

# Cognitive Science of Religion and the Rationality of Religious Beliefs

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**Abstract:** Cognitive science of religion does not tell us whether we are justified in believing that God exists or does not exist. Consequently, cognitive science of religion neither rationally compels us to believe or to disbelieve in God. Under such epistemic circumstances, the English notion of rationality implies that it is rational for theists to believe in God and for atheists to disbelieve in God.

**Keywords:** atheism, cognitive science of religion, justification, rationality, theism.

## I. Introduction

Theists believe in God, while atheists disbelieve in him. It would be rational to embrace theism if there are strong arguments for it, and it would be irrational to do so if there are no such arguments. The same holds for atheism. It would be rational to embrace atheism if there are strong arguments for it, and it would be irrational to do so if there are no such arguments. Consequently, resolving the dispute between theists and atheists requires that we investigate whether there are strong arguments for and against the existence of God.

Philosophers have constructed several philosophical arguments for and against the existence of God. The philosophical arguments for the existence of God include the argument from the first cause, the argument from design, and the argument from miracles. The philosophical arguments against the existence of God include the problem of evil, the problems of divine location and age (Park 2017), and the problem of divine evaluation (Park 2024). The problems of divine location and age result from the following two questions: Where did God exist before he created the world? How old was he when he created the world? The problem of divine evaluation (Park 2024) holds that it is unjustifiable to send believers to heaven and nonbelievers to hell, and hence that God, a just being, would not do such a thing. This paper sets aside these philosophical arguments for and against the existence of God.

This paper is interested instead in whether cognitive science of religion (CSR) shows that either theism or atheism is justified, and hence whether either theism or atheism is reasonable. In Section 2, I unpack the psychological and evolutionary explanations of why religious practitioners hold religious beliefs. In Section 3, I argue that CSR neither shows that theism is justified nor that atheism is justified. In Section 4, I invoke Bas van Fraassen's (1989) English notion of rationality to argue that it is rational for theists to embrace theism but it is also

rational for atheists to embrace atheism. In Section 5, I respond to what other researchers have said on the issue of whether theism or atheism is rational. In the end, this paper introduces a theoretical resource that both theists and atheists can invoke to promote mutual tolerance.

## **II. Cognitive Science of Religion**

According to CSR, multiple cognitive faculties jointly produce secular and religious beliefs. For example, the cognitive device called ‘the hyperactive agency detection device (HADD)’ predisposes us to ascribe agency to ambiguous objects (Guthrie 1993; Barrett 2000; Atran 2002). If we see a rock on Mars which appears to be a human face, HADD is activated in our minds and interprets it as a human face. If we see a cloud which appears to be a human face, HADD is activated in our minds and interprets it as God’s face. Such cognitive faculties jointly induce both secular and religious beliefs in our minds.

CSR appeals to evolutionary theory to explain why we have cognitive faculties that produce secular and religious beliefs. For example, we have HADD because it was advantageous for the survival and reproduction of our ancestors. It is plausible that HADD increased the chance that our ancestors survived and reproduced. Imagine that there was an ambiguous object that appeared to be a snake or a round twig. Suppose our ancestors took it to be a snake while their competitors took it to be a round twig. It is clear that our ancestors were more likely to survive and reproduce than their competitors.

Some cognitive scientists of religion (Barrett 2004; Clark and Barrett 2011; Calvin 2016, 22) are theists, claiming that God implanted the cognitive faculties in human minds. Other cognitive scientists of religion (Dawkins 2006; Dennett 2006) are atheists, claiming that it is false that God implanted the cognitive faculties in human minds. In sum, some researchers use CSR to support theism, while other researchers use it to support atheism.

## **III. Justified?**

Does CSR justify either theism or atheism? How can we show whether CSR justifies theism or atheism? This section aims to answer these questions, considering the fundamental assumption of CSR and a theory of justification in epistemology called ‘reliabilism.’ Let me explicate the fundamental assumption and reliabilism in turn.

The fundamental assumption, which theistic and atheistic cognitive scientists of religion share, is that the cognitive faculties that produce secular beliefs also produce religious beliefs. As E. Thomas Lawson states, “whatever it takes to explain how minds work generally will be sufficient to explain how religious minds work.” (2000, 79) For example, HADD induces both secular and religious beliefs, as the two examples in Section 2 above illustrate. Thus, CSR presupposes that there is no special cognitive faculty for religious beliefs, i.e., that

there is no cognitive faculty that is devoted exclusively to generating religious beliefs.

Reliabilism (Goldman 1979) is an epistemological theory of what makes a belief justified. It holds that a justified belief is one that is produced by a reliable cognitive faculty, i.e., a cognitive faculty that produces mostly true beliefs. For example, a perceptual belief is justified if it is produced by a perceptual system which produces mostly true perceptual beliefs. Note that, according to reliabilism, the justification for a belief lies in the causal relation between the belief and a cognitive faculty, and a belief is justified or not depending on whether or not there exists such a causal relationship.

Reliabilism and the fundamental assumption mentioned above jointly yield an interesting hint as to how we can determine whether theism or atheism is justified. Theism would be justified if the cognitive faculties which produce secular and religious beliefs were reliable, i.e., if they produced mostly true beliefs. By contrast, atheism would be justified if those faculties produced mostly false beliefs. Consequently, resolving the dispute between theists and atheists over whether theism or atheism is justified requires that we investigate whether the cognitive faculties produce mostly true beliefs or mostly false beliefs.

How can theists and atheists show that the cognitive faculties produce mostly true beliefs or mostly false beliefs, respectively? They should take the following two steps. First, they should randomly select a large number of beliefs from the set of all the beliefs that the cognitive faculties produce. If they do not randomly select beliefs, or if the number of selected beliefs is not large enough, their sample would not resemble the population of all the beliefs that the cognitive faculties produce, and their inference from the sample to the population would commit the fallacy of biased statistics.

Second, theists and atheists should ascertain whether the selected beliefs are true or false. If most of them turn out to be true, theists can conclude that the cognitive faculties are reliable, i.e., they produce mostly true beliefs, and hence that most religious beliefs are true. By contrast, if most of them turn out to be false, atheists can conclude that the cognitive faculties are not reliable, i.e., they produce mostly false beliefs, and hence that most religious beliefs are false.

It is not clear how theists and atheists could ascertain whether most of the selected beliefs are true or false. In my view, they can at best ascertain whether some of the secular beliefs are true or false. Suppose, for example, that they observe an ambiguous object which appears to be a rock or a bear. HADD kicks in and induces the secular belief that it is a bear. They can take a closer look at the ambiguous object and tell whether the belief is true or false. By contrast, they cannot ascertain whether some religious beliefs are true or false. For example, they observe a cloud in the sky which appears to be a human face. HADD kicks in and gives rise to the religious belief that it is God's face. Atheists would say that it is just an accident that a cloud made a face-like figure, and theists would reply that

God showed himself to us by the means of the cloud. They would not reach an agreement as to whether the belief is true or false.

It is under dispute between theists and atheists whether religious beliefs are mostly true or mostly false. Consequently, theists would beg the question against atheists to assume, without independent evidence, that the cognitive faculties produce mostly true beliefs. As Justin Barrett (2007, 63), Jonathan Jong (2013, 529), and Joshua Thurow (2013, 84) point out, atheists would also beg the question against theists to assume, without independent evidence, that the cognitive faculties produce mostly false beliefs. Accordingly, it is to beg the question against atheists for theists to say that God implanted the cognitive faculties in human minds, so the cognitive faculties produce mostly true beliefs. It is also to beg the question against theists for atheists to say that it is false that God implanted the cognitive faculties in human minds, so the cognitive faculties produce mostly false beliefs.

To say that it is to beg the question against atheists for theists to say that God implanted the cognitive faculties into human minds does not imply that God did not implant the cognitive faculties into human minds. To say so only implies that it is under dispute between theists and atheists whether religious beliefs are mostly true or mostly false, so it is also under dispute between theists and atheists whether God implanted the cognitive faculties into human minds, and theists should provide independent evidence for their view that God implanted the cognitive faculties into human minds.

The same holds for atheists. To say that it is to beg the question against theists for atheists to say that it is false that God imbued human minds with the cognitive faculties does not imply that God imbued human minds with the cognitive faculties. To say so only implies that it is under dispute between theists and atheists whether religious beliefs are mostly true or mostly false, so it is also under dispute between theists and atheists whether God implanted the cognitive faculties in human minds, and atheists should provide independent evidence for their view that it is false that God implanted the cognitive faculties in human minds.

Theists might be tempted to argue that the philosophical arguments for the existence of God mentioned in Section 1 above are strong, so we know, independently of CSR, that God imbued human minds with the cognitive faculties, that the cognitive faculties produce mostly true religious beliefs, and that theism is justified. This tempting move, however, would only prod atheists to construct a similar argument: the philosophical arguments against the existence of God mentioned in Section 1 above are strong, so we know, independently of CSR, that it is false that God imbued human minds with the cognitive faculties, that the cognitive faculties produce mostly false religious beliefs, and that atheism is justified. This paper does not explore the debate between theists and atheists over whether the philosophical arguments for and against the existence of God mentioned in Section 1 are strong or weak. This paper sets aside those arguments

and then explores whether CSR renders either theism or atheism justified or unjustified.

Evolutionary theory cannot resolve the dispute between theists and atheists. There is no consensus among cognitive scientists of religion over whether religion is an adaptive trait or a by-product of an adaptive trait. Some researchers (Wilson 2002, 2005; Szock and van Eyghen 2021) claim that it is an adaptive trait, while other researchers (Barrett 2004; Bloom 2005) claim that it is a by-product of an adaptive trait. To say that religion is an adaptive trait means that it is a fitness-enhancing trait. By contrast, to say that religion is a by-product of an adaptive trait is neutral as to whether it is a fitness-enhancing trait.

Even if religion is an adaptive trait, we cannot conclude one way or the other whether religious beliefs are mostly true or mostly false. Theists might be tempted to argue that since religion is an adaptive trait, religious beliefs are mostly true. After all, it sounds plausible to say that religious beliefs increase fitness because they are mostly true, and that if they were mostly false, they would instead decrease fitness. A problem with this argument is that some false beliefs increase fitness. For example, we believe that ripe strawberries are red, and that unripe strawberries are green. This belief increases our survivability and reproducibility. However, it is false, given that strawberries are made up of colorless atoms.

We have seen that CSR neither renders theism justified nor atheism justified. What can we conclude? Theists would be tempted to conclude that atheists are irrational, and atheists would be tempted to argue that theists are irrational. In sum, they would be tempted to accuse each other of being irrational for holding positions on insufficient evidence.

#### **IV. Both Are Rational**

Is there a way for theists and atheists to avoid accusing each other of being irrational? Is there a way to show that both theism and atheism are rational? Positive answers to these questions can be inferred from van Fraassen's (2017) position on the issue of whether it is rational or irrational to believe a scientific theory. In this section, I sketch his position and then stake out a similar position on the issue of whether it is rational or irrational to believe that God exists.

Van Fraassen, a leading figure in philosophy of science, considers two rival notions of rationality: the Prussian notion of rationality (PNR) and the English notion of rationality (ENR). The PNR holds that "what is rational to believe is exactly what one is rationally compelled to believe." (van Fraassen 1989, 171) The PNR mirrors the Prussian legal system, according to which "everything is forbidden which is not explicitly permitted." (van Fraassen 1989, 171) The ENR holds that "what it is rational to believe includes anything that one is not rationally compelled to disbelieve." (van Fraassen 1989, 171-172) The ENR mirrors the English legal system, according to which "everything is permitted that is not explicitly forbidden." (van Fraassen 1989, 171) Van Fraassen chooses the ENR over the PNR.

Van Fraassen thinks that scientific antirealists have no argument that rationally compels us to disbelieve a scientific theory, and thus scientific realists can rationally believe it. Similarly, scientific realists have no argument that rationally compels us to believe a scientific theory, so scientific antirealists can rationally disbelieve it. Although a scientific theory best explains phenomena, we are not rationally compelled to believe it because among other things, there might be alternatives to it (van Fraassen 1989, 143). We are neither rationally compelled to believe a scientific theory nor to disbelieve it. Under such epistemic circumstances, the ENR implies that it is rational for scientific realists to believe a scientific theory and for scientific antirealists to disbelieve it (van Fraassen 2017).

Just as van Fraassen invokes the ENR to argue that scientific realists and antirealists can rationally believe and disbelieve a scientific theory, respectively, so I invoke it to argue that theists and atheists can rationally believe and disbelieve in God, respectively. Let me explicate in detail how this conclusion follows from CSR and the ENR.

CSR and the ENR work in favor of theists as follows. As we noted in Section 3 above, CSR does not provide justification for atheism, which implies that CSR does not rationally compel us believe that God does not exist. Under such epistemic circumstances, the ENR implies that it is rational for theists to believe that God exists, and that atheists cannot accuse them of being irrational.

Atheists would feel frustrated when they attempt to convey disbelief in God to theists who are armed with the ENR. Suppose that atheists say to theists that it is rational to disbelieve in God. Theists would retort, adhering to theism, that it is also rational to believe in God. This possible exchange between theists and atheists indicates that if atheists aimed to transmit atheism to theists, they would have to construct an argument that rationally compels theists to embrace atheism. Such an argument would make it irrational to adhere to theism, but CSR does not provide such an argument

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In my view, the ENR can be a means to promote tolerance between theists and atheists. Under the ENR, theists would think that atheists can rationally

disbelieve in God, and atheists would think that theists can rationally believe in God. Accordingly, it would be beyond the call of rationality for theists to criticize atheists and for atheists to criticize theists. To put it differently, theists would be rational agents even if they do not criticize atheists, and atheists would also be rational agents even if they do not criticize theists. Theists can rationally give up the aim of persuading atheists into theism, and atheists can rationally give up the aim of persuading theists into atheism.

In this context, theists and atheists might be tempted to appeal to the philosophical arguments mentioned in Section 1 above to argue that theism and atheism are rationally compelling, respectively. As already mentioned in Section 3 above, however, this paper is not interested in whether the philosophical arguments compel us or not to embrace theism or atheism, but rather in whether CSR compels us or not to embrace theism or atheism.

In my view, the ENR can also be a means to promote tolerance between theists of different religions. Under the ENR, Christians would think that Muslims can rationally believe that Allah exists, and Muslims would think that Christians can rationally believe that God exists. Accordingly, it would be beyond the call of rationality for Christians to criticize Muslims and for Muslims to criticize Christians. To put it differently, Christians would be rational agents even if they do not criticize Muslims, and Muslims would also be rational agents even if they do not criticize Christians. Christians can rationally give up the aim of persuading Muslims into Christianity, and Muslims can rationally give up the aim of persuading Christians into Islam.

## **V. Comparison**

What do other commentators say with regard to the issue of whether CSR can be invoked to argue that religious beliefs are rational or irrational? How do their positions differ from my position? How do I respond to their positions? I answer these questions in this section.

Jonathan Jong states that “these recent advancements in our scientific understanding of the causes of religious belief turn out to have very little to say about the veracity of those beliefs.” (2013, 531) Similarly, Joshua Thurow states that “CSR findings in general do not show religious belief to be irrational.” (2013, 97) Jong and Thurow commonly point out that it is one thing for beliefs to be produced by certain cognitive faculties, and that it is another for them to be justified or unjustified. On their account, even if we grant that the cognitive faculties that generate secular and religious beliefs are unreliable, religious beliefs might be justified by the philosophical arguments for the existence of God mentioned in Section 1 above.

There are similarities and differences between these philosophers’ position and my position. A similarity between them is that both commonly assert that CSR does not tell us one way or the other whether theism or atheism is justified. A difference between them is that my position asserts, while their position does not,

that it is rational for theists to believe in God and for atheists to disbelieve in God. This difference is due to the fact that the ENR figures in my position, but not in their position.

John Wilkins and Paul Griffiths (2013) raise an interesting objection to theism. Religious beliefs are fitness-enhancing. For example, religious believers form a group, and they help each other in the battle to survive and reproduce. However, there is no evidence that the cognitive faculties that generate religious beliefs “track supernatural truth.” (Wilkins and Griffiths 2013, 143) By contrast, commonsense beliefs, such as beliefs about the location of human bodies and inanimate bodies, contribute to adaptive behaviors. The cognitive faculties that produce such beliefs are reliable (Wilkins and Griffiths 2013, 134).

How do I respond to Wilkins and Griffiths’s objection to theism? I point out that it is intended to establish not that religious beliefs are false, but that we do not know whether religious beliefs are true or false. After all, it only implies that there is no link between evolutionary success and the truth of religious beliefs, i.e., even if religious beliefs are fitness-enhancing, it does not follow that they are mostly true. Their objection is compatible with the position that religious beliefs are mostly true, and that religious beliefs contribute to evolutionary success.

I also point out that Wilkins and Griffiths (2013) do not randomly select some beliefs from the population of secular and religious beliefs produced by the cognitive faculties, nor do they show that the sample beliefs are mostly false. Consequently, it is an open question whether the cognitive faculties that generate secular and religious beliefs are reliable or not, which implies that it is an open question whether religious beliefs are mostly true or false. Therefore, Wilkins and Griffiths’ objection does not compel theists to disbelieve in God.

Matthew Braddock (2016) raises another strong objection to theism. He notes that contemporary humans’ cognitive faculties are similar to ancestral humans’ cognitive faculties. Ancestral humans worshiped many deities whose powers were finite, while contemporary humans, such as Christians and Muslims, worship a single deity whose power is infinite (Braddock 2016, 273). Since ancestral humans’ cognitive faculties produced mostly false religious beliefs, contemporary humans’ cognitive faculties also produce mostly false religious beliefs. This argument is a straightforward inductive argument from the past to the present.

How do I assess this argument against theism? It only shows that the cognitive faculties produce mostly false religious beliefs. It does not show that the cognitive faculties produce only false beliefs. Accordingly, it does not rule out the possibility that some religious beliefs are true. So what? When faced with Braddock’s argument, Christians would think that their religious beliefs are true while others’ religious beliefs are false, and so would Muslims. As a result, Braddock’s argument does not rationally compel Christians to give up their religious beliefs, nor does it rationally compel Muslims to give up their religious beliefs. In sum, it does not rationally compel any theist to give up theism.

Does Braddock's historical argument show that religious beliefs are unjustified? My answer is 'No.' CSR presupposes that the cognitive faculties that produce religious beliefs also produce secular beliefs. Consequently, if you aim to show that religious beliefs are unjustified, you would have to show that the cognitive faculties mostly produce false religious and secular beliefs, and hence you would have to randomly select a large number of beliefs from the population of secular and religious beliefs, and then show that most of the selected beliefs are false. Braddock does not go through these two steps. Consequently, it is an open question whether the religious beliefs are justified or not.

## VI. Conclusion

CSR neither establishes theism nor atheism. Under such epistemic circumstances, we are neither rationally compelled to believe in God, nor are we compelled to disbelieve in God, and the ENR implies that it is rational for theists to believe in God and for atheists to disbelieve in God. The same holds for religious practitioners of different religions. Therefore, the ENR can serve as a theoretical means to promote tolerance between theists and atheists, and between religious practitioners of different religions.

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