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Why the debunking threat won't go away

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Abstract

A central claim often made to *debunk* religious beliefs is that they would be formed regardless of whether they are true or false. One way to support this claim is to apply findings from the cognitive science of religion. However, this use of science in an argument against religious beliefs has been strongly criticized. This article is about weaknesses in that criticism. I consider two arguments. Firstly, the critic of debunking can argue that the debunker makes empirically dubious claims about the origin of religious beliefs. I argue that the debunker can avoid this problem because the controversial empirical claims are not necessary. General naturalistic assumptions about the origin of religion also create worries that support the central debunking claim. The second criticism focuses on the highly general nature of the claims or assumptions debunkers make about the origin of religious beliefs. Critics maintain that such claims or assumptions, even if true, fail to affect the specific religious beliefs you or I form. I respond, arguing that this criticism fails to engage with the most prominent version of debunking, which aims at classes of beliefs. Furthermore, by making a detour through a related discussion in metaethics, I show how this version of the debunking argument can be extended in such a fashion that it applies to a given individual who forms a religious belief.

Keywords Debunking · Cognitive science of religion · Cultural evolution · Morality · Natural selection · Justification of religious beliefs

Introduction

Debunking arguments aim to undercut beliefs by establishing that their causal origins are epistemically dubious (Kahane, 2011; Sauer, 2018). This dubiousness is for example present when S does not believe p because p is true but because of something unrelated to the truth of p. For example, S sees a wall that seems red

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and forms the belief that it is red. But in this case the cause of S's belief is not the color of the wall but a red light shining on it (Lutz, 2018, p. 1109). In these arguments,

> "There is frequently a contrast between an official story citing the reasons that would, in principle, be suitable for justifying a belief or practice and an unofficial one revealing its actual origins, the way it came about, and the forces that first caused and continue to sustain it." (Sauer, 2018, p. 1)

The debunkers we shall consider maintain that the official story religious believers tell is wrong. What really causes their belief in God is unrelated to God's existence, and this should lead them to worry. But to provide believers with a good reason for worry, the debunkers need a convincing "unofficial" story. Where can such a story be found?

For information about the origin of religious belief, debunkers have to a large extent turned to the cognitive science of religion (CSR), a field which aims to,

> "explain how religious ideas, beliefs, and behaviors arise and recur in human populations by integrating knowledge on evolution, cognition, brain, and behavior." (White, 2021, p. 1)

There are now quite a few debunking arguments based on this research (Braddock, 2016; Davis, 2020; Goodnick, 2016; Kvandal, 2022b; Nola, 2012, 2018; Wilkins, 2016; Wilkins & Griffiths, 2012) as well as many criticisms and general discussions (Baker–Hytch, 2023; Barrett, 2007; Clark, 2019; Clark & Barrett, 2011; Clark & Rabinowitz, 2011; De Cruz & Smedt, 2015; Goldberg & Murray, 2009; Jong & Visala, 2014; Kwan, 2022; Launonen, 2021; Murray, 2009; Thurow, 2013, 2014, 2018, 2023; Van Eyghen, 2018, 2020). Since these discussions usually revolve around monotheistic beliefs, by "religious belief" I shall mean belief in the God of Abrahamic theism, i.e., Judaism, Christianity, and Islam.

This article defends debunking arguments from two criticisms which both revolve around the use of CSR to provide an alternative story about the origin of religion. Firstly, Launonen (2021) and Leech and Visala (2011) point out that some debunkers appeal to the *"standard model"* (SM) in CSR. They argue that because of the serious empirical challenges faced by this model, these debunkers are in trouble. One response is to empirically update the argument (Davis, 2020). I argue that this is risky because all substantial theories in CSR are to some extent controversial. Moreover, it is unnecessary since it is possible to defend debunking without committing fully to these theories. The second criticism focuses on the scope of explanation. Thurow and Visala argue that the causal story CSR tells of the origin of "thin" religious belief does not undermine the "thick" beliefs of any specific individual, which are largely left unexplained. Hence, it is misleading to apply such research to debunk the latter (Thurow, 2023; Visala, 2011). I argue that this criticism does not engage with and therefore fails to refute the most prominent debunking arguments, which target *classes of beliefs*. Furthermore, it is not misleading to apply general theories or assumptions to debunk religious belief on an individual level. To defend this, I apply a related metaethical

argument regarding the use of natural selection to explain moral beliefs. I conclude that these two criticisms do not remove the debunking threat to religion.

Arguing for unreliability: EDAs based on CSR

Two distinctions introduced in a related metaethical discussion will facilitate our discussion of religion below. Sauer (2018) firstly distinguishes between *proximal* and *distal* debunking arguments. In the former, the epistemically damaging (causal) information is about the immediate origin of a belief. For example, in the red-light case, that information concerns the presence of a red light when S perceives the wall. When S is made aware[1] of the presence of the light, the evidence in the form of S's visual experience is no longer a good reason to believe that the wall is red (Lutz, 2018). By contrast, in *distal debunking* the damaging information concerns the ancient past (Sauer, 2018, pp. 73–74). The prototypical example is an *evolutionary* debunking argument (henceforth "EDA"). For example, according to the "capacity etiology argument", information about the way evolutionary forces in our ancestral past shaped the mental capacities that undergird our moral beliefs undermines those beliefs (FitzPatrick, 2015). A central example of such forces is natural selection (more on this below). Sauer secondly distinguishes debunking arguments *with narrow and broad scope*. A highly narrow debunking argument targets single beliefs or narrowly delimited classes of beliefs. For example, the debunker might want to undermine only deontological beliefs, leaving consequentialist beliefs untouched. By contrast, global arguments target all beliefs in a domain, such as all moral or all religious beliefs. EDAs are typically global (Sauer, 2018, pp. 71–72).

As Sauer (2018, p. 32) points out, the goal of EDAs is to pose an unreliability-challenge. We can think of unreliability in terms of the relevant mechanisms being "off track" with respect to truths in the targeted domain. There are different ways to flesh out and support the unreliability-claim. According to Wilkins and Griffiths, the naturalistic science of religion provides no good reason to think that the relevant processes that produce moral and religious beliefs[2] track moral and religious truths. Hence, the processes would produce such beliefs regardless of whether they are true or false (Wilkins & Griffiths, 2012). To support this, Wilkins and Griffiths argue that there is no evidence for a link between getting moral or religious truths *right* and increasing one's *fitness* (Wilkins & Griffiths, 2012). This lack of truth-tracking undermines the epistemic status of the targeted beliefs.

A possible generic structure for the unreliability-EDA can be formalized as follows:

(1)   "Scientific evidence shows that the mechanisms that produce supernatural beliefs are unreliable.

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[1] Awareness relates to the notion of an epistemic defeater. See the final section of the paper for more about the role of defeaters in debunking arguments.

[2] By contrast from how I restrict my usage of "religious belief", Wilkins and Griffiths do not by that term necessarily mean only Abrahamic theistic beliefs.

(2)   Beliefs that are produced by unreliable mechanisms suffer from an epistemic deficiency.

(3)   Therefore, supernatural beliefs suffer from a serious epistemic deficiency." (Van Eyghen, 2018, p. 126)

(1) and (2) can be referred to as the causal and epistemic premises, respectively (Kahane, 2011). (1) makes a claim about the origin of the target-beliefs. In the evolutionary version of the argument, the origin is distal; the evidence is about the evolutionary origin of belief-producing structures. We see this focus on evolution in Wilkins and Griffiths' argument. But in other EDAs, (1) is based more directly on research in CSR. More specifically, some arguments apply *the standard model* (SM) in CSR to support the unreliability-claim (see e.g., Braddock, 2016; Goodnick, 2016; Nola, 2012). We also find this model in reconstructions by critics of debunking (Barrett, 2007; Leech & Visala, 2011; Murray, 2009; Thurow, 2013; Van Eyghen, 2018). Given its prominence in the current discussion, let us look at the SM.

There is no canonical definition of the SM, but the following four components are usually seen as central. The first is HADD-theory. Barrett (2004) and Barrett and Lanman (2008) argue that humans have an evolved tool or mechanism for detecting agency. Furthermore, since false negatives (failures to detect agents) are more fitness-reducing than false positives (over-detection of agents), selection favors a highly sensitive mechanism which is prone to false positives. For this reason, this tool is called "HADD", or *hyper-sensitive* agency detection device. HADD relates to religion in the sense that it biases humans in the direction of belief in superhuman agents like gods (Barrett, 2004; Barrett & Lanman, 2008). HADD can be used in debunking. Nola (2012, pp. 172–178) for example argues from its hypersensitivity to its unreliability. He concludes that the targeted beliefs "lack any justification and are thereby debunked" (Nola, 2012, p. 182).

The second component in the SM is a theory about the transmission of religious concepts known as "MCI theory". The EDAs of Goodnick (2016) Braddock (2016) and (Kvandal, 2022b) appeal to this theory. MCI theory portrays religious ideas as concepts with content that to some extent violates evolved intuitions we have about physical objects, agency, and minds. For example, we intuitively assume that agency is implemented in physical bodies. But gods are to some extent counterintuitive, since they are non-physical agents. This makes gods memorable. In this sense, they are cognitively attractive. Hence, we are biased to obtain and use such concepts (Barrett, 2004; Boyer, 2002; McCauley, 2011). Importantly with respect to debunking, MCI-theory (as does HADD-theory) indicates that the mind is biased towards some form of theism regardless of whether any gods or other supernatural entities exist.

Thirdly, the SM is based on a modular theory of cognition according to which the mind comprises functionally specialized, genetically inherited mechanisms, such as HADD, Theory of Mind, and intuitive teleology. Fourthly, in the SM religion is depicted as an evolutionary byproduct of such mechanisms (Barrett, 2004; Boyer, 2002). As two critics of the SM put it,

"The SM purports to deliver a 'deflationary' evolutionary explanation of religion, in the sense that it takes religion to be wholly parasitic on other functional structures that would be present even if religion did not exist." (Powell & Clarke, 2012, p. 460).

The idea of religious beliefs as byproducts of HADD and related mechanisms can figure into EDAs in various ways (for discussion, see Leech & Visala, 2011, pp. 304–305; Nola, 2012, pp. 172–173) J. Barrett for example points out how critics of religion rhetorically use this idea to sow doubts or make religion look bad. For example, some would say that in virtue of being a functionless byproduct, religion is a cognitive illusion (Barrett, 2007, pp. 62–63).

By adding empirical detail to the above formalization, we obtain what I shall call a "substantial unreliability-argument":

S1: Given HADD-theory, MCI-theory, the modularity of mind, and the view that religion is a. functionless evolutionary by-product, religious beliefs arise from mechanisms which are unreliable.
S2: Beliefs that are produced by unreliable mechanisms suffer from an epistemic deficiency.
S3: Therefore, supernatural beliefs suffer from an epistemic deficiency.

Equipped with a clearer picture of how CSR is used to support EDAs against religious beliefs, we shall in the following sections discuss two criticisms of such arguments. The first focuses on S1 (of the substantial version) whilst the second applies both to the substantial and the generic version by providing a principled objection to the debunker's use of science to undermine religion. But before we get to these, let us observe a third objection to debunking, which we do not discuss in the current paper. It arises from the work of Plantinga (2000).

Plantinga's epistemology focuses on *warrant*, the property which separates knowledge from mere true belief. Plantinga's central claim is that from a Christian perspective, God probably created humans with cognitive equipment capable of meeting the conditions for warrant (Plantinga, 2000, p. 156). This includes the "Sensus Divinitatis", a faculty whose purpose is to produce true beliefs about God (Plantinga, 2000, p. 179). Extending this, one could interpret CSR mechanisms as the Sensus Divinitatis (Clark & Barrett, 2011). One then has a response to the debunker, namely that the causal premise is wrong. If Christianity is true, CSR mechanisms are not unreliable (when producing Christian beliefs). Hence, to defend the unreliability-claim, the debunker (or "de jure" critic of religion) would have to deny Christianity (Plantinga, 2000, pp. xi-xii).

I have elsewhere responded to this sort of objection. One of my main points is that there are serious tensions between relevant findings in CSR and Plantinga's depiction of the Sensus Divinitatis. In the light of these, to interpret CSR mechanisms as the Sensus Divinitatis is not plausible (Kvandal, 2020, 2022a, pp. 119–143). There are also other criticisms of reformed epistemology in the light of CSR (Teehan, 2016; Van Eyghen, 2016) as well as further discussion of the Plantingian response

to debunking (Goodnick, 2016; Mawson, 2016; McNabb & Baldwin, 2017; Moon, 2021). However, we currently shall consider two different criticisms of debunking. Let us turn to these.

Criticism 1: debunkers apply flawed explanations of religious beliefs

The first criticism we shall consider focuses on S1 of the substantial unreliability-argument, where we find an appeal to the SM. The problem is that each component of the SM faces empirical challenges. We start with HADD-theory, which is discussed in more detail by Launonen (2021) and Kwan (2022). Here are three challenges. Maij et al. (2019) looked at whether intuitions about agency are affected by threat-inducing stimuli. A central prediction is that HADD becomes more hypersensitive when the organism feels threatened. This relates to the notion that false positives are less costly than false negatives. However, Maij et al. found that subjects did *not* become more prone to attribute agency in threat-inducing situations, thus violating the prediction. Another issue concerns the neurobiological basis for HADD. Van Leeuwen and van Elk (2019) reviewed neurobiological studies which tried to pinpoint HADD but failed to find any evidence for it. Finally, HADD-theory presupposes a causal relationship whereby intuitions about agency lead to the formation of religious beliefs (Barrett & Lanman, 2008). After all, HADD relates to religion because it is supposed to bias the mind towards belief in gods. But according to Van Leeuwen and Van Elk, priming-studies, the most likely avenue, have repeatedly failed to establish this causal connection (Van Leeuwen & van Elk, 2019, pp. 7–8).

Purzycki and Willard (2016) argue that many of the empirical studies in MCI theory are methodologically flawed. The concepts used to gauge people's memory, called "MCI-concepts", are poorly constructed, they argue. For example, it is not clear whether they involve intuitions shaped by *evolution* or learned intuitions shaped by widespread *folk-theories*. This is problematic because MCIs are supposed to violate the former. According to Purzycki and Willard (2016) this flaw in the experimental design undermines the support of the theory.

Turning to the third component, N. Barrett (2010) and Jones (2015) argue that the modular theory is highly problematical. Barrett for example argues that the idea of specialized input–output modules neglects the way cognition is sensitive to context (Barrett, 2010, p. 598). Jones objects that the modularity-thesis is not supported by current neuroscience (Jones, 2015, pp. 19–24). In a recent discussion of the evolution of cognition, Heyes (2018) agrees, arguing that the evidence does not support the existence of genetically inherited cognitive mechanisms (see also Davis, 2020, pp. 192–200). This criticism also applies to the fourth component of the SD, which claims that religion is the byproduct of such mechanisms. But this final component has also independently been criticized by scholars who favor adaptationist models of religion (Bering & Johnson, 2005; Johnson, 2016; Norenzayan, 2013; Norenzayan et al., 2014; Wilson, 2002). These theories deny that religion is functionless, maintaining that it rather is shaped by evolutionary forces because of its adaptive nature for individuals or groups.

Someone convinced by these criticisms might consider the following argument against the substantial unreliability-EDA. Let us call it "the flawed Standard Model response" (FSM).

SM1: The causal premise of substantial EDAs from unreliability is based on the SM.

SM2: The SM is a flawed model of religion

SM3: Therefore, we should reject substantial EDAs from unreliability

It is obviously beyond the scope of this paper to fully appraise SM2. But, clearly, the criticism of the SM makes EDAs tied to this model vulnerable. To the extent that an EDA needs the SM to provide a damaging story, this is clearly a weakness. Here are two responses the debunker can consider.

Response 1: updating CSR with better theories

In a recent discussion of the epistemic implications of CSR, Davis (2020) provides a detailed critique of the (SM) view that religion is the outcome of cognitive biases that result from the way genetically inherited cognitive mechanisms work. According to Davis, there is much better evidence that religion is the product of how selection acts on culturally inherited information propagated by groups. *Dual-inheritance theories* promote that view. Their central thesis is that cultural ideas which promote prosocial behavior stand the best chances of propagating, because such behavior enhances the success of the group (Davis, 2020, p. 200). According to such theories, people do not (proximately) entertain religious ideas because they are genetically predisposed to do so but because of social learning in the context of a relevant ingroup. Davis focuses on a version called the "Big Gods theory" (BGT). According to BGT, belief in Big Gods enhances the cohesiveness of groups by making people afraid of supernatural punishment. Fear of Big Gods decreases freeriding such as cheating and increases trust and cooperation in large groups. Furthermore, because groups believing in such gods outcompete other groups, the belief spreads (Norenzayan, 2013; Norenzayan et al., 2014). To indicate support for the theory, Davis (2020, p. 198) points to evidence provided by Norenzayan (2013), a lot of which comes from priming-studies. These suggest that brief reminders of Big Gods reduce rates of cheating (Shariff & Norenzayan, 2007).

In a section devoted to applications of CSR in debunking, Davis criticizes Wilkins and Griffiths (2012). Recall, they argue that religious beliefs are susceptible to evolutionary skepticism because there is no link between evolutionary success and obtaining religious truths. According to Davis, Wilkins and Griffiths tie their EDA too closely to early theorizing in CSR, which makes their argument vulnerable to criticism. In other words, he suggests that their argument is as an example of what I call a substantial unreliability-argument. For example, argues Davis, Wilkins and Griffiths problematically focus too much on the way selection shapes *cognitive mechanisms.* Furthermore, they think of evolutionary success as the (genetical)

fitness of the *individual* rather than that of the group (Davis, 2020, p. 206).[3] However, argues Davis, their argument works in a new version, reformulated in terms of the BGT. Davis presents a reconstruction in terms of purported differences between science and religion, whereby only the latter is susceptible to debunking. In short, science avoids that threat because "scientific beliefs are culturally inherited traits that have been selected for in virtue of their ability to produce, true, accurate predictions." (Davis, 2020, pp. 206–207) For example, science involves procedures by which false theories eventually are rejected. By contrast, no such procedures exist in religion. Religious beliefs are culturally inherited traits that have been selected for in virtue of how they promote prosocial behavior. This leads to skepticism because such beliefs promote prosocial behavior regardless of whether they are true. For example, fear of supernatural punishment works regardless of whether gods exist (Davis, 2020, p. 206).

Interpreted as a response to FSM, which is my formulation of criticism 1 against debunking arguments, Davis' argument exemplifies a strategy we can call the "updating CSR response". In short, by updating the causal premise of the EDA (i.e., S1) with newer theories of religion, the debunker avoids being vulnerable to the criticism of the SM. By including a new theory in the causal premise, Davis thus defends a substantial unreliability-argument. But this leads to trouble: One must deal with the threat of new empirical criticism. Not surprisingly for a substantial theory of religion, the BGT has also been strongly criticized (Baumard & Boyer, 2015; Levy, 2014; Turchin et al., 2022). Here is an example of a challenge for debunkers who ground their causal premise in the BGT. BGT claims that belief in Big Gods led to an increase in the size and complexity of cultural groups after the agricultural revolution. Because of the arrow of causality, Big Gods must therefore have emerged *prior* to the formation of large and complex societies (Baumard & Boyer, 2015). But using data from the Seshat Global History Databank, which contains systematic data about societies from the Neolithic to the industrial revolution, Turchin et al. found that belief in Big Gods tends to occur *after* societies crossed the threshold to complexity (Turchin et al., 2022). This undermines the causal claim about Big Gods (Kvandal, 2022a, pp. 33–34) We should be aware that this study has been heavily criticized (Beheim et al., 2021). The outcome of this debate is not yet clear. However, the example illustrates that it is risky to attach an EDA closely to a new, ambitious theory. Substantial EDAs inevitably will be vulnerable to empirical criticism. For each new model the debunker plots into the causal premise to strengthen the argument, the critic can update the empirical criticism. The "updating CSR response" therefore fails to fully answer empirical critics of debunking.

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[3] I do not agree with this interpretation. For example, Wilkins and Griffiths also discuss theories where the central focus is fitness-benefits to the *group* rather than the individual (see 2012, 142). Furthermore, even though they discuss "mechanisms", it is not clear that they mean only the genetically inherited mechanisms of the SM.

Response 2: avoiding CSR

In a recent discussion of the extent to which CSR supports debunking arguments, Launonen (2021) on the one hand focuses on empirical challenges for substantial versions based on CSR. Nola's HADD-argument, discussed above, is an example. On the other, he argues that some EDAs just give the impression that CSR provides new evidence that religious beliefs arise from unreliable mechanisms. But that impression, he argues, is misleading, because the central unreliability-claim is instead based on other considerations (Launonen, 2021). For example, Wilkins and Griffiths' argument does not assume the truth of theories in CSR. Rather, it hinges on two much more general assumptions. The first is that evolutionary science of religion is methodologically naturalistic in the sense that truths about gods are irrelevant to explaining religion. The second is that there is no bridge which links evolutionary success and religious truths. As Launonen points out, since these claims are not based on CSR, even the falsification of all current CSR-theories would not seriously damage the argument (Launonen, 2021, p. 424). I agree. Considering this, Launonen is right that claims about CSR providing new, undermining evidence against religious belief should not be exaggerated. But the fact that a central EDA like the one Wilkins and Griffiths defend does not need CSR also has another implication: Davis' reformulation is not only empirically risky but unnecessary. This suggests that a better response by the debunker is to avoid substantial EDAs. Wilkins and Griffiths have shown that this is possible; they make a strong case against religious beliefs based on two largely uncontroversial assumptions.[4] This is a significant strength.

In conclusion, empirical criticism creates trouble for substantial unreliability-arguments, but they do not remove the underlying threat of debunking. This pushes the critic to provide a more principled objection. Let us turn a criticism of EDAs which does exactly that.

Criticism 2: debunkers apply misleading explanations

Visala (2011), Leech and Visala (2011), Jong and Visala (2014), and Thurow (2013, 2014, 2018, 2023) argue that CSR—even if we suppose that its theories are plausible—fails to provide *the right kind* of explanation for debunking purposes:

> "All the CSR-based genealogies provide at most partial explanations of religious beliefs. They explain at most why humans have proclivities for forming and sustaining certain sorts of religious beliefs, but they do not explain why particular religious communities, or individual people, accept the beliefs they do". (Thurow, 2023, p. 130)

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[4] The methodological naturalism in this argument only rules out the supernatural in a scientific explanation. It does not deny the existence of the supernatural. In that sense it is uncontroversial. However, not everyone agrees with this interpretation of the argument. For example, Baker–Hytch (2023) Launonen (2021) argue that this argument can be interpreted as assuming a stronger naturalism, which is at odds with religion.

"In explaining particular instances of religious behaviours and beliefs, ultimate explanations of cultural evolution are basically useless: if we want to explain, for instance, why is it that John believes in God, then we quickly realize that an answer in terms of cognitive similarities and cultural evolution is far from being sufficient. Indeed, it might even be misleading." (Visala, 2011, p. 127)

As we saw earlier, CSR aims to provide evolutionary and cognitive explanations of religious beliefs and behaviors (White, 2021). Visala invokes Ernst Mayr's distinction between *ultimate* and *proximate* explanations in biology and argues that CSR is focused on the former (Visala, 2011, pp. 125–128). In short, proximate explanations address how-questions and deal with traits in individuals, and ultimate explanations are about why-questions and focus on the spread of traits in populations (Mayr, 1961). According to Leech and Visala, the fact that CSR explanations are ultimate is fatal to unreliability-EDAs. This is because such arguments need to establish that the relevant *proximate* mechanisms are unreliable, but ultimate explanations do not achieve this (Leech & Visala, 2011, p. 313).

It follows from this criticism that it does not help the debunker to put newer, more well-supported theories in the place of the SM. This is because the problem is not that any of these theories are false but that they cannot be used to debunk any individual person's religious belief. Notice also that we now move in a principled direction. Based solely on a general naturalistic explanation of religion (it need not be CSR), we can't deduce why an individual holds a specific version of a religious belief. For example, Wilkins and Griffiths' two central assumptions do not answer such a fine-grained question. If that is necessary for a debunking argument to work, the debunker is in serious trouble.

Before we formalize this criticism, we make a detour into a related debate in metaethics. This provides a larger context for our discussion, and as we shall see later, an argument from the metaethical debate helps resolve the trouble for the anti-religious debunker. A central assumption many metaethical EDAs make is that evolution is relevant to explaining morality in virtue of how natural selection has shaped the cognitive capacities subjects use when forming moral beliefs (FitzPatrick, 2015, p. 884; Kahane, 2011; Mogensen, 2016). Mogensen criticizes this use of evolution to challenge moral beliefs.[5] According to Mogensen (2016), debunkers (who focus on natural selection):

"Must assume that natural selection is in principle able to explain why you or I have the concept of moral obligation, or why we have a disposition to value our survival, or something along those lines. Otherwise facts about natural selection could not give rise to undercutting defeaters for our moral beliefs." (Mogensen, 2016, p. 1802)

According to Mogensen, this assumption is challenged by the "negative view of natural selection", which states that natural selection does not explain the traits of individuals in a population. Rather, it explains populational trends, such as the

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[5] Mogensen discusses problems with using *natural selection* to debunk beliefs. He does not argue against debunking in general (see for example, Mogensen, 2016, 1810–1815).

frequency with which traits occur in a population (Mogensen, 2016, pp. 1802–1803). To clarify this view, Mogensen appeals to an analogy: There is a classroom where only children who read above third grade level are admitted. In this case, a selection-procedure explains why all the children in the classroom read above third grade level, but it does not explain why each child reads above that level (Mogensen, 2016, pp. 1802–1803). To achieve the latter, one needs information about the development of reading-proficiency in each child. But that would be an example of proximate (not ultimate) explanation. Hence, one needs something else than natural selection to make one's debunking claim (Mogensen, 2016, p. 1800). As this case illustrates, a selection-procedure which explains the distribution of a trait in a population does not explain the development of that trait in each member of that population. The similarity to the debate in religion should be obvious. There, critics allege that explaining individual-level doxastic traits requires information, for example, about the believer's religious upbringing and other influencing factors (Leech & Visala, 2011; Thurow, 2023, p. 130; Visala, 2011, pp. 127–128). Seeking a proximate explanation of belief also entails a need to engage people by asking about their beliefs. That is very different from the typical debunking strategy of starting from highly general assumptions.

We are ready to formalize the second criticism of EDAs against religious beliefs. Let us call it "the misleading explanation response" (MER):

ME1:   Naturalistic explanations of religion are in scope and aim ultimate. Such explanations do not answer proximate questions about the formation of specific religious traits in individuals (such as beliefs).

ME2:   To debunk the specific religious beliefs of individuals, one must proximately explain how they in each case formed, showing that the responsible mechanisms were unreliable.

ME3:   Therefore, naturalistic explanations of religion - even if successful - fail to debunk the religious beliefs of specific individuals.

Since CSR focuses on ultimate explanation, MER applies to substantial unreliability-EDAs where the scientific evidence for unreliability comes from this field. But MER also applies to generic unreliability-EDAs. Recall, the causal premise of the generic argument states that "scientific evidence" indicates that the relevant mechanisms that produce religious beliefs are unreliable. If that evidence does not come from substantial theories of religion, the most relevant alternatives for the debunker are general naturalistic theories or assumptions (and not individual-level interviews or other fine-grained observations). For example, MER applies to Wilkins and Griffiths' argument because of its appeal to the naturalistic nature of evolutionary explanations of religion. Let us further appreciate that the problem made explicit by MER is a mismatch between the wide scope of the explanation in the causal premise of the EDA and the narrow scope of the target-domain, namely the belief or beliefs that are undermined. We can think of this from the first-person perspective and ask rhetorically, "does it follow from some general claims about the origin of religious beliefs that I, a religious believer, have done anything epistemically problematical

in believing in God?" The right answer, according to MER, seems to be "no". But I think this is wrong.

We have seen that the critics are adamant to stress that EDAs do not undermine the religious belief of *specific individuals*. But central EDAs, such as Wilkins and Griffiths ([2012](#)) are *global* in scope. These (*distal) global EDAs* use causal information about the ancient past to undermine beliefs on the coarse level of *classes of beliefs*. Their primary goal is to indicate the epistemic deficiency of the target-classes rather than any given token. MER fails to establish that it is misleading to use the distal causal information in CSR or related fields or to use general naturalistic assumptions to undermine religious belief as a *class*. For example, there is no mismatch in terms of scope between a general theory or assumption about religion and the class of religious beliefs. MER therefore does not remove the threat from a debunker who tries to establish the epistemic deficiency of religious beliefs in general and therefore does not focus on the belief-tokens of a given individual.

However, is it misleading to apply CSR or related research or assumptions to debunk single beliefs? This initially seems more plausible because then the mismatch-issue reemerges. More formally, does MER succeed in refuting what Sauer ([2018](#)) calls *distal narrow debunking* arguments, i.e., arguments which use information about the ancient past to debunk a very narrow class of beliefs or just one belief? To show why MER also fails to achieve this, I will adapt an argument from the related metaethical debate.

To support his argument that the negative view of natural selection challenges EDAs based on natural selection explanation, Mogensen ([2016](#)) provides the following case, which originally stems from White ([2010](#)). S has gone to a party where the host decided that would-be guests would either be allowed to enter or would be murdered based on their answer to a question about whether Napoleon invaded Egypt. By flipping a coin, the host decided that "yes" results in a fun evening and that "no" results in death. According to Mogensen, in this situation, a selection-procedure which fails to track truth about Napoleon explains why S belongs to a group whose members believe that Napoleon invaded Egypt. But this does not challenge *S's* belief, since the procedure fails to explain how *S* formed it (Mogensen, [2016](#), p. 1806). This point about explanation should by now be familiar. But in a recent response, Witteveen ([2021](#)) provides an amended version with an interesting twist which suggests that this criticism fails to show that the negative view rules out individual level debunking. S enters the party because he provided the answer which, as the result of the coin-toss, functioned as an admission-ticket. But then S has sexual intercourse with another party goer, T. Eventually, S and T's offspring, S*, inherits the Napoleon-belief from S and T. Growing up, S* eventually realizes that a truth-indifferent selection-procedure accounts for why she holds this belief. The same applies to other individuals in the offspring generation:

> "On either outcome of Adam's coin toss, the party offspring were guaranteed to inherit Napoleonic beliefs that were favored by a truth-indifferent selection process. Since you happen to be among the party offspring, you

inherited Napoleonic beliefs whose proliferation was not related to their truth-value. Therefore, selection challenges the justification of your beliefs about Napoleon". (Witteveen, 2021, p. 6018)

As Witteveen (2021) points out, in the original scenario selection happens *after* the beliefs have been formed. Because of this, it fails to affect the beliefs on an individual level. Mogensen is therefore right that S's belief in the original Napoleon-case is not undermined (Witteveen, 2021, p. 6017). But in the amended scenario, selection occurs *prior* to the belief-formation of the individuals in the offspring-generation:

"The precedence of selection to belief formation in later generations opens up the possibility that selection affected the basis on which those later beliefs were formed" (Witteveen, 2021, p. 6017).

Mogensen and Witteveen then agree that a belief which already has been formed can pass epistemically untouched through a truth-indifferent selection-process at a later stage. Their difference concerns cases where selection happens before the belief arises.

This case shows us that when prior truth-indifferent selection affects the belief that an individual currently forms, selection challenges that belief. The same is true of other belief-tokens affected by the same selection procedure. We can apply this case to our discussion of religion. Importantly, in the evolution of religion, selection is clearly prior to belief-formation in the current generation. This is highly plausible regardless of whether one applies the SM, BGT or general evolutionary theorizing. Furthermore, on any naturalistic theory, that process is indifferent to religious truth. This supports a global EDA which concludes that the class of religious beliefs of the current generation is epistemically dubious. We then direct our focus at an individual in the current generation who inherits her religious belief from this class. We assume that this process involves some sort of social learning (for an account of how social learning is relevant to the formation of belief, see Van Leeuwen & van Elk, 2019). Furthermore, this is not necessary for the argument to work, but depending on how convinced we are by CSR, we can also grant that various cognitive biases (described earlier) are involved. The individual then realizes that *her* belief is a token of the epistemically dubious class. She is then akin to S* in Witteveen's case, and a process involving selection challenges *her* religious belief. Hence, we have a distal narrow EDA, the use of distant causal information to challenge a very narrow class of beliefs or just one belief. In conclusion, therefore, MER has failed to show that it is misleading to apply general naturalistic explanations to undermine religious beliefs on the level of individual doxastic differences.

An internalist and an externalist version of the argument

Notice that in the argument above, the individual *realizes* that her belief stems from a challenged class of beliefs. This glosses over some complexities which emerge once we ask whether the argument assumes internalism or externalism about justification. To indicate that the argument works on both views, I will briefly outline two different versions. Internalism is the view that *all* justification-relevant factors are internal to the subject. Externalism denies this and hence grants that some such factors are external (Goldman & McGrath, 2015, p. 42). On Bergman's interpretation, "internal" refers to something the subject is aware of and internalism claims that S's belief that p is only justified if a justification-conferring factor is present and S is aware of that factor (Bergmann, 2006, p. 9). Given this view, an initial challenge for the debunker is that the causal premise of the EDA solely describes external factors. Thus, even if truth-indifferent selection has shaped a class of current-generation beliefs, that fact itself has no epistemic bearing. But when the individual *realizes* that her belief stems from the challenged class, that fact becomes internal. We can view this realization as a mental state defeater, which means a mental state, such as a belief or experience, which removes the justification of a belief (Bergmann, 2006, p. 155). As Baker–Hytch (2023 p. 109) suggests, internalist debunkers can thus add an extra step to the initial argument to make sure it is specified that the causal story enters the purview of subject.

By contrast, given externalism, the additional step does not seem necessary. A sound EDA can challenge a class of religious beliefs even if no religious believer is aware of this. This challenge applies to all tokens of that class. We can then say that the EDA describes various facts about the distant origin of religious beliefs which are incompatible with these beliefs being justified. Those arguing this way are what White (2010, 575) calls "blocking debunkers", since they argue that various facts (described in the causal premise) block justification. Is the individual's realization that her belief stems from a dubious class relevant in this perspective? For example, if there is no justification to be defeated in the first place, what role might it have? Perhaps only a minor role. White suggests that it could be relevant in helping the subject realize that her belief was never justified in the first place (White, 2010, 575). This suggests that her awareness of the problem would contribute to greater self-insight, by letting her appreciate her situation, epistemically speaking.

In concluding, let me stress that it is not necessary to my criticism of MER that a successful EDA removes the *possibility* of justification. My main point has been that MER fails to establish that EDAs based on CSR or general naturalistic assumptions inevitably fail to challenge religious beliefs on the fine-grained level of each individual believer. It is an open question how, in each case, the individual responds to that challenge and whether it can be resisted, such that justification can be regained.

Conclusion

We have considered two criticisms of EDAs against religious beliefs. Firstly, some critics focus on the empirical evidence meant to support the causal premise, i.e., the one which provides an unofficial story to create reasons for doubt or worry in the religious believer. It is possible to find that story in CSR. However, basing that story on the standard model (SM), which consists of early theorizing in CSR, now rejected by many, is not a good idea. Furthermore, the Big Gods theory, a newer and for some a much more promising theory, also faces challenges. This indicates that basing the causal premise on a substantial theory of religion is risky. Furthermore, it is unnecessary. Wilkins and Griffiths' influential argument works by avoiding too much empirical detail and by making two largely uncontroversial assumptions. We then considered another and more troubling criticism of debunking. This criticism states that to debunk the specific religious beliefs you or I hold one needs to explain how each of them were formed. Furthermore, to base such explanations on general theories or assumptions is misleading because of the mismatch between the scope and aim of the explanation and the narrowness of the debunking-target. To answer this challenge, I made a detour to a related debate in metaethics, where critics of debunking make a similar point regarding explanation of morality. I argued that there is nothing misleading about using general naturalistic explanations of religion in distal *global EDAs*, which aim at religion as a *class*. Furthermore, the fact that naturalistic explanations of religion are general does not rule out distal *narrow EDAs*. When subjects obtain their belief-tokens from an epistemically dubious class of beliefs (something a global EDA first needs to establish), that dubiousness is also inherited. I finally outlined an internalist and externalist version of this argument.

Declarations

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