Abstract: An evolutionary by-product explanation entails that religious belief is an unintended consequence of a cognitive process selected for by evolution. In this paper, I argue that if a by-product explanation is true, then religious belief is unwarranted (even if God exists). In particular, I argue that if the cause of religious belief is the god-faculty (HADD + ToM + eToM + MCI), then it is likely unreliable; thus, religious belief is unwarranted. Plantinga argues that de jure criticisms are not independent of de facto criticisms: without knowing whether or not God exists, one can't say that belief in God is unwarranted, since if God exists, it is possible that God has planned that this mechanism would lead to belief in Him. Against Plantinga, I show that in order for de jure criticisms to have force, it is not necessary to know that God does not exist. Instead, one only needs to doubt His existence. And if by-product explanations turn out to be supported by the evidence, this fact alone gives us reason to doubt God’s existence. Thus, if the by-product explanation is true, belief in God is not warranted; if we know this, then we have reason to doubt theism.

Keywords: Cognitive Science of Religion, HADD, Plantinga, religious epistemology

Introduction

Historically, some authors have attempted to undermine theistic belief by pointing out deficiencies in the psychological mechanism(s) that causes it; for example, in The Future of an Illusion, Freud claims that belief in God is an illusion and therefore problematic because it is based on wish-fulfillment. This type of explanation is often construed as what Plantinga would call a de jure criticism.¹ A de jure criticism of theism claims that, independent of the truth of God’s existence, it’s irrational or in some other way epistemically improper to believe in God.²

Other authors, however, have offered an alternative explanation of the genesis of theism and have similarly argued in favor of its warrant; for example, in Warranted Christian Belief, Plantinga has argued that belief in God can be warranted insofar as it is caused by God and cognized by (something like) Calvin’s sensus divinitatis (or similar belief-forming mechanism).

Both of these strategies are grounded in an epistemology wherein the epistemic status of a belief at least partially depends on the cause of the belief.³ In this paper, I will focus on the claim that theism is

1 Plantinga, Warranted Christian Belief, ix.
2 First, I'd like to thank two anonymous referees at Open Theology for their extremely helpful comments on a draft of this paper. I'd like to thank my colleagues at MSU Denver, especially Tony Chu, Caleb Cohoe, Sergio Gallegos, Tim Gould, Daniel Krasner, and Sean Morris, for their helpful comments on a prior draft of this paper I presented on April 3, 2014. I presented an earlier draft of this paper at the “Cognitive Science of Religion, Philosophy, and Theology” conference (Oxford May 9-11 2014), and I would like to thank the participants—especially Helen deCruz, Trent Dougherty, Kelly James Clark, and Michael Antony—for their helpful questions and comments. Finally, I'd like to thank Alex Hughes for his helpful feedback.
3 See Clark and Barrett, “Reidian Religious Epistemology” and Clark and Barrett, “Reformed Epistemology” for further discussion of these issues.

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unwarranted in virtue of particular characteristics of the mechanisms that cause it, claiming that belief in God is unwarranted—regardless of whether or not God actually exists. It is important to note that I solely focus on theistic belief—belief in an omniscient, omnipotent, omnibenevolent creator of the universe (God)—and not other forms of religious belief such as polytheism, henotheism, etc. or any other form of supernaturalism.

Very generally speaking, on these types of accounts, if a belief results from a belief-forming mechanism that meets certain criteria (which vary among theorists), then the belief is warranted. However, if a belief results from a mechanism that fails to meet the criteria, then the belief is unwarranted. Thus, when evaluating the epistemic status of theism, it is important to do two things: 1. determine the criteria that belief-forming mechanisms must meet in order to generate justified or warranted beliefs; 2. determine the belief-forming mechanism(s) responsible for theism.

The aforementioned arguments about belief in God—whether or not they offer theistic or atheistic conclusions—fail the second task. Many of these theories do not allow us to determine the epistemic status of theism since they don’t determine which among the many possible mechanisms actually causes it. Instead, they provide conditional claims: if belief in God is caused by God and cognized by the sensus divinitatus, then it is warranted; if, however, belief in God is caused by wish-fulfillment, then it is unwarranted.

This is not surprising given that, until recently, the cause or causes of belief in God has been highly speculative—truly a branch of arm-chair psychology. However, contemporary cognitive scientists of religion are now investigating the origin of religious beliefs. Despite the fact that there is yet no consensus as to the cause or causes of religious belief, there are some promising alternatives, one of which is the evolutionary by-product explanation: the view that religious belief is an unintended consequence of a cognitive process (or processes) selected for by natural selection.

In this paper, I construct a conditional de jure criticism of theism based on a by-product explanation of religious belief—I argue that if the cognitive science of religion (CSR) shows that a by-product explanation is true, and that the belief-forming mechanism responsible for belief in God is unreliable, then theism is unwarranted (even if it turns out to be the case that God exists). I go on to argue that the cause of religious beliefs as described in by-product accounts (which, following Clark and Barrett, I call the god-faculty) is, given the evidence we have now, probably an unreliable belief-forming mechanism (at least insofar as it causes theistic belief). It is important to emphasize that my claim is conditional (if by-product explanations are true, then theism is unwarranted). While CSR has provided some evidence to believe the truth of the antecedent, there is still significant disagreement within the field and much work yet to be completed. As Jong, Kavanagh, and Visala put it: “CSR’s theories are still massively underdetermined by data.” And while by-product theories are gaining ground, there are scholars who offer alternative theories, for example, that religious belief is adaptive and therefore selected directly. As the science grows, then, so will the strength of my criticism (only insofar as the science shows that a by-product explanation is the most likely).

Plantinga has objected that de jure criticisms of this type are not successful unless we already know (or assume) that God does not exist. Against Plantinga, I argue that in order for a de jure criticism to have force, we need not assume that God does not exist; instead, it is only necessary that we have reason to doubt God’s existence. I show that if CSR determines that religious belief is a by-product, then our belief is unwarranted.

4 And, unsurprisingly, scholars have recently begun the process of applying these new theories to arguments both for and against the rationality of theism. See, for example Dennett, Breaking, Dawkins, The God Delusion, and Bloom, “Religious Belief” for some atheistic arguments and Barrett, “Cognitive Science of Religion: What Is It”, van Inwagen, “Explaining”, and Murray and Goldberg, “Evolutionary Accounts” for some theistic arguments. See Peterson, “Are Evolutionary”, van Till, “How Firm”, Leech and Visala, “The cognitive science of religion: a modified theist response”, and Leech and Visala, “The Cognitive Science of Religion: Implications” for arguments against CSR as undermining theism. See Nareaho, “Cognitive science” for a more nuanced position.

5 While CSR concerns the cause of religious belief, generically, this paper focuses solely on theistic belief. As a species of religious belief, though, theism is caused by the same cognitive mechanisms that cause other religious belief. I discuss the role of culture and environmental inputs below.

6 Jong, Kavanagh, and Visala, “Born idolators,” 250.

7 See, for example, Wilson, Darwin’s Cathedral.
Thus, if we have knowledge of CSR’s findings and the implications of those findings, we have reason to
doubt God’s existence. Therefore, I conclude that CSR provides us with a forceful de jure criticism of theism
if it shows that a by-product explanation of religious belief is correct.8

**Evolutionary By-product Explanations**

Cognitive science of religion is based on the idea that religion is a natural part of the human experience.9
A by-product theory suggests that religious belief is not directly selected for by natural selection (or
group selection), but instead is a result of cognitive faculties and/or processes that have been selected for
some other purpose. The theory attempts to explain the origin of religious belief and account for its easy
transmission. It doesn’t, however, fully account for all of the variation in the content of religious belief or for
the spread of particular religions, since, of course, culture also plays a role in determining this.

In the CSR literature,10 there are commonly three (or four, as not everyone includes eToM) main
components to the by-product explanation of religious belief: the hypersensitive (or hyperactive) agency-
detection device (HADD)11, theory of mind (ToM)12, existential theory of mind (eToM)13, and minimal
counterintuitiveness (MCI).14 I will briefly describe each, in turn.

**HADD:** The ADD (agency-detection device) produces a belief in an agent (e.g., another human, a non-
human animal, etc.) in the presence of certain sensory stimulation (e.g., the image of a face, a rustling
in the bushes, etc.). In our environment, this ability is obviously useful insofar as it allows us to quickly
identify threats (or friends) and even more quickly predict the behavior of that threat (or friend). It is also
likely that natural selection would favor a hyperensitive agency detection device insofar as it over-detects
agents or results in false positives (e.g., a rustling in the leaves actually caused by the wind is attributed
to some sort of predator). False positives may have some costs (we run away from the rustling in the leaves
instead of climbing the tree to get the fruit); however, false negatives are much more costly (we don’t
run away from the rustling in the leaves and get mauled by a tiger). Moreover, HADD is experimentally
confirmed: there have been numerous studies that suggest that humans readily attribute agency to non-
agential causes.15 It has been theorized16 that the human tendency to anthropomorphize is explained
by HADD. CSR suggests that HADD is (at least partially) responsible for the idea of supernatural and/or
invisible agents.17

**ToM:** Theory of mind is the cognitive system responsible for attributing mental states (beliefs, desires,
emotions, etc.) to agents (or supposed agents). This system is utilized to predict an agent’s (likely) behavior
(e.g., that tiger looks hungry and believes I am food and so is likely to come chase after me in order to
eat me). Again, the existence of a ToM, even in young children, is experimentally confirmed.18 Some have
theorized that ToM also plays a role in anthropomorphizing, insofar as beliefs/desires, etc. are applied to

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8 Todd Long, in “A proper de jure objection” has also attempted to provide a de jure criticism of religious belief that satisfies
Plantinga’s criteria for a proper de jure objection. While Long’s objection is, I think, promising, mine differs from his insofar
as it (a) significantly incorporates new research from CSR; and (2) interacts more directly with Plantinga’s theory of warrant.
9 See Geertz and Markkuosson, “Religion is natural” for an excellent explication of this point.
10 Following Leech and Visala, “Naturalistic Explanation,” Barrett, “Cognitive Science of Religion: What Is It,” Barrett and
Lanman, “The science,” and Barrett, “Cognitive Science, Religion, and Theology.”
11 Barrett, “Exploring” and Barrett Why would anyone, based on Guthrie, Faces.
12 Barrett, Why would anyone.
13 Bering, “The Existential Theory.”
14 Boyer, The Naturalness and Boyer, Religion Explained.
15 Heider and Simmel, “An Experimental Study”; “Guthrie, Faces; and Rochat et al., “Young infants”. For a nice review of the
relevant studies, see Barrett and Johnson, “The Role of Control,” esp. p. 209. It’s important to note that, at this stage, showing
that agency detection is hyperactive does not entail that it is unreliable. In fact, this is quite difficult, as I argue below. However,
I go on to argue that there are some good reasons supporting the claim that the God-faculty as a whole is unreliable.
16 Guthrie, Faces.
17 Atran In Gods, Boyer, Religion Explained. See also Riekki et al., “Paranormal and Religious Believers” and Riekki et al.,
“Supernatural believers.”
18 Baron-Cohen, Mindblindness.
non-agents.\textsuperscript{19} CSR suggests that once the idea of supernatural agents is in place, ToM begins to operate and fills in details about the supernatural and/or invisible agent’s (or agents’) beliefs, desires, etc.

\textit{eToM}: Existential theory of mind is connected to a tendency to ask questions like: “why me?” or “what does this mean?”, especially in situations that are perceived as unusually misfortunate (or fortunate), coincidences, etc. The eToM is, again, empirically confirmed in children.\textsuperscript{20} Some cognitive scientists of religion (e.g., Bering) have argued that we automatically wonder about the intentions of an agent or agents that may have caused events that are striking or have important (positive or negative) consequences, providing an opportunity to naturally posit God (or gods) and His (their) role in and concern with human affairs.

\textit{MCI}: Finally, minimal counterintuitiveness helps to explain the details of concepts of God(s) and transmission of religious belief. Boyer argues that concepts that are minimally counterintuitive are more easily entertained, remembered, and transmitted.\textsuperscript{21} He claims that we have intuitive ontological categories (e.g., person, plant, artifact) and associated with these categories are certain expectations about the psychology, biology, and physics of the objects. Minimally counterintuitive concepts violate our expectations, but not too much. For example, a person who is invisible violates the physical characteristics we’d expect about persons and thus would be an MCI. Boyer’s claim is that, at least in the day-to-day life of ordinary people (not theologians or philosophers at work), god concepts tend to be minimally counterintuitive. This theory can explain and predict some of the details of the kinds of supernatural agents posited by the HADD/\textit{eToM} and elaborated on by ToM. Boyer also uses MCI to explain why (certain) religious beliefs are easily transmitted.

Some cognitive scientists of religion theorize that together, these cognitive faculties (at least partially) explain the origin (and transmission) of religious beliefs. Following Clark and Barrett\textsuperscript{22}, I will call the combination of these related faculties the god-faculty. Of course, many people come to their particular religious beliefs not on the basis of the god-faculty directly, but through transmission (through culture, texts, and family). But, the fact that (almost) all humans share these cognitive faculties explains why religious beliefs (in general, and of course, certain particular features of those beliefs) are easily accepted and passed on.

\textbf{A \textit{De Jure} Criticism of Theism from CSR}

Some philosophers have attempted to use by-product explanations (as well as other natural explanations of religious belief from CSR and elsewhere) to undermine religious belief. They have argued that the fact that religious belief is an unintended consequence of naturally selected for cognitive mechanisms shows that religious belief is unwarranted. These are potential \textit{de jure} criticisms insofar as learning about the origin of religious belief is supposed to provide reason to doubt the warrant of the belief, independent of whether the belief is true or false. In general, these types of criticisms provide undercutting defeaters: they point out some feature of the belief-forming mechanism responsible for the belief that is supposed to undermine the warrant of the belief.

One simple version of this argument goes as follows: beliefs caused by HADD + ToM + eToM + MCI (the god-faculty) are caused by faculties that were selected for by natural selection. Faculties that were selected for by natural selection are, first and foremost, selected for their facilitation in survival and reproduction—not because they attempt to represent the truth. Because religious beliefs are not caused by a belief-forming mechanism aimed at the production of true beliefs, they should not be trusted. The beliefs they produce are unwarranted for the same reason beliefs based on wish-fulfillment are unwarranted: even if they happen to be true, it will be because the believer “got lucky” in this case. My 3 year old niece is not a good source of information regarding mathematics (she doesn’t reliably state true mathematical statements, nor does

\textsuperscript{19} Heider and Simmel, “An Experimental Study.”
\textsuperscript{20} Bering, “The Existential Theory.”
\textsuperscript{21} Boyer, \textit{Religion Explained}.
\textsuperscript{22} Clark and Barrett, “Reidian Epistemology.”
she attempt to). If she tells me that the square root of 729 is 27, my belief would not be warranted (though, in this case, she happens to be correct). Thus, insofar as belief in God is based caused by various cognitive faculties that are not truth-oriented, it is unwarranted.

The theist, however, has a quick response: the fact that the cognitive faculties responsible for religious belief are not truth-oriented (insofar as they are selected to promote certain behaviors, not true beliefs) is also true (for the naturalist) for all of our cognitive faculties. So, the criticism would apply to all of our beliefs. But this is absurd.23

I think, however, that there is a better version of this type of objection. My view is that theism, if caused by the god-faculty, is not warranted insofar as that belief-forming mechanism is unreliable (it does not usually produce true beliefs). One shouldn’t trust beliefs formed by a known unreliable mechanism any more than one should trust thermometer that is known to be unreliable24, thus one shouldn’t trust beliefs formed by the god-faculty.

One version of this criticism might go as follows: the HADD is hypersensitive—it is known to give false positives, and in fact, is selected for on that basis. ToM is also shown to produce false beliefs insofar as it attributes an intentional stance to non-agents. eToM is a natural tendency to seek an agential cause of events—but is still active even when those events don’t necessarily have an agential cause (one is still prone to search for an agential cause of mere coincidences or dramatic events caused by regular laws of nature). Thus, it plays a role in falsely positing agential causes of non-agentially-caused events. MCI predicts that beliefs with particular noteworthy features, not necessarily true ones, will be preferred. So, if theistic belief really is the product of HADD + ToM + eToM + MCI, belief in God is unwarranted (even if it turns out that theism is true).

At this point, however, one might worry about determining the reliability of the particular belief-forming faculties that make up the god-faculty, for example, HADD and ToM. (A similar objection could be given for eToM and MCI, but I will ignore those here for the sake of brevity, given that the objection and response will be fairly similar). One might object that HADD, despite its name, is generally reliable: while it doesn’t produce 100% true beliefs, it produces mostly true beliefs. After all, it’s responsible for most of our beliefs in agents, and most of those are, of course, true. Similarly, one might also argue that ToM attributes the intentional stance correctly to agents most of the time.

Thus, it may seem more appropriate to instead consider how reliable HADD and ToM are in forming beliefs about supernatural agents.25 Consider the following analogy: in general, the faculty of visual perception is fairly reliable at relatively close distances. However, that faculty is not very reliable at longer distances. So, while it would makes sense to trust our visual perception of objects between, say, 1 to 10 feet away, it does not make sense to trust our visual perception of objects several hundred feet away. Similarly, it may be the case that HADD is reliable in detecting certain types of agents (fairly large visible ones), but unreliable in detecting supernatural agents. Unfortunately, HADD’s reliability with respect to beliefs about supernatural agents is hard to test, so this strategy probably won’t work.26

A more promising way to avoid objections about the reliability of particular belief-forming mechanisms is to focus instead on the god-faculty as a whole. While each of the particular belief-forming mechanisms

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23 See Leech and Visala, “The Cognitive Science of Religion: Implications,” Murray, “Four Arguments,” and Murray, “Scientific Explanations” for a similar point. It’s interesting that Plantinga would probably have to accept this particular version of the argument. Of course, he shouldn’t mind—since he can argue that this version of the argument (and all other similar versions) assume that God doesn’t exist. He would likely say that this criticism is successful, but isn’t a true de jure objection because the epistemic status of theism on this view isn’t independent of its truth insofar as it assumes the truth of naturalism. A similar version of the argument might claim that insofar as religious belief is a by-product, it is unwarranted. But this is also easily defeated. Many beliefs, including complicated mathematical beliefs, are likely by-products of cognitive systems selected for some purpose other than, e.g., understanding calculus, and we do not think they are unwarranted. See also McCauley, Why Religion is Natural, for a similar point concerning science.

24 I say known to be unreliable, since it is likely that in the case of thermometers (and in the case of our cognitive faculties), there’s a presumption that they are reliable and therefore trustworthy. With no evidence to the contrary, it makes sense that we would trust a thermometer (and our cognitive faculties). However, when we have evidence that the thermometer is unreliable, we should not trust it. Thanks to Dan Krasner for this point.

25 See Leech and Visala, “The Cognitive Science of Religion: Implications” and van Till, “How firm” for a similar point.

26 Murray makes this point in his “Four Arguments,” 394.
involved in the god-faculty necessarily (given a by-product explanation) plays a role in the formation of non-religious beliefs, CSR may show that, taken together, uniquely religious beliefs are the result of this particular combination of faculties. If this is the case, then it is more fruitful to say something about the reliability of the entire god-faculty (HADD + ToM + eToM + MCI taken together). In what follows, I will argue that if CSR shows that belief in God is the result of the god-faculty (as composed of HADD + ToM + eToM + MCI taken together), then, given further empirical evidence about the distribution of theistic belief, it is likely that the god-faculty is an unreliable belief-forming mechanism.

Given some background assumptions from CSR, it's clear that belief in some kind of god or gods is very common. However, there's a great deal of religious diversity. The god-faculty is responsible for all sorts of beliefs in supernatural agents—from ghosts and fairies to Zeus and the Christian God. And surely not all of these beliefs are true (especially insofar as some sets of these beliefs are inconsistent). So, it seems that the god-faculty itself isn't reliable insofar as it, statistically speaking across the population, produces many false beliefs.27 There are, of course, several objections to this argument. I will consider two of the most pressing and respond to them in turn.

Objection 1 (Murray on Cultural Influences): In “Four Arguments,” Murray argues that the HADD is not solely responsible for producing religious beliefs—it produces a vague belief but the environment and cultural traditions play a large role in determining what the content of that specific belief is.28 Consider an example: after I hear a rustling in the bushes, HADD should generate a belief in an agent. Presumably, in this capacity, HADD is reliable (sure, there might be a few false positives, but not more than 50% of the time). But my environment (whether I'm in the woods or the jungle) will determine if I think that agent is a bear or a tiger. I may, depending on my cultural traditions, even get the false belief that the agent is the boogeyman. But in this case, HADD reliably produces beliefs in agents—and that's all it needs to do. My environment and culture produce specific beliefs, which, granted, are contradictory (and false in some cases); but this doesn't show that HADD is unreliable, nor does it show that my belief in an agent is unwarranted. Similarly, Murray might argue against me that the god-faculty produces a generic belief in God, but the details of the belief are filled in by the environment and cultural factors. Thus, incompatible (and false) religious beliefs are not the result of the god-faculty, but the result of these other factors. Thus, the god-faculty cannot be said to be unreliable and so belief in God is not unwarranted.

The problem with this objection is that it doesn't show that theism is warranted. At best, it shows that a generic belief is warranted—but that generic belief is not theism. For Murray's objection to work, the god-faculty would have to reliably produce theistic belief, which culture then manipulated into its various inconsistent forms. Just as in the analogy, HADD must reliably produce beliefs in agents, which are then manipulated by the environment and culture into contradictory beliefs; so the god-faculty must reliably produce belief in God, which then is manipulated by culture to produce contradictory beliefs. But this does not seem to be the case. There is widespread consensus that the god-faculty does not produce theistic belief that is then manipulated by culture into its various inconsistent and more specific forms. Instead, the god-faculty is not very likely to produce belief in a single, powerful God.29 The evidence suggests that throughout human history, the god-faculty is more likely to produce belief in multiple, less powerful, and not morally perfect (or even good) gods. Historically speaking, most people did not believe in a single god.30 Barrett, for example, claims, “the oldest and most widespread form of god concepts is the ancestor

27 See Willard, “Plantinga's Epistemology” for a similar point.
28 This view, described at this level of generality, is representative of what most by-product theorists argue: that the environment and culture play an important role in determining the content of the belief (though note that our cognitive mechanisms are not silent here—counter-intuitiveness is important and does determine some parameters for content). An anonymous reviewer also made this point.
29 For a similar point, see Marsh, “Darwin and the Problem;” Maitzen, “Divine Hiddenness;” Jong, Kavanagh, and Visala, “Born idolaters;” and Bloom, “Religious Belief.”
30 Marsh, for example, analyzing data from Stark, Discovering God, 60-61, claims “on Stark's own estimation, which is based on ethnographic data for roughly four hundred 'pre-industrial' cultures, a huge portion of these cultures (from what I can tell, less than 50 percent) have apparently affirmed a High God, with far fewer affirming an active or moralistic High God that cares about the morality of human beings,” 358.
spirit or ghost.”31 Even Norenzayan, who argues that religious beliefs are typically canalized into what he calls “Big Gods” (morally good super knowers), claims that these types of beliefs evolved from beliefs in ghosts and ancestral spirits.32 Maitzen, using as an example the relative number of theists in Saudi Arabia versus the number of non-theist Buddhists in Thailand, argues that even today, belief in a single God is not widespread.33 While it may be tempting to argue that there is a common, theistic core to religious belief, it doesn't appear, at this time, that the empirical data supports that view.34 Thus, it cannot be said that the god-faculty reliably produces theistic belief.35

Objection 2 (Murray on Environment): In his “Four Arguments,” Murray argues that since the reliability of HADD is quite good in “the ordinary course of things” (e.g., when we see cloaked figures out the window or when we hear a voice coming from another room), but less good in other environments (e.g., when we are in a dark forest), to get a criticism of theism off the ground, one would need to argue that HADD is “likely to be unreliable in the contexts in which religious beliefs are generated.”36 Presumably, Murray could give a parallel version of the argument for the entire god-faculty: in order for my argument to work, I'd have to argue that the god-faculty is “likely to be unreliable in the contexts in which religious beliefs are generated.”

The problem with this objection is that it seems that, if theism were true, most environments that humans find themselves in should produce belief in God, since God would want humans to know about Him. But, as I argued earlier, most environments do not produce theistic belief; instead, most environments produce belief in ghosts, ancestor spirits, polytheistic or henotheistic gods, etc. If Murray wants this objection to succeed, he'll have to argue that there are only limited environments wherein the god-faculty produces theism, and that in these environments, the god-faculty is reliable. But looking at the available empirical data, it seems as though this environment would have to be constrained primarily by date and region, since it seems that humans have gained theistic belief only quite recently (when compared to the total time humans have existed) and primarily in the West. But this seems very problematic to me37—it seems unlikely that God would want only modern western humans to believe in Him.38 Thus, it is likely that if CSR shows that belief in God is the result of the god-faculty, then given the evidence about the distribution of theistic belief, it is likely that the god-faculty is an unreliable belief-forming mechanism.

Plantinga on De Jure Criticisms

It is obviously not easy to construct a cogent de jure objection using knowledge gleaned from CSR, but according to Plantinga, the situation is even worse than I have so far presented. He argues that there are...
no coherent de jure criticisms of theism at all. In his *Warranted Christian Belief* (and echoed in his *Where the Conflict Really Lies*)\(^3\), Plantinga argues that de jure criticisms are not independent of de facto criticisms (criticisms about the truth of God’s existence).

Plantinga notes that de jure criticisms of theism (at least the type I’ve been explaining) are criticisms of the warrant (as opposed to the justification) of theistic belief. For Plantinga, a belief \(B\) is warranted if and only if:

1. The cognitive faculties involved in the production of \(B\) are functioning properly . . .
2. Your cognitive environment is sufficiently similar to the one for which your cognitive faculties are designed;
3. . . . the design plan governing the production of the belief in question involves, as purpose or function, the production of true beliefs . . .
4. The design plan is a good one: that is, there is a high statistical or objective probability that a belief produced in accordance with the relevant segment of the design plan in that sort of environment is true.\(^4\)

Plantinga states that without knowing whether or not God exists, we can’t say that belief in God is unwarranted in virtue of the features of the mechanisms that cause it. If CSR discovers that theistic belief is caused by the god-faculty, and if God exists, then, Plantinga claims, CSR has (potentially) discovered the means by which God causes theistic belief. It is possible that God has planned it such that this group of mechanisms would lead to belief in Him.

Thus, according to Plantinga, if God exists, belief in God is warranted insofar as it meets all of his criteria. (1) The god-faculty (HADD + ToM + eToM + MCI) is functioning properly (at least in the case when it results in theistic belief). (2) The believer is in the proper environment (this one is easy). (3) The particular operation of the ADD is properly aimed (by God) at the production of true belief (in God). (4) The cognitive faculties reliably produce true belief (since God designed them, they’re bound to be good)\(^4\). So, Plantinga concludes, the de jure criticism is not independent from the de facto question: if God exists, then theistic belief is probably warranted (regardless of the findings of CSR); if God doesn’t exist, then it’s probably not warranted. But, one can’t say that belief is unwarranted, he claims, without already assuming that God doesn’t exist. If one does not assume that God does not exist, he argues, then one cannot (rightfully, according to Plantinga) claim that the belief-forming mechanism is problematic in ways that undermine warrant (e.g., one cannot claim that the god-faculty is unreliable).

### Against Plantinga

Plantinga argues that if God exists, then God could use whatever cognitive faculty (or faculties) CSR determines is (or are) responsible for religious belief to cause belief in God. So, even if that faculty is unreliable or isn’t aimed at the formation of true beliefs (or has whatever flaw that would make it unwarranted (even according to Plantinga’s criteria)), if God does exist, it would produce warranted belief in God. That, I concede.

Plantinga concludes from this that one cannot be in a position to launch a de jure criticism unless one already knows (or just assumes) that God does not exist. The problem with this is that Plantinga’s warrant claim is also conditional. So, unless one already knows (or just assumes) that God does exist, one can’t be sure that theistic belief is warranted. This is where the de jure objection has force.\(^4\)

Suppose we don’t antecedently know that God exists (or doesn’t). Suppose we are in state of uncertainty. From our perspective, we don’t know whether or not God exists. We don’t believe it (so we have first-order doubts), or we do, but we have second-order doubts. If we have doubts, then we can only say that

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\(^3\) Plantinga, *Warranted Christian Belief*, ch. 6 and Plantinga, *Where the Conflict Really Lies*, ch. 5.

\(^4\) Plantinga, *Warrant and Proper Function*, 194.

\(^4\) There’s an interesting tension here between Plantinga’s claim that the god-faculty is reliable (if designed by God) and the empirical evidence: if God exists, then how can the god-faculty so regularly produce false beliefs? Plantinga has a response to this (involving sin) that is outside the scope of this paper. See Plantinga, *Warranted Christian Belief*, ch. 7 for his detailed response.

\(^4\) See Bishop and Aijaz, “How To Answer” for a similar point.
it is possible that God exists (or maybe we can assign a probability to it based on our credence—perhaps based on how we evaluate the arguments for and against God’s existence and on how much we weigh our religious experiences and/or the testimony of others who have also supposedly had religious experience). If it’s possible that God exists, then it’s merely possible that belief in God is warranted. But Plantinga himself argues that the inference from possible to actual is a terrible one.43 From the dialectical perspective of the person who is uncertain about God’s existence, the de jure objection actually does have force. She might admit to the following proposition: “If God exists, then my theistic belief is warranted”. But, if she can’t endorse the antecedent of that conditional, she is still unsure whether or not her belief is warranted. And that’s all the de jure criticism requires.

A Draper-Style Argument and the De Jure Criticism of Theism

Suppose that CSR tells us that religious belief is caused (in part) by an unreliable belief-forming mechanism. This mere fact gives one reason to doubt one’s belief in God. If CSR determines that an evolutionary by-product explanation is true, then this provides evidence in favor of theism being false. My argument, inspired by Draper’s evidential problem of evil, is as follows44:

Let:
- $B$: the evolutionary by-product explanation for religious belief is true
- $N$: naturalism
- $T$: theism

I will argue that $P(B/N) > P(B/T)$. Thus, the truth of the evolutionary by-product account favors naturalism over theism and therefore provides reason to doubt that God exists.

For one, if theism is true, then there are many plausible alternatives as to how God could have caused theistic belief (for example: God could have given us the belief through revelation, God could have set us up in such a way that natural selection would have directly selected for belief in God, God could have imprinted his existence upon our soul directly as an innate belief, God could speak to us as a voice in the clouds45). But, if naturalism is true, then there must be some evolutionary explanation. Of course, an adaptive account or some other non-by-product evolutionary explanation is possible, but the options are far greater if God in fact exists.

Moreover, if a common version of theism is true (a version inspired by Aquinas, in which the doctrine of the imago dei plays an important role in understanding God’s intentions toward us insofar as we are rational creatures and thus it is important for us to have knowledge of the world), I take it that a deceiving God is a problem (though perhaps not an intractable one). If God exists and our belief in God is known to be caused by an unreliable belief-forming mechanism (which itself is caused by God), then we have reason to think that we are being deceived. After all, in normal cases, we don’t trust unreliable mechanisms or mechanisms not aimed at truth. If God has set it up such that we learn that our belief in him is caused by the kind of mechanism that wouldn’t normally produce warranted belief, it seems that God is in some way being tricky insofar as the warrant for belief in His existence depends on facts that also provide reason to think that he doesn’t exist.

If God exists, then the belief-forming mechanism is functioning properly, and reliably aimed at the production of true belief in God. However, if we can’t assume that God exists, then we can’t assume that the belief-forming mechanisms are reliably aimed at the production of true belief. If naturalism is true,

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43 Plantinga, Where the Conflict Really Lies, 25.
44 Draper, “Pain and Pleasure.”
45 “Suppose, therefore, that an articulate voice were heard in the clouds, much louder and more melodious than any which human art could ever reach; suppose that this voice were extended in the same instant over all nations and spoke to each nation in its own language and dialect; suppose that the words delivered not only contain a just sense and meaning, but convey some instruction altogether worthy of a benevolent Being superior to mankind—could you possibly hesitate a moment concerning the cause of this voice...” (Hume, Dialogues, 3.2).
then we have reason to think that the belief-forming mechanism is not reliable, at least in cases involving supernatural agents, since if naturalism is true, then all beliefs in supernatural agents are false! Even if they are generally reliable\textsuperscript{46}, then they fail when they produce belief in the supernatural: since God didn't design the god-faculty, it cannot reliably produce true theistic belief.

Regardless of our knowledge of these facts, if belief in God is caused as a by-product of the god-faculty (and if that faculty is unreliable with respect to theistic belief), then our belief is unwarranted. So, if we doubt that God exists, and if we know that religious belief is caused by certain kinds of defective psychological mechanisms, then belief in God should be rejected. This is how the mere fact of the evolutionary by-product explanation gives us reason (not all things considered, but still a reason) to doubt God’s existence and thus provides an actual de jure criticism against theism. A de jure criticism with bite doesn’t require theism being false; rather, it requires theism being uncertain. However, since by-product explanations are themselves grounded in empirical data, if the evidence shows that they are correct, this fact and its implications give us reason to doubt God’s existence.

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\textsuperscript{46} Something Plantinga will deny (given the truth of naturalism), but which seems quite plausible for reasons outside the scope of this paper.
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