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The Epistemic Parity of Religious-Apologetic and Religion-Debunking Responses to the Cognitive Science of Religion

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Abstract: Recent work in the cognitive science of religion has challenged some of the explanatory assumptions of previous research in the field. Nonetheless, some of the practitioners of the new cognitive science of religion theorize in the same skeptical spirit as their predecessors and either imply or explicitly claim that their projects undermine the warrant of religious beliefs. In this article, I argue that these theories do no additional argumentative work when compared to previous attempts to debunk religious belief and that these recent debunking efforts are very much motivated by methodological commitments that are shared with canonical research. I contend that these argumentative strategies put debunkers very much on an epistemic par with religious apologists: both advocate responses to the cognitive science of religion that are primarily motivated by methodological commitments.

Keywords: epistemology; religious experience; cognitive science of religion



Citation: Stepanenko, Walter Scott. 2021. The Epistemic Parity of Religious-Apologetic and Religion-Debunking Responses to the Cognitive Science of Religion. *Religions* 12: 466. <https://doi.org/10.3390/rel12070466>

Academic Editor: Mark Webb

Received: 18 May 2021
Accepted: 22 June 2021
Published: 25 June 2021

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1. Introduction

The discourse around the cognitive science of religion (CSR) creates the impression that religion debunkers are in an epistemically superior position relative to religious apologists. A great deal of philosophical and theological work in the literature is dedicated to the construction of debunking arguments motivated by CSR evidence and apologetic responses to these arguments. In this article, I argue that the reality of the epistemic situation is quite different, and that religious apologists and religion debunkers are in very similar epistemic positions. To make this case, I first explicate some features of traditional research projects developed in CSR. I then contrast these projects with more recent developments in the field. I argue that both projects motivate debunking arguments in which methodological commitments rather than first-order scientific evidence are doing much of the argumentative work. I explain that these are commitments that most religious apologists reject and that the debate over the implications of CSR comes down to the viability of various methodological commitments. Insofar as CSR itself cannot settle these issues and debates over these commitments are philosophically live, I conclude that religious apologists and religion debunkers are on an epistemic par with respect to CSR.¹

2. Canonical Cognitive Science of Religion

The canonical cognitive science of religion (CCSR) can best be described as a research program that is committed to the scientific investigation of religion.² Defined in this way, CCSR need not involve a commitment to debunk, undermine, or otherwise defeat religious beliefs.³ In fact, defined in this way CCSR does not necessarily require practitioners to develop projects that fix their explanatory scope on religious belief(s). For example, this definition of CCSR covers explanatory projects that involve a coarse-grained explanatory scope that is concerned with offering accounts of the ubiquity and/or persistence of religious behavior.⁴ However, many practitioners in CCSR take their work to have implications

for the warrant of religious belief. For example, Bloom (2009) suggests that CCSR cannot refute theism, but that CCSR can “still tell us something about the rationality, or lack thereof, of religious believers” (p. 126). Nonetheless, different practitioners pursue different explanatory strategies. Some theorists advocate adaptationist accounts of religion.⁵ For these theorists, the ubiquity and persistence of religious belief and behavior are explained by appealing to the ways that they contribute to evolutionary fitness. Other theorists advocate by-product accounts of religion.⁶ For these theorists, the ubiquity and persistence of religious belief and behavior are explained by appeal to the accidental outcomes produced by the normal functioning of otherwise adaptive cognitive processes. Despite these differences, there is quite a bit more common theoretical ground than the distinction between these two approaches implies. Many adaptationists fix their explanatory scope on extant monotheistic traditions, while many by-product theorists are most concerned with explaining the ubiquity of beliefs in supernatural persons. In this way, adaptationists often subsume by-product theories and imply that cognitive by-products are later co-opted by organized traditions where they play the role of exaptations.

To see this, consider a CCSR account following along lines suggested by Boyer (2002) and Norenzayan (2013): Human beings are animals just like any other animal, and just like every animal constrained by evolutionary processes of natural selection, human beings must survive long enough to reproduce and pass down their genes to the next generation. However, survival is no easy matter. Threats abound in most environments and every animal needs to be prepared to fend them off or evade them. Therefore, an animal will be well-suited for its environment if it is prone to identify threats. This makes agency detection very important. If an animal fails to detect a threat, it will be eaten and therefore unable to reproduce and pass down its genes to the next generation. However, if an animal is very sensitive to possible threats, it might flee more times than it needs to, but the only cost would be calories. Therefore, natural selection would favor trigger-happy animals over agency-insensitive animals, but the trigger-happy animals would be likely to overattribute agency. They would possess minds tailored to identify agents where there are none. If these animals are social animals, they would also possess minds tailored to attribute mental states wherever they detect agency. These animals would be prone to identify agents where there are none and to attribute various goals or desires to these agents. Therefore, these animals would be predisposed for belief in invisible, but imaginary, persons. The existence of such persons is surprising, given that they are like other persons these animals know in most respects except for the fact they are invisible, but the concept of an invisible agent is not so extravagant that it is difficult to remember. Therefore, the recognition of surprising invisible agents would be easy to transmit because the concept is captivating and easy to remember. Thus, belief in such agents could spread across a population. As it does, this belief could ratchet up the solidarity amongst the members. Belief in these invisible agents could then become a sign of one’s group affiliation, but it could also become a way of keeping people in line. Group members cannot always monitor one another’s behavior, but an invisible agent can stand in for them. The more that agent knows and sees, the more it can police, but it can only police that behavior if it has the intention and power to do so. Therefore, a group that believed in one invisible agent with as much power, knowledge, and goodness as possible might be able to coerce cooperation in a way that another group without that belief could not. Groups with such beliefs might therefore outcompete groups without such beliefs, and as a result, they could more successfully reproduce and spread across various regions such that over time and space, an entire race of progeny would exist with the genetic predisposition for their belief system.

Such a story captures the most crucial theoretical elements in various theories in CCSR. That it is a coherent story is one reason for its popularity amongst theorists, but what is most important for present purposes is the identification of various theoretical postulates therein. First, we have various cognitive processes producing the “raw materials” for religious belief. Chief among these is the hyperactive agency detection device, or HADD. HADD is the cognitive process that is responsible for producing belief in agents, but it

is unreliable. It detects agents in more cases than those in which an agent is actually present, but that is not all. HADD is expanded by theory of mind (ToM). ToM involves various cognitive processes that are responsible for attributing mental states to agents. Together HADD and ToM dispose individuals to believe in persons who are not there. These beliefs could be transient, but they are minimally counterintuitive (MCI): they violate categorical expectations but in only a few respects. They are surprising, but because they only minimally violate categorical expectations, they are easy to remember. They can therefore be easily transmitted. Once transmitted, they can serve as signals of group affiliation. Signals can promote group solidarity, but the beliefs underpinning the signals can also promote cooperation. The bigger and more powerful the agents believed in are, the more cooperation the beliefs facilitate.

In this way, the CCSR story subsumes by-product theories in more expansive adaptationist accounts of religion. HADD and ToM facilitate the emergence of religious beliefs, but these beliefs are by-products. They do not contribute to the fitness of the individuals who are committed to them, but the processes that produce these by-products are adaptive. These processes contribute to the fitness of the individuals who accept the by-products, but the by-products are not themselves adaptive. However, as these by-product beliefs are disseminated through a population, they facilitate the emergence of commitments that contribute to a group's fitness. They can serve as social signals of group affiliation and they can promote cooperation. Therefore, what started out as a cognitive by-product can be co-opted by a later evolutionary process that contributes to group cooperation and thus contributes to group members' fitness. In this way, a theory like supernatural punishment theory (SPT) can suggest that sufficiently developed religious beliefs, such as a commitment to monotheism, are adaptive even if underdeveloped religious beliefs, such as beliefs in ghosts or spirits, are merely by-products. Thus, the CCSR story supports both by-product and adaptationist theorizing. Whether a theorist committed to CCSR identifies as one or the other thus depends on whether that theorist takes their explanatory scope to cover supernatural beliefs in general or monotheistic beliefs in particular.

Of course, any one theorist could accept a by-product theory and resist the claims of adaptationists, but what is interesting is that both theorists are committed to at least part of the CCSR story. This reveals a significant overlap of theoretical commitments. This (partial) theoretical consensus reveals a similarity in their respective debunking strategies. To see this, it will help to first identify the theoretical commitments underpinning CCSR. As I see it, two of these major commitments include:

1. A commitment to Darwinian evolutionary synthesis, and
2. A commitment to modular theories of mind.

(1) is revealed in the CCSR story's focus on the gene as the unit of evolution and the primary locus of natural selection. A commitment to (1) is best seen in the error management theory that supports the HADD postulate. HADD is supposed to contribute to fitness because it predisposes an organism for agency detection, and while the false positives it generates are costly in terms of calories, false negatives are much more costly. False negatives can lead to death, which from an evolutionary perspective is not an evil in itself but is nonetheless disastrous insofar as it represents the end of a genetic line. (2) is revealed in the CCSR focus on the primacy of unconscious inferences. Modular theories of mind are defined by different theorists in different ways and are expanded to mean many different things in more recent cognitive science research,⁷ but the classical conception of modularity involves a commitment to the idea that many or most sensorial processes encapsulate information.⁸ This idea can be operationalized in different ways, but the basic idea is that senses passively receive information, encode that information, and pass that information along to online or conscious deliberative processes that take that information as their input. Thus, (2) can be read in CCSR's focus on HADD and ToM as "behind the back" cognitive processes producing beliefs that individuals are conscious of only once formed.

Now, what is interesting about these commitments is that they alone are not very damaging to religious believers. (1) may put pressure on young-Earth creationists, but that is not where CCSR gets its bite. CCSR is not addressed to creationists. It is addressed to religious believers who accept evolutionary theory and think their religious beliefs are warranted. Similarly, (2) is hardly damaging either. (2) might put pressure on neuroscientific skeptics, but again, that is not where CCSR gets its bite. It is not addressed to such skeptics. It is addressed to religious believers who accept the claims of neuroscience and yet maintain that their religious beliefs are warranted. What is damaging to the religious believers is CCSR's suggestion that every instance of agency detection involving an invisible agent is a false positive. Therefore, what is potentially damaging to the religious believer is:

3. A commitment to naturalism and/or physicalism.

Obviously, (3) could be better formulated. A physicalist need not necessarily deny the existence of all invisible forces and a form of naturalistic theism is theoretically possible.⁹ Nonetheless, the CCSR story suggests that there are no invisible agents. Both naturalism and physicalism are often taken to involve the denial of these; therefore, I think (3) will do for now. What is interesting to note here is that (3) is doing all of the debunking work. (1) and (2) just provide the theoretical apparatus to tell the debunking story. The debunking work really rests on (3), but (3) looks like a metaphysical commitment. However, if the problem with religious beliefs ultimately reduces to the implausibility of metaphysical commitments, why all the cognitive scientific handwringing? One potential reason is that the CCSR theorist is probably not committed to (3) on metaphysical grounds but on methodological grounds. The CCSR theorist might believe that a methodological commitment to parsimony or scientifically tractable hypothesis forces (3) on them. Although I disagree with that contention, even if we grant it, the problem just resurfaces. In that case, (1) and (2) are still not doing much work. The debunking work is being done by the methodological commitments that underpin (3). However, once again, one can ask, why all the cognitive scientific handwringing? One reason for appealing to cognitive science is that cognitive science helps complete the debunker's account of religion and to systematize the debunker's perspective. This is not an altogether illegitimate move, but it has interesting consequences for how to frame debunking efforts, as I will explain later.

3. Challenges to CCSR and Non-Canonical Cognitive Science of Religion

The religious believer can respond to CCSR in several ways. One strategy is to subsume CCSR in a larger theistic worldview.¹⁰ Another strategy is to argue that the scope of CCSR is too coarse-grained to have any definitive implications for specific religious believers.¹¹ A third strategy is to argue that CCSR only threatens specific epistemic strategies for defending religious belief.¹² A fourth strategy is to argue that CCSR has negative epistemic implications for the debunker and is potentially self-defeating.¹³ A fifth strategy is to argue that CCSR has positive epistemic implications for religious belief.¹⁴ I believe all of these strategies are interesting and that some are even promising. However, in this section, I want to focus on another strategic challenge to CCSR: challenges to the first two theoretical commitments. These are challenges to the validity of the science that motivates CCSR.

If I am right that CCSR involves two primary scientific commitments, then it follows that there are two primary ways to challenge the science of CCSR. If we look at religious responses to debunking work motivated by CCSR, I think this is exactly what we find. Consider, for example, Oviedo's (2018) concern that CCSR is "inscribed in a clear anthropological framework that builds on a quite simple and reductionist program" (p. 25). Here, the target of Oviedo's criticism appears to be (1). Recall that (1) involves a commitment to Darwinian evolutionary synthesis. In this view, evolution by natural selection primarily operates on genes and therefore genetic material is the primary locus of natural selection. Oviedo's concern here is that this conception of evolution is too simple and reductive. To improve their theoretical commitments, Oviedo calls for CCSR theorists "to make place for

neglected instances, like epigenetic factors, symbolic processes, meaning systems, and in general, the role played by culture” (p. 25).

Consider also [van Eyghen’s \(2020\)](#) concern that CCSR overlooks the extent to which “religious beliefs are mainly learned” (p. 187). In his view, religious beliefs are better understood as the products of predictive processing. According to this model of cognition, sensory input is interpreted in light of expectations of how the world works and is framed in terms of predictions about where the input came from. For example, van Eyghen discusses the case of a bird watcher whose expectation that she will see a bird leads her to conclude that a moving black dot in the sky is a bird. Therefore, on the predictive processing model, “all perception is heavily shaped by top-down processes” (p. 193). Here, van Eyghen’s concern seems to be with (2). Recall that (2) involves a commitment to modular theories of mind. Classical modular theories of mind suggested that sensations are informationally encapsulated: they are encoded by receptive mechanisms that pass the encoded information downstream to online or conscious deliberative processes. Van Eyghen’s endorsement of the predictive processing model in which all perception is shaped by higher-order cognition therefore involves a rejection of (2).¹⁵

Now, my intention here is not to adjudicate these scientific disputes. What I want to point out is that these disputes give rise to analogous reforms in CSR. To see this, let us work backward from (2) to (1). The charge against (2) is that theoretical postulates of CCSR involve a commitment to a classical conception of modularity. Therefore, one available response on behalf of the CSR practitioner is to deny this. Robert [Nola \(2018\)](#) does just this. Nola argues that it is wrong to call all agency detection devices, let alone hyperactive ones, “a module of any sort” (p. 80). Here, the idea seems to be that agency detection is a complex, distributed process. It not only involves perceptual triggers, but categorical triggers that classify the agent as one kind of thing or another, and inferential processes that make guesses about an agent’s origins, intentions, or some other feature of the situation. Of course, this description may run together CCSR’s typical distinction between HADD and ToM, but so long as Nola believes that some of these inferences and triggers are conscious, then Nola is denying the extent to which these postulated cognitive mechanisms are informationally encapsulated and therefore rejecting at least classical modularity.

A second way to reorient CSR is to reject (1). This involves a move from constructing theories under the assumption of Darwinian evolutionary synthesis and toward the construction of theories under a different conception of evolution, such as the one offered by the extended evolutionary synthesis.¹⁶ One theorist who has developed such an account is Kim Sterelny. In [Sterelny’s \(2018\)](#) view, the development of religious institutions should be explained in terms of the development of embodied religious practices into articulated religious beliefs. These early forms of religious activity involved “rituals, ceremony, collective activity, and material symbolism” (p. 419). As social and economic life became more complex and groups of humans had to interact across filial, tribal, and band units, Sterelny surmises an evolutionary pressure to codify the ontological suppositions of these activities into consistent narratives that could be transmitted across both groups and generations and therefore serve as signals of shared identity. In this way, Sterelny develops something quite like a big gods theory situated in a multi-dimensional evolutionary framework that emphasizes developmental processes that govern socio-cognitive niches and not just genetic inheritance. In his view, “[r]eligion is a dynamic mosaic of coevolving individual and social factors” (p. 410). Thus, Sterelny moves the [Norenzayan \(2013\)](#) big gods theory out of a Darwinian evolutionary framework and into extended evolutionary synthesis.

Of course, much more could be said about these theories. The important point for present purposes is that these brief descriptions reveal the structure of an alternative to CCSR. We can call this alternative non-canonical cognitive science of religion (NCSR). What distinguishes NCSR from CCSR is the rejection of (1) and (2). Therefore, we can say that NCSR involves:

4. A commitment to extended evolutionary synthesis, and/or
5. A commitment to non-modular models of cognition.

However, just as with CCSR, these commitments alone do not do much to undermine the warrant of religious beliefs. [van Eyghen \(2020\)](#) explicitly advocates (5) as a means of walking back the CCSR claim that HADD is unreliable. In his view, the predictive processing model of cognition suggests that the cognitive mistakes CCSR attributes to HADD are better understood as cases of overfitting. However, in that case, van Eyghen suggests that the predictive processes are mostly reliable and therefore religious beliefs are “more sensitive to truth” (p. 202). Sterelny is not so sympathetic to the religious outlook. He suggests that religious beliefs are “[o]bviously not veridical” (p. 409). While this statement is terminologically confused (epistemologists typically describe beliefs as warranted or unwarranted and experiences as veridical or not veridical), it is nonetheless telling. Sterelny makes this claim before he develops his account of the origins and development and religion. Thus, Sterelny seems to take the epistemic vacuity of religious belief systems as part of a puzzle calling for an evolutionary and cognitive scientific explanation for their origin.¹⁷ This suggests that neither (4) nor (5) are doing much debunking work. What is? It must be something like: (3) A commitment to physicalism and/or naturalism.

However, if that is the case, then the debunking work being done in NCSR is the exact kind of work being done in CCSR. The science has changed but the argument is largely the same. However, what exactly is that argument? Is it convincing? These are the issues to which I now turn.

4. Methodological Debunking Strategies

Some CSR practitioners accuse religious apologists of resorting to methodological appeals in the face of scientifically motivated debunking efforts. For example, [Wilson \(2009\)](#) argues that religious beliefs were once regarded as scientifically tractable hypotheses that only became “superempirical when they [were] driven from empirical inquiry by the scientific method” (p. 335). Here, Wilson seems to be implying that religious apologists only salvage their beliefs by methodologically bracketing them from the reach of empirical inquiry when confronted with confounding evidence. One thing to say in response to this charge is just that it is false. Medieval thinkers, such as St. Thomas Aquinas, long ago defended a conception of God as a transcendental, ontologically simple being for complex theological and philosophical reasons. It is not the case that these thinkers advocated supernatural conceptions of the divine only in response to the success of Baconian science. These thinkers advocated these concepts long before Boyle ever developed his air pump. A second thing to say in response is what I hope to demonstrate in this section: that the epistemic situation religious apologists find themselves in is exactly parallel to the situation religion debunkers find themselves in. Both are motivated by distinct methodological commitments. To reinforce this suggestion, I want to buttress the case developed in the preceding section that debunking efforts motivated by both CCSR and NCSR ultimately hinge on the same methodological appeals by examining some debunking arguments.

The first argument comes from Robert [Nola \(2018\)](#). In his argument, Nola pits religious explanations against naturalist explanations in attempts to account for a shared explanandum: many human beings have religious beliefs. He then advocates a method of comparative confirmation governed by “a Law of Likelihood,” which stipulates that “data D favors hypothesis H1 over H2 if and only if $p(D, H1) > p(D, H2)$ ” (p. 88). In Nola’s view, the naturalist explanation (H1) better accounts for D (the shared explanandum) than the religious explanation (H2). Why is that? In support of this contention, Nola invokes several criteria: ontological parsimony, explanatory breadth, explanatory and predictive novelty, progressive explanatoriness, absence of untestable assumptions, and fewer ad hoc assumptions (pp. 88–91). These criteria are probably familiar to many readers, but we can briefly summarize Nola’s case as resting on the supposition that, compared to religious explanations, naturalistic explanations involve fewer and syntactically simpler theoretical entities, that they explain a wider variety of facts, generate new research programs, uncover new facts, presuppose no empirically intractable assumptions, and revert to no auxiliary hypotheses to salvage their theory.

I suspect much more can be said in defense of religious explanations on these counts than Nola surmises, but I want to direct attention to an altogether different issue. The issue here concerns the fact that Nola's argument involves an inappropriate use of the method of comparative confirmation. A method of comparative confirmation making use of the law of likelihood is better situated in Bayesian forms of reasoning where the probability of a bit of data is not just assessed with respect to two rival hypotheses, but with respect to two rival hypotheses against a shared background. However, this is not how Nola appeals to the law of likelihood. He appeals to the law in the context of a categorical argument, but the law is superfluous in that form of argumentation. The notion of probability does no work in these contexts. In categorical contexts, one argues that one hypothesis coheres with more of the categorical desiderata than its rival, and this is exactly what Nola does. However, in that case, the notion of probability drops out. Methodological appeals remain and are doing the argumentative work.

To see this, compare Nola's argumentative strategy to the kind of reasoning we employ when we play a game like Clue. Suppose that we are playing an iteration of the game and we know that Mr. Green was murdered in the library of a mansion with a golf club on Saturday evening and that only Colonel Mustard and Professor Plum were recorded entering the mansion that night. Call this set of information D. Given D, we have two rival hypotheses: Colonel Mustard killed Mr. Green (H1) and Professor Plum killed Mr. Green (H2). Suppose, in addition, that we already know that Colonel Mustard and Professor Plum both had some animosity for Mr. Green. Call this information k. With this information, it seems that $p(D/k, H1)$ is roughly equivalent to $p(D/k, H2)$. However, suppose that we then learn that Colonel Mustard had recently purchased a set of golf clubs consistent with the murder weapon. In that case, $p(D/k, H1) > p(D/k, H2)$. Suppose that we subsequently learn that Colonel Mustard had loaned this set of clubs to Professor Plum the night before. Now, it appears that $p(D/k, H2) > p(D/k, H1)$. However, suppose we then check the surveillance footage from the mansion, and we discover that Professor Plum returned that set of golf clubs to Colonel Mustard before the two entered the mansion that evening. In that case, it seems that the evidence reverts the inequality back to $p(D/k, H1) > p(D/k, H2)$.

Nola's argument for the superiority of naturalistic explanations over religious explanations is irresponsive to first-order evidence of this kind.¹⁸ In fact, Nola says nothing at all about concrete religious experiences and the features of the experiences that tilt the inequality one way or the other. One reason why not is that Nola is concerned with developing a general argument for the explanatory superiority of one research program over another. That is fine enough, but the problem is that he frames his argument as a comparative confirmation argument testing rival hypotheses. However, the argument that he constructs is not such an argument. It rests entirely on methodological appeals. The contrast with the game of Clue brings this clearly into view.

To be fair, Nola does develop another argument from the unreliability of HADD. This argument goes as follows:

- P1. x's HADD causes x's belief that D exists.
- P2. HADD is not reliable.
- C. x's belief that D exists is debunked (p. 85).

This argument is responsive to first-order evidence. To make good on this argument, we would need first-order evidence that P1 is true. Nola does not offer evidence for thinking that any particular religious believer has a belief caused by HADD nor is it clear how he could. However, even if we bracket this concern, Nola's formulation of P1 is consistent with cases in which x's belief that D exists is overdetermined and cases in which HADD is only one cause of x's belief that D exists. For example, HADD can cause x's belief that D exists, but perhaps God co-opts HADD for this purpose. Or perhaps HADD causes x's belief that D exists, but later x has an experience of God speaking to them. In the former case, x's belief is overdetermined, and in the latter case, there are other causal routes to that belief. Presumably, Nola rejects the possibility of theistic overdetermination because it involves an explanation that is not as parsimonious as that naturalistic explanation and

he rejects the explanation that an individual has verbal communication with God because that explanation contains untestable assumptions about the existence of God. That is fine enough but notice that even if we grant Nola these claims for now, it is these methodological commitments that are doing the argumentative work.

Therefore, Nola does not actually develop the kind of argument he claims to be developing. However, this is not to say that arguments of this sort cannot be developed. Consider an argument developed by Goodnick (2016). Like atheistic arguments from divine hiddenness, Goodnick develops an argument that leverages evidential ambiguity into a consideration in favor of naturalism. She starts from the position of someone who is unsure whether God exists. She then suggests that the truth of theism would imply the possibility of several alternative routes God could have used to produce theistic belief. By contrast, the truth of naturalism would lead us to expect only unreliable routes relevant to the production of theistic belief. On the naturalistic view, the faculties that are responsible for producing supernatural beliefs (HADD, ToM, MCI, etc.) are unreliable. From these considerations, Goodnick concludes that naturalism should be favored over theism (p. 31). This argument has the appearance of a Bayesian argument. It starts from a condition of evidential ambiguity, presents some first-order evidence, and arrives at a conclusion about the relative likelihood of one hypothesis compared to another. However, this appearance is misleading. Goodnick's argument rests on the view that the first-order evidence clearly posits only one belief-forming faculty for theistic belief: the faculty constituted by the assemblage of CSR postulates. She outright dismisses the possibility that "God could have given us the belief through revelation" (p. 31). Of course, this is exactly what a Christian theist would suggest. Presumably, Goodnick believes that there is something methodologically incorrect with appealing to revelation. That is fine enough, but in that case, methodological commitments are playing a much more decisive role in Goodnick's argument than appearances suggest.

Finally, consider an argument motivated by a theory like the one developed by Sterelny. To see how such an argument could be developed, note that Sterelny's theory involves no appeal to the existence of supernatural agents whatsoever. Therefore, one could argue that the success of the account renders alternative religious accounts superfluous. However, notice that here considerations like the ones Nola appeals to are very much operative. If Sterelny's account succeeds, then it only obviates the possibility of supplementing it with religious accounts on the grounds that these accounts are less parsimonious and involve empirically intractable assumptions. Here, again, methodological considerations are doing much of the argumentative work. In response, a debunker might double down on Nola's concern for ad hoc assumptions. Here, the idea might be that religious accounts would not expect various evolutionary processes to facilitate the development of religious beliefs and behaviors and that for this reason, naturalistic accounts are explanatorily preferable. The problem with this suggestion is that it is not clear how much weight such considerations should receive. A physicist studying the origins of the universe might not predict the emergence of various biological processes at a later stage of the universe, but the emergence of such processes does nothing to shed any doubt on the warrant of that physics. We should not expect a theory of cosmic everything to fall out of theology, and if one does not, that is hardly a count against theology or religious explanations.

In addition to these considerations, one other point is worth discussing. Earlier I suggested that these debunking cases are motivated by (3), namely, a commitment to naturalism and/or physicalism, but I have not said much about physicalism. I suspect that most CSR debunkers take the success of naturalism to motivate a commitment to physicalism, but even this much can be questioned. For example, Visala (2018) argues that interventionist accounts in philosophy of science are ontologically neutral. These accounts simply identify difference-makers in causal relationships and support counterfactual statements.¹⁹ However, Visala argues that this account "does not require an account of a physical chain of events that would link the cause to the effect...[all that] is necessary for the existence of a causal relationship is that we can produce change in the effect by

producing change in the cause factor" (p. 64). If this is right, the truth of physicalism does not follow from the success of interventionist science and therefore empirical methodology is in principle consistent with methodologies other than methodological naturalism. In fact, as [Gant and Melling \(2009\)](#) observe, various psychologists, including some representatives of the American Psychological Association, have begun, or signaled a need for, renewed efforts to study relationships between religion and health.²⁰

Given these considerations, it very much appears that debunking cases are motivated more by methodological commitments than first-order evidence. A debunker might object that I have only examined three arguments and that this conclusion is just a hasty generalization. Of course, I admit that I have not examined every debunking argument ever developed in the history of the CSR literature, but I have not suggested that all religious experiences are veridical. I am sure that some experiences can be debunked by applying CSR theories to the case.²¹ What I am suggesting is that CSR-motivated arguments concluding that all religious experiences are not veridical and that all religious beliefs grounded in religious experience are therefore unwarranted depend on methodological commitments and that these are methodological commitments religious apologists will reject. Religious apologists who recognize a transcendent God will believe that some things cannot be known scientifically and therefore reject methodological naturalism. They will also believe that some natural processes can be co-opted by a transcendent being and therefore balk at appeals to parsimony in some contexts. Therefore, religious and anti-religious responses to CSR in general exhibit epistemic parity. Whether one takes CSR theories to generally and/or universally undermine religious beliefs depends on one's methodological commitments. The actual science is not doing very much argumentative work in either direction. This is an important observation to make because many religious debunkers working in CSR often write as if religious apologists illegitimately resort to methodological considerations to salvage their view in response to scientific evidence. The preceding reveals that debunkers are in a very similar epistemic position.

However, to suggest that religious apologists and religion debunkers are on an epistemic par implies more than this; it implies that the epistemic weight of their methodological commitments is roughly equivalent. [Rea \(2002\)](#) suggests that methodological commitments are basic and that one can only judge one set of dispositions to be superior to another with respect to their epistemic consequences. I believe that much can be said in favor of this view, but if evaluative criteria are derived from methodological commitments, it is not clear how this evaluative process should go. This problem of evaluative incommensurability goes to the heart of what [Taylor \(1987\)](#) has called one of "the most important spiritual issues of our time," the struggle between "neo-Nietzscheans" and "the defenders of critical reason" (pp. 483–85). Fortunately, the present issue does not require the solution of these fraught epistemological problems. These problems in conjunction with the parallel appeal to methodology reveal that religious apologists and religion debunkers are on an epistemic par in response to CSR.

5. Conclusions

What else might one say about this epistemic situation? As I see it, the preceding supports the conclusion that the discourse around the cognitive science of religion very much depends on the social prestige of science compared to religion, but this much is not surprising to theologians and philosophers of religion. Nonetheless, a word of caution is in order here. In the preceding, I have only focused on the epistemic position of religious apologists and religion debunkers with respect to CSR. I have not discussed the epistemic positions of these two groups of thinkers relative to one another when all things are considered. I am also not suggesting that scientific research cannot undermine specific religious beliefs. For example, I do believe that evolutionary science puts significant pressure on and perhaps even refutes some religious beliefs.²² However, I also believe that religious believers have options with respect to these challenges and that no field of scientific research and no body of scientific evidence has successfully undermined

belief in a transcendent God.²³ In fact, if I had to make the case one way or the other, I would probably argue that when all things are considered, religious apologists are in an epistemically superior position compared to religion debunkers. Nonetheless, I am perfectly willing to say that the situation is much more epistemically ambiguous than many partisans admit, but I doubt that this situation can be used to motivate any substantive conclusions. In my view, this situation says more about the epistemic limitations of human beings than it does about the existence of God.

Funding: This research received no external funding.

Conflicts of Interest: The author declares no conflict of interest.

Notes

- 1 In this article, I use the terms religious apologist and religion debunker to refer primarily to individuals concerned with the viability of Western forms of monotheism, most especially Christianity. This is due to the author's own religious identity and the context most of the CSR literature presupposes.
- 2 Rea (2002) defines a research program as "a set of methodological dispositions" (p. 3).
- 3 For example, Visala (2018) distinguishes between attempts to "pursue explanatory theories from the cognitive and biological sciences" and "a thoroughgoing 'naturalization' program of the humanities" (p. 52).
- 4 For example, White (2018) suggests that CSR aims to account for "the *presence, prevalence, and persistence* of religion" (p. 40).
- 5 See Wilson (2002).
- 6 Bloom (2009) is an example of such a theorist.
- 7 See McCauley's (2011) discussion of contemporary research on modularity (pp. 50–52).
- 8 See Fodor (1983).
- 9 See, for example, Draper (2019).
- 10 See, for example, van Inwagen (2009).
- 11 McBrayer (2018) might be described as advocating a strategy of this sort.
- 12 For example, Jong and Visala (2014) argue that CSR is more threatening to reliabilists than internalists (p. 256).
- 13 See Barrett and Church (2013).
- 14 See Braddock (2018).
- 15 However, as I mentioned above, more recent proponents of modularity modify the classical Fodorian conception of informational encapsulation (e.g., Barrett and Kurzban 2006). In their sense, a predictive processing model of cognition does not necessarily involve a rejection of modularity. Predictive processing is consistent with the view that automatic intuitive judging processes shape or constrain sensorial processes. I interpret van Eyghen's bird watcher example to suggest a view of cognition wherein willful, conscious intentions constrain and/or shape sensory input. Therefore, I interpret van Eyghen to advocate a model of predictive processing that is not modular in even this non-Fodorian sense. However, if that is wrong, we can simply interpret some challenges to CCSR as challenges to Fodorian modularity rather than to modularity in general. I thank an anonymous reviewer for drawing my attention to the need to belabor this point.
- 16 See Laland et al. (2015) for an account of the extended evolutionary synthesis
- 17 See the collection of essays in Deane-Drummond and Fuentes (2017) for theologically minded anthropologists working in the framework of the extended evolutionary synthesis.
- 18 By first-order evidence, I mean evidence described in terms both hypotheses accept, a shared explanandum, etc.
- 19 See Woodward (2005).
- 20 Of course, it is also worth returning to a point made earlier regarding the theoretical possibility of naturalistic and physicalist accounts of the divine and/or ultimate. A pantheist could embrace physicalism, for example. I thank an anonymous reviewer for emphasizing this point as well.
- 21 See Stepanenko (2020).
- 22 See de Smedt and de Cruz (2020) for an excellent treatment of some of the ways evolutionary science challenges specific religious beliefs.
- 23 Much more might also be said in the way of challenging the scientific objectivity of debunkers operating in CSR. Many critics point out that the accumulated empirical evidence does not support many of the theoretical postulates of CCSR (for some discussion, see Szocik and van Eyghen 2021). This is an important criticism to address, but I am wary of apologetic attempts to simply dismiss debunking arguments on these grounds. It seems to me that many partisans in these debates often overlook the ineluctable role of idealizations in scientific practice (e.g., Potochnik 2020). Idealized scientific "just so" stories still have some epistemic bite because they contribute to our understanding of how religious belief and behavior might have emerged, and religious apologists may still

rightly feel inclined to respond to these stories. The strength of debunking arguments might be mitigated in these circumstances, but it is not obviated, and in my opinion, much of what I have to say about epistemic parity holds therein. I thank an anonymous reviewer for stressing the need to address these issues.

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