to explain the reliability of our D-beliefs. Harman's contrast is relevant to the first, but not, evidently, to the second. One upshot of the discussion is that genealogical debunking arguments are fallacious. (Clarke-Doane 2014, pg. 80)

Debunking theorists have supposedly confused the question of how to justify—that is, argue for or defend—our moral beliefs with the question of how to explain the reliability of our defeasibly justified moral beliefs. Clarke-Doane does not assume that we need to be able to justify our D-beliefs in order for them to be *justified* (Clarke-Doane 2014, pg. 81). So he argues that debunking arguments like Harman's threaten our moral beliefs only if they undermine the justification of our moral beliefs, regardless of whether they succeed in undermining our ability to explicitly justify our moral beliefs.

Clarke-Doane denies that the contents of our D-beliefs have to be part of their best explanation in order to be justified. He holds, in particular, that Harman's objection threatens the justification of our moral beliefs only if it gives reason to doubt their reliability (Clarke-Doane 2014, pg. 84). Clarke-Doane takes the relevant sense of "reliability" to be the safety and the sensitivity of the beliefs: a belief is *safe* just in case it could not easily have been false; *sensitive* just in case if it had not been true it would not have been believed. Clarke-Doane asserts the following principle about how the *justification* of kinds of beliefs, such as moral kinds, can be undermined by some information:

> MODAL SECURITY: If information, E, undermines all of our beliefs of a kind, D, then it does so by giving us reason to doubt that our D-beliefs are both sensitive and safe.

MODAL SECURITY says that undermining the justification of all moral beliefs requires giving reason to doubt that they are generally safe and sensitive.[11] With it in hand, Clarke-Doane argues that debunking arguments, like those of Joyce and Street, give no reason to believe our moral beliefs unsafe or insensitive; in fact, some of the materials they are constructed out predict that our moral beliefs are reliable in his sense. The putative metaphysical necessity of moral facts[12] entails sensitivity. Our moral beliefs, if true, couldn't have been false and so *a fortiori* couldn't easily have been false. As for safety, Clarke-Doane notes that geneological debunkers like Joyce and Street think our moral beliefs are *robust*. That is, given their evolutionary origin, we could not easily have had different ones. They therefore cannot claim that robust realists have reasons to believe them unsafe. Clarke-Doane concludes that there are no special problems with the justification of our moral beliefs that derive from debunking arguments.

Clarke-Doane's approach misunderstands the dialectical burden of the robust realist in light of Harman's objection, and therefore misunderstands one proper role of debunking in arguments against robust moral realism. Not all debunking arguments are versions of the reliability challenge; Harman's point, for example, and the argument constructed from it below are rather different. For what it's worth—though I can't argue this in detail here—it also seems to me that Clarke-Doane's strategy is hampered by the fact that safety and sensitivity conditions are almost entirely trivialized when applied to truths that are thought necessarily true if true at all. It seems hasty to try to explicate the reliability of beliefs whose content is not contingent by means of conditions designed to explain the counterfactual robustness of contingent content.[13]

---

[11]For the purposes of responding to Harman, Clarke-Doane takes our moral beliefs to be safe if it is not true that we could easily have had at least one false explanatorily basic moral belief (Clarke-Doane forthcoming-c, fn. 15). I will argue directly against MODAL SECURITY later, so I will not adopt this implausibly strong construal of general safety. Thanks to Earl Conee for useful discussion and help.

[12]Though see (Rosen Manuscript) for worries about the metaphysical necessity of morality.

[13]See (Setiya 2012, §3.1) for a lucid discussion of problems involved in using safety or sensitivity in explicating the relevant sense of reliability and (Barkhausen 2016, ch. 2) for useful generalization of these problems to conceptual necessity. Of course, specifying the relevant sense of reliability is difficult and Clarke-Doane's worries for certain forays into doing so are useful, but we should not rest content with using sensitivity or safety, so explicated, to explain reliability.

3. How to Interpret Harman's Argument

Harman's argument is better understood as a burden-shifting argument. His question is what reasons we have to maintain our moral beliefs in light of the fact that the explanation of our possession of them does not require that they be true. Harman notes that the standard way of testing scientific beliefs involves their confirmation by observational evidence and that the best explanation of these observations involves their truth. To use his example, we might observe, on the basis of a visible vapor trail in a cloud chamber, that a proton is moving through it. The best explanation of why we observed that a proton was moving through the cloud chamber will include that the proton was moving through it. So we can justify our observations—and, in like fashion, scientific principles—by the fact that the truth of what we observe partially explains why we observe it. But this route doesn't work for moral beliefs:

> Observational evidence plays a part in science it does not appear to play in ethics, because scientific principles can be justified ultimately by their role in explaining observations...by their explanatory role. Apparently, moral principles cannot be justified in the same way. It appears to be true that there can be no explanatory chain between moral principles and particular observings in the way that there can be such a chain between scientific principles and particular observings. Conceived as an explanatory theory, morality, unlike science, seems to be cut off from observation. (Harman 1977, pg. 9)

So we have an additional burden to explain and justify esoteric beliefs that we do not have with humdrum scientific and observational beliefs.[14] This argument does not purport to *directly undermine* our moral beliefs. Rather, it demands of the robust moral realist that they give an account of how to explain and justify our moral beliefs that does not route through observational evidence, analogously to the similar burden on robust mathematical realists.[15] If that burden cannot be met, then it seems our moral beliefs are unjustified, and our moral beliefs are thereby *indirectly* undermined. We can see Harman's argument as a comparison between the following argument for observational beliefs:

---

[14]Since nearly all parties to the dispute are willing to grant premises like 1o and 1m below, I will not argue for the explanation of our observational beliefs in terms of their truth.

[15]This means that, in principle, we could satisfy this demand by arguing for a moral epistemology that did not reduce moral reasons or moral justification to abductive reasons arising from non-moral observational data. Thanks to an anonymous reviewer for useful discussion here.

ARGUMENT-O

(1o) We can give a putative causal explanation of our *believing that p* on the basis of (the truth of) *p* for observational and scientific *p*.[16]

(2o) The best explanation of our having the observational and scientific beliefs we have is that given in (1o).

(IBE$^+$) We ought to believe in the grounds of the best explanation of phenomena like our observational and scientific beliefs.

(Co) We (epistemically) ought to continue believing our observational and scientific beliefs.

with the following against moral beliefs:

ARGUMENT-M

(1m) We cannot give a putative causal explanation of our *believing that p* on the basis of (the truth of) *p* for moral *p*; we *can* give a debunking explanation.

(2m) The best explanation of our having the moral beliefs we have does not involve their truth—it is, rather, the debunking explanation.

(IBE$^-$) If the truth and content of our moral beliefs is not involved in the best explanation for our possession of them, then we need additional reasons to believe them.

(Cm) We (epistemically) ought not to continue holding our moral beliefs *unless we have additional reasons—reasons arising from something other than the best explanation of why we believe them—to believe them.*

Harman goes on to point out that we can *indirectly* confirm our mathematical beliefs by their role in scientific explanations, thereby satisfying the additional burden that such esoteric beliefs carry. In particular, Harman argues that in establishing claims like 1o,[17] we need to use mathematics. As I have reconstructed this style of argument, this means that we can fulfill the demand for additional reasons that would occur in the conclusion of an argument, analogous to the above, against

---

[16]By 'on the basis of', I mean that (the truth of) p is part of the *explanans* of which our believing that p is the *explanandum*. See §3.1 for a discussion of the relevant notions of explanation.

[17] As well as 2o, but Harman does not make this point. For related discussion, see below.

mathematical beliefs. Whether and to what extent we actually can indirectly confirm our mathematical beliefs is not my primary concern here; personally, it seems to me that what we indirectly confirm of mathematics in *this* way is somewhat less than we would like. We can, however, give even more indirect reasons to believe other parts of mathematics in terms of their role in explaining the parts of mathematics we *can* indirectly confirm in Harman's suggested fashion.

For example, this is one way to understand Harvey Friedman's work showing that certain combinatorial theses, analogous to those we believe on Harmanian confirmational grounds, entail the existence of large cardinals (Friedman typescript). This means that certain combinatorial theses entail existence claims which are independent of the working mathematician's set theory of choice, ZFC. Since it would be strange to think that only the part of combinatorics without such consequences is determinate, we might argue that Friedman's theses are also determinate and, consequently, that we should think that the existence or not of such large cardinals is determinate. Likewise, even if we don't indirectly confirm things like the Axiom of Choice by the use of mathematics in science,[18] we can potentially confirm such principles by their use in organizing and explaining the fragment of mathematics that we do indirectly justify by its use in science.[19] The possibility of this type of extended confirmation is important since it means that there is a potential route to giving additional reasons to believe in substantial fragments of mathematics and logic if we can defend believing in a more minimal fragment. I take no stand on whether either route is ultimately successful—though both strike me as at least initially quite promising.

I will assume for the rest of the paper that claims like 1o and 1m are true. Nearly all participants to the dispute grant them, and many of the challenges surrounding their importance involve ways of interpreting Harman's argument that I reject. For example, Clarke-Doane (forthcoming-a, pg. 92) uses the conceptual possibility that ordinary objects don't exist to show that our ordinary-object be-

---

[18] For related discussion, see §2 of (Clarke-Doane 2014).

[19] A reviewer suggests that this sort of explanation is problematic given the existence of theorists like Aczel or Quine who would disagree about Zermelo-Fraenkel set theory being the best way of organizing and explaining mathematical facts. This strikes me as only a minor worry; Zermelo-Fraenkel set theory with choice is the language of working mathematicians and is plausibly the most natural and elegant background theory that performs an organizing and explanatory role. Quine's *New Foundations* and Azcel's non-well-founded set theories are outliers of only marginal technical interest.

liefs are not sensitive (over conceptually possible worlds.) He argues by analogy that moral analogues of 1o and 2o are not necessary for explaining the reliability of our moral beliefs. However, since I am arguing that Harman's argument should not be understood in terms of the reliability challenge, such worries are not to the point. Harman's argument works regardless of whether moral analogues to 1o and 2o are necessary for explaining the reliability of our moral beliefs.

3.1 Spelling out ARGUMENT-M

ARGUMENT-M claims that we can best explain our possession of our moral beliefs without appeal to their truth. It concludes, on the basis of IBE$^-$, that we ought to be skeptical of the truth of our moral beliefs *absent* additional reasons to continue believing them. We can articulate the more general thought underlying this transition principle as:

> BURDEN SHIFT If our believing in certain claims of a domain D can be well explained without any appeal to their content and truth, then we acquire the epistemic burden of explaining why we should continue to believe them in spite of their theoretical superfluousness.

BURDEN SHIFT, in combination with 2m, does not yet undermine our moral beliefs, but it impinges, *prima facie*, on their epistemic credentials. If we have an undischarged burden to explain why we should continue with our moral beliefs, then our confidence in them should, on reflection, be somewhat shaken. In the presence of additional factors, such as the diversity of moral belief and the coherence of moral error theory, it seems that a powerful abductive argument *against* robust moral realism can be mounted on this basis.[20]

Clarke-Doane seems to suggest that Harman's argument, in its most compelling form, relies on something's dispensability being sufficient reason not to believe in it (Clarke-Doane, forthcoming-a, p. 82). Although this *would* underwrite BURDEN SHIFT—in fact, it would underwrite even stronger principles—my

---

[20]This is not to deny that there might also be pragmatic reasons to continue with such beliefs even if they cannot ultimately be justified on epistemic grounds, just as there may be pragmatic reasons to continue believing in religious claims even though they cannot be justified on epistemic grounds (James 1985). See also (Magire and Woods, ms) for arguments that we can have prudential reason to continue holding epistemically impoverished beliefs. However, the epistemic papers of such beliefs are certainly no longer in perfect order.

reconstruction does not need such contentious epistemological principles. It is thus worth emphasizing how weak the epistemic assumptions of my reconstruction actually are. As I will argue below, when we can well explain why we believe something without appealing to its truth, any explanation that did appeal to its truth would be a worse explanation. Even permissive standpoints that accept that simply believing something provides defeasible justification for it should also accept that *when* we can explain why we believe something better without appealing to its truth, we need to explain why we should continue believing it. Otherwise, it is unclear how beliefs in ghosts or the innate superiority of the wealthy could ever be effectively undermined.[21] Such an explanation will involve giving additional reasons to maintain these beliefs.

BURDEN SHIFT and IBE⁻ do not say that such reasons have to be based in observational evidence. Perhaps we could find an additional reason in the thought that common sense should triumph against philosophical argument. The deliberatively indispensability of these beliefs might be another.[22] Which type of reasons count and how strong such reasons need be is an epistemological issue that I will not address.[23] If the demand for additional reasons is very stringent, as one suspects Harman, Joyce, and Street take it to be, then we can move easily from IBE⁻ to undermining our realistically construed moral beliefs.

On the other hand, if moral epistemology is very permissive, then perhaps we can meet the epistemic burden. Of course, the robust realist also has the burden of arguing for a morally permissive moral epistemology. One suspects they will be open to a charge of special pleading on behalf of morality. But this need not concern us here since IBE⁻ and BURDEN SHIFT are, strictly speaking, independent of additional claims about which reasons count as admissible and sufficiently weighty.[24] These two principles thereby ought to be acceptable to both those of a

---

[21]Thanks to Derek Baker for discussion and the fantastic latter example.

[22]A reviewer suggests that robust realists define themselves in opposition to principles like IBE⁻. This seems incorrect to me; robust realists, rather, take the demands imposed by IBE⁻ to be significantly weaker than Harman and Quine. Enoch (2011), for example, takes the *deliberative indispensability* of normative claims to be additional reason to maintain them whereas some, such as Harman and Quine, will disagree that this suffices as an additional reason.

[23]This is because the overall point I want to make is that we do not need such additional reasons, of whatever stripe the robust realist thinks acceptable, to defend logic, mathematics, and normativity from arguments like the above.

[24]It is nevertheless reasonably plausible that whatever reasons the robust realist furnishes and considers acceptable will not be sufficient. Once there is a burden to be satisfied, acceptable to all

Harmanian- or Quinean-stripe and their robustly realistic opponents. And, given the explanatory facts encoded in 1o, 1m, and BURDEN SHIFT, robust moral realists have some explaining to do.

Of course, there is an relevant distinction here between *pragmatic* explanations and *metaphysical* explanations. It is plausible that moral and mathematical claims play a role in some good pragmatic explanations—after all, we typically use both mathematical and moral properties in offering actual explanations to people, a fact that should be acknowledged on all sides. Explanations that are good in the pragmatic sense are those which would satisfy us about some question or bring us to understanding of some issue.[25] Good pragmatic explanations may use extraneous materials in order to make our transition to understanding easier: we might explain why Alaska is colder than California by pointing out that Alaska is above California on a map.

Debunking theorists and Harman should not be understood as claiming that moral properties aren't part of good explanations in the pragmatic sense of satisfying ordinary inquiry (Sturgeon 1986). Both are interested in a more metaphysical, less pragmatic notion of explanatory goodness according to which good explanations cut explanatory dross.[26] Non-pragmatic explanations are *better* explanations when they are *compact* in the sense of not containing any superfluous material. This is a familiar thought:

> A particular assumption is explanatorily impotent with respect to a certain fact if the fact would have obtained and we could have explained it just as well *even if the assumption had not been invoked in the explanation* (Sayre-McCord 1988, 272)

Moral properties and facts are explanatorily impotent in the sense that we can well explain—in some non-pragmatic sense—the psychological fact that we be-

---

parties, the robust realist also takes on the burden of showing that their additional reasons really are sufficient to justify our moral beliefs.

[25]This gloss presumes that we are talking about pragmatically good explanations for creatures with roughly our psychology. It might be that creatures with very different psychologies from ours would require very different sorts of explanations. Thanks to Catharine Diehl for discussion.

[26]We not need go so far as full-bore metaphysical explanation here, of course. Causal explanation would do nicely, properly spelled out, as would a variety of other explanatory relations. Since the point is clear enough without an extensive discussion of such explanatory relations, I will simply presume that there is some relevant notion of non-pragmatic explanation in the vicinity that will do for our purpose.

lieve that something is wrong without making use of its wrongness *and* any putative explanation that made use of it would be less compact, and hence worse, than one that did not. Harman focuses on causal explanation, but we can broaden this to any objective, non-pragmatic explanatory relation without damaging the argument. Such a broadening wouldn't undermine the argument in the presence of a suitably plausible account of explanatory goodness that held that non-compact explanations were less good than compact ones.

So, we motivate principles like BURDEN SHIFT on the basis of very general epistemological considerations. These principles express the thought that we need to justify maintaining beliefs whose content seems to play no role in the best explanation of why we believe them. We can explain why we possess our moral beliefs without invoking them and any competitor explanation assuming their truth is less compact and thereby worse. Our moral beliefs are thereby explanatorily impotent in explaining why we have them, so we need to justify continuing to believe them. We can thereby conclude that we should only maintain these beliefs if there is some additional reason to do so. There very well may be such additional epistemic reasons, of course, but the point here is that the robust moral realist needs them while the robust scientific realist does not.

3.2 Harman's Argument and MODAL SECURITY

Can we make sense of Clarke-Doane's use of MODAL SECURITY as a response to Harman? There is one way of doing so.[27] Suppose MODAL SECURITY is true. Further suppose that we concluded on the basis of 1m and 2m that our moral beliefs are unjustified absent additional reasons. Given MODAL SECURITY, this means we can conclude that 1m and 2m, absent additional reasons, give us reason to believe that our moral beliefs are unsafe or insensitive. Clarke-Doane argues, however, that 1m and 2m give us no reason to believe our moral beliefs are unsafe or insensitive. If his argument worked, then there are either additional reasons to maintain our moral beliefs or, alternatively, principles like IBE$^-$ are false. Either way, Harman's challenge would then not suffice to show robustly construed moral beliefs are unjustified.

---

[27]I make no claim that this is a step-by-step reconstruction of Clarke-Doane's argument. It is merely constructed out of materials he accepts.

3.2.1 MODAL SECURITY isn't generally true about undermining

This line of objection only works, however, if MODAL SECURITY is plausible as a general principle about undermining justification. Clarke-Doane give us the following reason to accept it:

> Because it is hard to see why we should give up beliefs in light of information that neither tells 'directly' against their contents, nor against the 'security' of their truth. (Clarke-Doane forthcoming, pg. 30)

There are two problems with this reason. The first problem is that MODAL SECURITY neglects the fact that information might alter the burden of proof in such a way that we should suspend belief instead of actively doubting or disbelieving. It *is* plausible that information cannot undermine our beliefs without presenting reasons to refrain from believing them safe, but this is because believing our beliefs safe involves believing them to be true. Any (epistemic) reasons to suspend belief on p are thus reasons to refrain from believing p safe, but they are not yet reasons to believe p *unsafe*. Since reasonable suspension does not always involve believing that these beliefs are insensitive or unsafe, MODAL SECURITY is implausible as a general constraint on undermining.[28]

Suppose, for example, that we believe that moral truths are either necessarily true or necessarily false and our beliefs in moral truths are robust in the sense that much of our history and nature would have to change if we were to disbelieve them. Suppose further that we also think that had we believed in moral nihilism, our believing that would be equally robust. We believe that absent our actual reasons to prefer our moral beliefs, both (conceptual) possibilities are equally likely (i.e. if we were to explicitly suspend our putative reasons and put our belief in moral realism and moral nihilism on the justificatory scales, we'd take a bet at even odds on which is right). Finally, we currently believe our moral beliefs are justified by inference to the best explanation from non-moral observations. The Harmanian argument given above then gives us reason to refrain from thinking our (current) moral beliefs are safe or sensitive but not to actively believe that they are unsafe or insensitive. After all, they very well might be true and, if true, they would be both safe, and sensitive. In this case, it seems we should suspend

---

[28]Thanks to an anonymous reviewer for suggesting I make my position here clearer and to Barry Maguire and Derek Baker for useful suggestions for how to do so.

belief absent further reasons to take a stand on the issue.

The second problem is that MODAL SECURITY entails that the moral or mathematical skeptic must undermine our moral or mathematical beliefs *by* showing that they are either unsafe or insensitive. But this is incorrect: even if all undermining information tells against our beliefs being safe or sensitive, this might be because an unsatisfied demand for additional reasons generates additional reasons to *actively disbelieve* our moral beliefs and, hence, believe them unsafe. An epistemic position strongly committed to believing p just in case p figured in the best explanation of our scientific beliefs, for example, would underwrite this kind of position. A weakened version of MODAL SECURITY would then be a consequence of these additional epistemic assumptions, not the other way around.[29] We would still need additional reasons to persist in our moral beliefs, but absent these reasons, we should actively disbelieve them.[30] This weakened version of MODAL SECURITY is insufficient to underwrite the argument I opened this section with. Clarke-Doane has only argued that premises like 1m and 2m don't show, by themselves, that we have reasons to believe our moral beliefs unsafe or insensitive. He has not argued that 1m, 2m, and additional epistemic principles would not have this result.

3.2.2 MODAL SECURITY **isn't true about undermining esoteric beliefs**

MODAL SECURITY is thus unjustified as a general constraint on undermining. Perhaps, though, it is acceptable as a special constraint governing our attempts to undermine esoteric mathematical and moral beliefs. Robust realists explicitly do not think our moral beliefs are justified by inference to the best explanation from our observations, as in the above example.[31] So let us consider an example which avoids the use of inference to the best explanation. Let's suppose we are default justified in believing in classical mathematics and give classical justifications for mathematical beliefs, but come to believe on the basis of very compelling arguments—say, Dummett's acquisition and manifestation arguments

---

[29]Clarke-Doane's earlier formulations of the principle were weaker in the relevant respect. See (Clarke-Doane forthcoming-a) for one such formulation.

[30]If Clarke-Doane nevertheless managed to show that 1m, 2m, and such additional epistemic assumptions gave us no reason to believe our moral beliefs unsafe, this would just mean that there were additional reasons to persist in our moral beliefs.

[31]As noted by an anonymous reviewer.

(Dummett 1978, preface)—that constructive, not classical, mathematics is correct. This would result in the loss of justification for our actual mathematical beliefs. For some mathematical beliefs, the prior classical justification is constructively acceptable. We would recover justification for these mathematical beliefs nearly immediately simply by inspecting our prior proof or by testimony that a constructively acceptable proof is available. However, this will not be the case for many robustly believed mathematical beliefs as constructively acceptable analogues of classical proofs can be quite difficult to find.

Disbelieving here would be too quick; some of these beliefs might very well be constructively provable, necessary, and robust. They merely lack justification given our newfound commitment to constructive proof.[32] We ought suspend belief in them until and unless we can either provide a constructive proof (an additional reason for maintaining our belief), a demonstration that there will be no additional reasons forthcoming,[33] or come to our mathematical senses.[34]

Clarke-Doane might complain, as he does in (forthcoming-c), that this sort of false but justified belief about mathematical justification only gives the *wrong* kind of reason to refrain from believing, but it's hard to see why this is. If we are justified in believing that constructivism about mathematical justification is correct, even if it ain't correct, then it is very intuitive that many standing mathematical beliefs would be unjustified absent constructive proof (especially since constructive proofs are classically acceptable in nearly all cases.) The idea that this sort of belief doesn't undermine is generally very contentious; it would thus be a serious cost to Clarke-Doane to hang his defense of MODAL SECURITY on it.

For a final case that avoids this wrong kinds of reason worry, consider the widely held view that personal relationships have non-instrumental value. Pre-

---

[32]This way of setting up the counterexample avoids Clarke-Doane's worry about certain counterexamples to MODAL SECURITY undermining beliefs which do not form a natural class (forthcoming-c, pg. 32.) The details of how to individuate classes of beliefs is difficult, but luckily these counterexamples are all independent of it.

[33]For the *cognoscenti*, I have in mind here the production of a weak counterexample.

[34]For an interesting variation on these cases, note that the insulation result I argue for below gives us a reason to maintain our mathematical and logical beliefs that does not appeal to their safety or sensitivity, but rather their involvement in constructing skeptical arguments. If, however, we were to learn that some fragment of these were not required, and that there were no other reasons to maintain them, this would give us reason to refrain from believing them, but not reason to think them unsafe or insensitive.

sumably, our belief that such relationships have non-instrumental value, if true, is safe—it is nearly impossible to imagine seriously holding our personal relationships have no such value or to imagine social contexts in which we held such an alien view. Presumably, our belief that such relationships have non-instrumental value is trivially sensitive—the non-instrumental value of personal relationships is very plausibly not contingent. We might also view the facts about non-instrumental value as part of the explanation of why we think these relationships have non-instrumental value (Maguire manuscript). However, once we find out that our beliefs about the value of personal relationships are deeply shaped by unreliable testimony of those around us, our social circumstances, economic facts, and facts about human psychology, we should refrain from believing that there are non-instrumental value in such relationships until and unless we find additional reasons, such as moral or normative reasons, to think so.

This information does not provide the wrong kind of reason to refrain from believing and it does not show directly that our beliefs about the value of personal relationships are unsafe or insensitive. Rather, this information puts us in a position to search for additional reasons, perhaps reasons arising from other prudential or moral facts, to believe that these relationships have value. Potentially, there are such reasons, but absent them, it seems we should refrain from believing.

Wrapping up, MODAL SECURITY is open to a number of counterexamples that demonstrate that it holds neither as a general principle about undermining, nor as a principle about undermining esoteric beliefs like those of morality or mathematics. It is also antecedently plausible that we can undermine beliefs in ways other than by showing them unsafe or insensitive. To invoke MODAL SECURITY against my reconstructed argument would be a paradigm case of special pleading. Clarke-Doane's claim that 1m and 2m do not, by themselves, give us reason to believe our moral beliefs as unsafe or insensitive is thus besides the point. We turn now to the mathematical, logical, and normative realist.

4. The Insulation of Mathematical, Logical, and Normative Beliefs

It seems that there is a demand for the robust realist to find additional reasons to believe in the accuracy of their moral beliefs. Can we raise an analogous worry for mathematical and logical beliefs? That is, can we run a version of the following argument:

(1l) We cannot give a putative causal explanation of our *believing that p* on the basis of (the truth of) *p* for mathematical/logical *p*; we *can* give a debunking explanation

(2l) The best explanation of our having the mathematical and logical beliefs we have does not involve their truth—it is, say, the debunking explanation.

(IBE⁻) If the truth and content of our mathematical and logical beliefs is not involved in the best explanation of our possessing them, then we need additional reasons to believe them.

(Cl) We (epistemically) ought not to continue believing our mathematical and logical beliefs *unless we have additional reasons to believe them*.[35]

Perhaps surprisingly, the answer is that we cannot. 1l is plausible and we will presume for the rest of the essay that it is true. Consider, however, (2l): we need to be able to justify the claim that the debunking explanation is the *best* explanation of our possession of our mathematical and logical beliefs. But the notion of *best* in *best explanation* is not independent of our mathematical and logical beliefs—our conclusions about which explanation is best will depend on what mathematical and logical theory we accept in the background.[36]

For a toy example, consider the explanatory virtue of ontological simplicity. Presumably, in assessing how ontologically simple an explanation is, we need to appeal to (a) claims about which entities' existence are entailed by it, and (b) claims about how many types of these entities are entailed.[37] (a) clearly requires background facts about logic.[38] As for mathematics, our justification of the fact

---

[35]Note that indispensability for science potentially satisfies this condition, but we need not lean on it given the results of this section.

[36]Of course, when there are reasonable disputes about the relevant mathematical and logical facts, the issue gets significantly messier. I have explored this issue elsewhere, so I will put it to the side for now and focus on simple examples.

[37]Plausibly, it is the number of types of entities entailed, not the brute number of entities, that matters for ontological simplicity. Nothing significant turns on this.

[38](a), combined with the dispute about whether property-talk is existentially committing, gives a nice example of how change of background logic can change our evaluation of which explanation is best. Since this complicates the issue and my focus is on using Harman-style arguments to undermine all our mathematical or logical beliefs at once, I will put this example to the side.

that an explanation is overall ontologically simpler than alternatives depends on both (a) judgments about what existence claims the grounds of the explanation entail as well as (b) the contention that alternative explanations demand *more* existence claims. This means we need mathematical facts about cardinal comparisons in order to measure ontological simplicity.[39] Similarly with other explanatory criteria like fruitfulness, consistency with background beliefs, etc.[40]

4.1 The Extent of Insulation

How much of our mathematical and logical beliefs are required to justify a judgment that some explanation is the best? This will depend on the metrics used in analyzing potential explanations, the particular case, and our general account of inference to the best explanation. It seems clear that at least some logic, arithmetic and, potentially, a significant fragment of analysis are required.

We need to be able to assess the sum weight of how well an explanation satisfies various criteria like coherence with our background beliefs, simplicity, fruitfulness, etc., compare the overall score of this explanation with alternatives, as well as look at general constraints like logical consistency, internal coherence, and antecedent likelihood (involving probabilistic reasoning), etc. If we accept that in order to be the *best* explanation, an explanation has to at least be a *reasonably likely* explanation, then we also need to engage in probabilistic reasoning about the grounds of our explanation, which itself may require a non-trivial amount of analysis in the guise of probability theory. More could be said here, but this should be sufficient for my point.[41]

---

[39]A reviewer notes that we, strictly speaking, only need "cardinality" quantifiers for this. This is true, but although finite cardinality quantifiers like *there are exactly n Fs*, for n finite, are definable in first-order logic with identity, infinitary cardinality quantifiers are not generally so-definable. Moreover, adding the "Frege"-quantifier that expresses 'there are more Bs than As', is a significant extension of first-order logic, as witnessed by the resulting failure of compactness. See (Antonelli 2010, pg. 166).

[40]See the discussion of these criteria in (Thagard 1978) and, in particular, the use of entailment, minimal set theory, and cardinal comparisons in Thagard's analyses of explanatory criteria.

[41]I am bracketing the question of whether replacement of mathematics with logic (i.e. showing that we *could* redo these analyses in purely logical terms) is sufficient to show that mathematics does not figure into our best explanations. This is a complicated question and I have made the least charitable assumption for my point. If it turns out that mathematics is still necessary to justify the claim that some explanation really is the best one of some phenomena, this is grist for my mill.

The use of simple arithmetic, as is well known, can be tediously replaced with first-order logic, at least in large part. This means, in particular, that we can *replace* some mathematical premises in justifications with an expanded series of steps in pure first-order logic—for example, we can use finite cardinality quantifiers, defined out of quantification, negation, and identity, instead of bits of arithmetic like $2 + 5 = 7$ in our justifications. The mathematics used in characterizing probability theory, however, typically require significantly larger logical resources.[42] So, even if the necessary resources can be obtained just from logic, the amount needed is likely stronger than first-order logic.[43] Logical resources stronger than first-order have a slightly dubious claim to being non-mathematical.

We need this fragment of mathematics and/or logic both for assessing how well the explanation does in meeting various explanatory criteria and for assessing how the overall explanatory goodness score—on whatever scoring function—of the explanation compares to alternatives. If we refrain from assuming the truth of this fragment of logic and mathematics, we will lose our justification of 2l and thus our conviction in the soundness of the argument itself. We may also need mathematics and logic to justify 1l, though the case for this claim is less straightfoward.[44] Nothing similar affects the arguments against moral beliefs; no moral beliefs are involved in the justification of the premises of ARGUMENT-M.

If we were to abandon our background mathematical or logical beliefs, then we would be unable to justify (2l) and our debunking argument would fall apart. If we came to believe Cl on the basis of ARGUMENT-ML and also believed there were no additional reasons to persist in our mathematical and logical beliefs, we should cease to believe them. But we then lose our justification of the premises of ARGUMENT-ML itself, undermining our original reason to relinquish our mathematical and logical beliefs. Call arguments with this self-undermining property *self-effacing*. Harman-style debunking arguments against logic, mathematics, and

---

[42]For general discussion, see (Field 1980) and (Malament 1982; Burgess 1984) for criticism. See (Woods, ms) for further discussion and an application to choice of logic.

[43]For example, consider the point about probability theory above. First-order logic and Peano Arithmetic, treated non-logically, suffice for rational-valued probabilities ranges. Likewise, we could use an ordinal theory of probabilities. So we may not need to dip into analysis, strictly speaking, for the requisite amount of probability theory. However, any of these alternative approaches requires more than first-order logic. They thereby involve more logic than can be safely assumed to be independent of mathematics.

[44]1l potentially loses plausibility when we widen the class of explanations past causal. Since I am assuming that 1l is true here, I will put the point aside.

normativity are self-effacing. As I will argue below, this fact protects our robustly construed logical, mathematical, and normative beliefs from being undermined. But first an objection.

4.2 Using Alternative Mathematical, Logical, and Normative Notions

Arguments like ARGUMENT-ML are self-effacing when we use robustly construed mathematical, logical, and normative beliefs in justifying the premises of our argument. Could we avoid this result by using some more naturalistically acceptable alternative to robustly construed mathematical, logical, and normative beliefs? Not obviously; I have assumed that the content of our actual logical, mathematical, and normative beliefs is insulated from the empirical world. If, in contrast, we understood these beliefs in a way which drew on features of the empirical world, as we would on a hardcore conventionalist view where mathematics, logic, and normativity were treated like etiquette and rules of chess, then we could characterize abductive arguments without appeal to robustly realistic logical and mathematical facts.[45] But if we could do this, then already the best explanation of our mathematical and logical beliefs *would* be connected to their truth and ARGUMENT-ML would not get off the ground.

Even if our actual beliefs are robustly realistic, could we use alternative notions of logic, mathematics, or normativity in order to justify the abductive argument given above? Suppose the replacement of mathematics with logic mentioned above sufficed to justify that the debunking explanation was the best overall explanation of our mathematical beliefs. ARGUMENT-ML would then not be self-effacing. We would need additional reasons to maintain our mathematical beliefs. The analog argument against our logical beliefs still would be self-effacing, of course. This would provide a non-negligible reason to favor logical reconstructions of mathematics. Importantly, using logic in the place of some fragment of mathematics in such arguments is acceptable to all parties to the dispute. The only question is how much mathematics we can eliminate. The use of something naturalistic in place of logic is a much taller order; there is no even remotely plausible candidate naturalistic construction.[46]

---

[45]See (Warren 2015) for the best contemporary defense of such a position. See also (Woods, forthcoming) for a recipe for the reduction of nearly all normativity to conventional practices. Such views are very contentious.

[46]This is not to say that there are no such reductions, of course, but detailing them and their

There is another, deeper problem lurking here, especially visible in the case of logic. Replacing the use of logic in debunking arguments with something else requires justifying that the replacement is adequate. This requires showing that this replacement will replicate enough of our current commitments regarding entailment, consistency, inferential relations, and so on. In short, we need to justify the claim that it is acceptable as a replacement. Justifying the adequacy of this replacement, however, requires that we *use* our current logical beliefs.[47] Thus, even if we can justify a premise such as 2l utilizing some replacement for logic, the justification for regarding this justification as adequate will still depend on our logical beliefs. The argument remains self-effacing, albeit at one remove.[48]

Absent an acceptable-to-all-sides replacement of the use of mathematics with logic, the same point holds for nominalistic-style *reductions* of mathematics to a combination of logic and some favored primitive notion like logical necessity, arbitrary choice, or constructibility.[49] Anyone who thinks that such a replacement can be developed and utilized in the sorts of arguments we're considering must somehow explain their way out of this justificatory pickle. I'm not holding my breath.[50]

A similar response works against the worry that there is no reasonably plausible explanation of our possessing the mathematical, logical, or normative beliefs we do in terms of their truth.[51] Suppose, that is, that we could construct an analogue argument to ARGUMENT-ML that argued from the claim that no reasonably

---

faults lies outside the scope of this essay.

[47]The possible exceptions to this involve cases where the replacement notion is both justified already and sufficiently strong as to internally justify its use in replacing our logical notions in these proofs. Since the abstract possibility of this doesn't give any clue what it would look like, and since the use of logic in providing justifications is so conceptually basic it's difficult to imagine not using it, I will set the worry aside.

[48]This response bears a non-trivial resemblance to Poincaré's objection to Russellian logicism. It is also suggestive a problem for offering *recapture* theorems to justify severely non-classical logics. Space prohibits me from a full discussion here, but see (Woods, ms).

[49]See (Burgess and Rosen 2002) for details and criticism of such reductions.

[50]This is not to claim that arguments like ARGUMENT-ML could not be used to give reasons to not interpret our logical and mathematical beliefs robustly if we do not already do so. The burden of argument is different in this case. There is consequently no need to give a justification of non-robust mathematical, logical, or normative notions that makes use of robustly construed mathematical, logical, or normative notions.

[51]Thanks to Max Barkhausen for suggesting this line of attack.

plausible explanation of our mathematical, logical, or normative beliefs involved their truth to the conclusion that they were unjustified. Even if this argument worked formally, we would still need reasons to *believe* that every explanation of these beliefs did not involve their truth. It is very plausible that logic will be involved in generating such reasons. It is likewise plausible that our normative beliefs will still be needed to justify moving to the conclusion that we ought not to maintain our beliefs. Further, if explanations had to be reasonably likely in order to justify such a move—inference to, say, the existence of *a sufficiently likely* explanation—then the justification of the belief that all sufficiently likely explanations of these beliefs are thus and so itself plausibly requires probabilistic reasoning. Hence non-trivial mathematics is also insulated here for reasons analogous to those above.

On balance, these types of objections have the most plausibility for mathematics, which is the least clearly insulated of our insulated domains, so it is of minimal value overall against the main structural point I am pressing here.[52] However, even in the case of mathematics, there is good reason to think that fragments of it—or equi-strong parts of logic—will be insulated one way or another.

4.3 Self-Effacement as an Additional Reason to Believe

My claim, then, is that Harman-style debunking arguments against mathematics and logic are self-effacing; coming to believe that we should give up our mathematical and logical beliefs on their basis undermines the premises on which this conclusion is based. But Harman-style debunking arguments against morality are not self-effacing. Self-effacement is often generally taken to be a bad-making property of a set of reasons (Hare 2011); I have argued that it is also a bad-making property of arguments (§4.1). The reason is rather straightforward. In order to justify premises that would undermine our mathematical and logical beliefs, we need to make use of our mathematical and logical beliefs; so if the conclusion is right that their best explanation does not involve their truth, and there are no other reasons to believe them, then we were not in a position to conclude that they were unjustified to begin with. The very fact that such arguments are self-effacing supplies us with additional reason to maintain our beliefs, meeting the caveat in Cl.[53]

---

[52]Thanks to Max Barkhausen for useful discussion of this point.

[53]Note that this route to additional reasons is different than Enoch's attempt to claim that normative truths are deliberatively indispensable; my claim is that some arguments against mathematical,

We can flesh this out in more detail. Burden Shift and a lack of additional reasons to believe suggest that we ought not to believe our current mathematical and logical beliefs if we accept 1l.[54] However, if we accept this conclusion, then we ought to relinquish the belief that the debunking explanation mooted in 1l is really the best possible; after all, our reasoning to this claim involved logic and mathematics. So we would lose our justification of 1l and thereby our justification for doubting our logical and mathematical beliefs. If, moreover, logical and mathematical beliefs are required in order to construct the debunking explanation mooted in 1l at all, then the plausible version of IBE invoked above:

> Positive-IBE we ought to believe in the grounds of the best explanation of our beliefs in some domain

also guarantees that we that we should continue to believe them, resulting in an outright instance of epistemic irrationality if we abandon them on the basis of the debunking story. Since both of these tar-pits seem like the sort of thing we ought to avoid, we have additional reasons to maintain our logical and mathematical beliefs.[55] In short, mathematics and logic meet, albeit in a surprising way, the additional reasons criterion of Argument-ml.

It is not just *mathematical* and *logical* beliefs that are insulated from Harman-style debunking explanations; some *normative* beliefs are insulated as well. In

---

logical, and evaluatively normative beliefs presuppose their truth, so we cannot coherently doubt them by such methods. Whether this obviates the need for an Enoch-style defense of our, say, logical beliefs is an interesting matter and one I hope to pursue elsewhere.

[54]There is a complicated story to be told about *which* parts of our mathematical and logical beliefs can be doubted on the basis of which others; this would take us too far afield and I have discussed the matter elsewhere. Since the conclusion of the arguments I am discussing is that we should stop believing *all* our logical or mathematical beliefs, we can put the more complicated question of how to rationally entertain doubts about *particular* logical principles to the side.

[55]The strategy here used is loosely based on similarly compelling arguments against skepticism in (Rinard ms) and (Rinard 2011). Her focus is general skeptical arguments about the external world, but the transition to my cases is straightforward. Roughly, her idea is that skepticism about the external world motivates skepticism about the past, that in turn motivates skepticism about complex reasoning. But refraining from doubt about complex reasoning is necessary to run the skeptical argument itself, so, she claims, coming to doubt the external world on the basis of a complex argument is irrational. One could worry about the similarities between skepticism about the external world, the past, and complex reasoning, but her method of finding a companions-in-guilt skeptical argument and arguing on that basis that it is immune to doubt in the original external-world skepticism case is similar in spirit to my approach. Her argument is also strikingly similar to Descartes' worries about the infidel mathematician's ability to know mathematical truths.

order to accept the 'ought' claim that occurs in such arguments, we need some fragment of our normative beliefs. We need at least normative claims prescribing how we should believe once we have found the *best* explanation of some phenomenon. Presumably, certain general structural facts about ought—for example, the connection of what we *ought* to do with what we are *permitted* to do—will also be be involved in judgments about how we may believe.[56] Harman-style objections against this limited fragment of our normative beliefs are thus self-effacing. As above, self-effacement then provides an additional reason to maintain such beliefs in the presence of the debunking story.[57]

This point depends on the conclusions of the arguments being formulated in terms of what we ought to refrain from believing. If, in contrast, the only conclusions which can be drawn do not prescribe how we ought to believe, but only describe the epistemic justification—or lack thereof—of our beliefs, then only the corresponding fragments of our beliefs about justification are insulated. It is contentious, of course, whether justification is a normative notion. So there are substantive matters lurking behind the additional conclusion that some evaluatively normative beliefs are insulated from Harman-style arguments (such matters don't affect the central claim about the insulation of logical and mathematical beliefs.) I argued as I did since the claim that we ought not believe what we need and lack epistemic justification for seems to me plausible (see §3.1 for relevant considerations about the need for justification in this case). I admit, however, that theorists who reject this and also reject that justification or cognate notions are normative will reject the additional conclusion I have drawn about our normative beliefs.[58]

It is also worth noting that it is implausible that our normative beliefs are required in constructing the (non-pragmatic) explanation of why we believe them so the double-bore self-effacement of mathematical and logical beliefs isn't available to the normative realist. It is also unclear that less purely epistemic normative notions can be defended on these grounds. If they could, then the idea that the moral should be reduced or understood in terms of some general form of the normative

---

[56]Depending on whether we take 'best' as it occurs in these arguments to be normative or not, we may insulate a slightly larger fragment of our normative judgments.

[57]An early version of this point was made in (Sayre-McCord 1988).

[58]Thanks to Earl Conee for discussion. I have given a recipe for how to construct an argument that some normative beliefs are insulated. The details, as can be seen from this short paragraph, need significant fleshing out. I hope to return to this interesting matter elsewhere.

would look attractive.[59]

5. Conclusion

Summing up, I have argued that Harman's argument is properly understood as a burden-shifting argument. Understood in this way, there is a useful disanalogy between morality and mathematics, logic, and normativity that underwrites a difference in the effectiveness of Harman-style debunking arguments against each of them. Morality, robustly construed, is vulnerable to this type of debunking argument; mathematics, logic, and a significant fragment of our normative beliefs are not. This is because Harman-style arguments are self-effacing for mathematics, logic, and normativity, but not for morality. This avoids worries about reliability, since these arguments are best construed as undermining our ability to justify our moral beliefs *indirectly*, by removing the natural way to support them.

This result should motivate philosophers to take very seriously the suggestion that morality is to be reduced or explained by the more generally normative or the natural. If, for example, we reduce or explain the moral in terms of a privileged fragment of the normative, then we may be able to defend the moral realm from skeptical Harmanian arguments in the same fashion as I sketched above. The normative ingredients in the analysis of moral claims would not be open to Harmanian doubt because we need to presuppose their truth in order to conclude that we ought not to believe in them absent additional reasons. Of course, the details of the analysis will matter, but the possibility of such a defense is independently interesting and may furnish a substantial reason to think that the moral is constituted by this protected fragment of the normative.

If all of this is right, and I think it is, then we are left in an interesting position. The Harmanian challenge is one of the most worrisome challenges for robust realism. There are, though, good reasons to not worry overmuch about taking parts of normativity, mathematics, and logic as realistically as one pleases since these domains are *insulated* from Harmanian worries. Robustly construed morality, for better or worse, is not. This does not mean that there aren't additional reasons to believe in morality. But the burden is on robust realists to supply them.

---

[59]A similar suggestion is made in (Enoch 2010) about how to react to epistemological worries about robust realism, but from a less enthusiastic perspective about debunking arguments. I hope to explore elsewhere the interesting issue of the extent of the beliefs insulated in this way.

References

Antonelli, G. A. 2010. Numerical Abstraction via the Frege Quantifier. *Notre Dame Journal of Formal Logic 51*(2): 161–179.

Barkhausen, M. 2016. *Morality without Objectivity*. Ph.D. dissertation, Philosophy Department, New York University.

Barkhausen, M. forthcoming. Reductionist Moral Realism and the Contingency of Moral Evolution. *Ethics*.

Boyd, R. 1988. How to Be a Moral Realist. In *Essays on Moral Realism*, ed. G. Sayre-McCord, 181–228. Cornell University Press.

Burgess, J. P. 1984. Synthetic Mechanics. *Journal of Philosophical Logic 13*(4): 379–395.

Burgess, J. P. and G. A. Rosen. 1997. *A Subject with No Object: Strategies for Nominalistic Interpretation of Mathematics*. Oxford University Press.

Clarke-Doane, J. 2012. Morality and Mathematics: The Evolutionary Challenge. *Ethics 122*(2): 313–340.

Clarke-Doane, J. 2014. Moral Epistemology: The Mathematics Analogy. *Noûs 48*(2): 238–255.

Clarke-Doane, J. forthcoming-a. Justification and Explanation in Mathematics and Morality. In *Oxford Studies in Metaethics*, ed. R. Shafer-Landau. Oxford University Press.

Clarke-Doane, J. forthcoming-b. Objectivity in ethics and mathematics. *Proceedings of the Aristotelian Society*.

Clarke-Doane, J. forthcoming-c. Debunking and Dispensability. In *Explanation in Ethics and Mathematics*, eds. U. D. Leibowitz and N. Sinclair. Oxford University Press.

Dummett, M. A. E. 1978. *Truth and Other Enigmas*. Harvard University Press.

Enoch, D. 2010. The Epistemological Challenge to Metanormative Realism: How Best to Understand It, and How to Cope with It. *Philosophical Studies 148*(3): 413–438.

Enoch, D. 2011. *Taking Morality Seriously*. Oxford University Press.

Field, H. 1980. *Science Without Numbers*. Princeton University Press.

Fitzpatrick, W. 2008. Robust Ethical Realism, Non-Naturalism, and Normativity. *Oxford Studies in Metaethics* 3: 159–205.

Friedman, H. M. Typescript. Invariant Maximal Cliques and Incompleteness. 71.

Hare, C. 2011. Obligation and Regret When There is No Fact of the Matter About What Would Have Happened if You Had not Done What You Did. *Noûs 45*(1): 190–206.

Harman, G. 1977. *The Nature of Morality*. Oxford University Press.

James, W. 1985. *The Varieties of Religious Experience*, Volume 13. Harvard University Press.

Joyce, R. 2008. Précis of the evolution of morality. *Philosophy and Phenomenological Research 77*(1): 213–218.

Maguire, B. The Value of Partiality. *Manuscript*.

Maguire, B. and J. Woods. Explaining Epistemic Normativity. *Manuscript*.

Malament, D. 1982. Science Without Numbers by Hartry H. Field. *Journal of Philosophy 79*(9): 523–534.

Quine, W. V. 1951. Two Dogmas of Empiricism. *The Philosophical Review* 60: 20–43.

Rinard, S. Reasoning One's Way Out of Skepticism. *Manuscript*.

Rinard, S. 2011. *Reasoning One's Way Out of Skepticism*. Ph. D. thesis, Massachusetts Institute of Technology.

Rosen, G. What is Normative Necessity? *Manuscript*.

Sayre-McCord, G. 1988. Moral Theory and Explanatory Impotence. *Midwest Studies in Philosophy 12*(1): 433–457.

Scanlon, T. 1998. *What We Owe to Each Other*. Harvard University Press.

Schafer, K. 2010. Evolution and Normative Scepticism. *Australasian Journal of Philosophy 88*(3): 471–488.

Setiya, K. 2012. *Knowing Right From Wrong*. Oxford University Press.

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

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

Thagard, P. R. 1978. The Best Explanation: Criteria for Theory Choice. *Journal of Philosophy* 75(2): 76–92.

Vavova, K. 2014. Debunking Evolutionary Debunking. *Oxford Studies in Metaethics* 9: 76–101.

Väyrynen, P. forthcoming. The Supervenience Challenge to Non-Naturalism. In *The Routledge Handbook of Metaethics*, eds. T. McPherson and D. Plunkett. Routledge.

Warren, J. 2015. The Possibility of Truth by Convention. *Philosophical Quarterly* 65(258): 84–93.

Woods, J. forthcoming. The Normative Force of Promising. *Oxford Studies in Normative Ethics, vol. 6*.

Woods, J. Manuscript. Logical Neutrality (or: A Plea for Ecumenical Reasons).