

# Cognitive Science of Religion and the Debunking Debate

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## *Introduction*

For centuries, natural explanations of religion have provided tools for the "cultured despisers" of religion. Ancient philosophers, Enlightenment rationalists, and New Atheists have all looked deep into the historical development and the psychological quirks of the human species in order to expose the irrational roots of religion. Recently, Cognitive Science of Religion (CSR) has breathed new life into this old tradition. CSR is an amalgam of several disciplines and draws data from multiple sources, such as developmental psychology, cultural anthropology, and evolutionary anthropology.

Anti-theistic arguments employing CSR theories and results most commonly attempt to undermine the grounds for belief in god(s).<sup>1</sup> A number of scholars have argued that the cognitive processes generating god-beliefs are unreliable in ways that make belief in god unjustified or without warrant.<sup>2</sup> These arguments can be best formulated as evolutionary debunking arguments (EDA). EDAs have been mounted not only against religious belief, but also against moral, mathematical, and even commonsense beliefs.<sup>3</sup> Guy Kahane's simple schema has become a standard point of reference:

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<sup>1</sup> For different ways to argue against religion from CSR, see VISALA 2011, 153–193; VISALA 2014.

<sup>2</sup> E.g., GRIFFITHS & WILKINS 2013; LEBEN 2014; NOLA 2013; TEEHAN 2014.

<sup>3</sup> See De Cruz & al. 2011.

*Causal premise.* S's belief that p is explained by X.

*Epistemic premise.* X is an off-track process.

Therefore

S's belief that p is unjustified.<sup>4</sup>

According to Kahane, debunking arguments are "arguments that show the causal origins of a belief to be an undermining defeater". In other words, whenever there is something dubious about the genealogy of a belief (or a category of beliefs), we have a reason to question its justification. EDAs provide evolutionary reasons to question certain beliefs. For example, it might seem to me that my kids are the smartest and most well-behaved children in the whole world. However, since evolution has fiddled with parental perceptions of the quality of their offspring in order to ensure parents' investment in their children, my belief has an evolutionary defeater.<sup>5</sup>

In what follows, I will present an EDA against god-belief from CSR and two different attempts to dismantle this type of an argument. The *reliability response* aims to vindicate the reliability of the cognitive processes that give rise to theistic beliefs. The *reasons response* claims that the reliability of these processes is only of peripheral importance, since justification hangs on one's reasons to believe. Finally, I will evaluate the benefits of each strategy.

### *The Hypersensitivity Argument*

EDAs inspired by CSR commonly build on the following observation: it seems that natural selection has endowed humans with minds that make us susceptible to god-beliefs *whether or not gods actually exist*. How does CSR reveal this susceptibility? A lot of research looks at our natural intuitions regarding *agency*. Agents are animate (self-propelled) beings with a mental life (beliefs, desires, goals), such as humans, animals, ghosts, or spirits. As socially intelligent creatures, people seem to be "wired" for agency. Consider some of the evidence that psychologist Justin Barrett presents in his book *Born Believers*: (i) Babies easily differentiate agents

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<sup>4</sup> KAHANE 2011.

<sup>5</sup> Example from TEEHAN 2014, 175–176.

from other objects and know that they act on the basis of inner beliefs and desires; (ii) children and adults have no trouble attributing agency to objects that do not resemble humans (e.g., geometric figures moving non-randomly); (iii) agents do not need a body or to be visible to be very real (many children have imaginary friends); (iv) young children attribute superpowers and super-knowledge to agents such as human adults; (v) people are very sensitive to evidence of agency, and ambiguous signals often cause inferences about the presence of an agent (and inferences of its inner goals and desires); (vi) people tend to see design in the world and its objects (mountains, rainbows) and (vii) they postulate agency and intention behind striking natural events (thunderstorms, shooting stars) and meaningful life events (good fortune, accidents, sickness).<sup>6</sup>

Barrett also presents cognitive "tools" and dispositions that purportedly lay behind these tendencies. One of them is called the *Hypersensitive Agency Detection Device*, or HADD.<sup>7</sup> While much of the evidence for HADD comes from developmental psychology and cultural anthropology, evolutionary considerations also figure in this theory. Natural selection, it is argued, has endowed us with a capacity to spot agents quickly. Thanks to HADD, our ancestors surpassed their contemporaries in detecting predators and prey effectively, and therefore survived. No harm was done if the "predator" turned out to be a rabbit or the wind rustling the leaves, whereas not reacting to signals of agency invited harm. Better to be safe than sorry. Therefore, HADD takes into account ambiguous sounds and sights that may indicate the presence of an agent (even when no agent is present). Compare HADD with a smoke detector. The purpose of a smoke detector is to trigger an alarm in the case of fire, but more often it is set off by burned toast. False alarms are simply harmless byproducts of a good smoke detector. Similarly, HADD (or HAPD, *Hypersensitive Agency Postulating Device*)<sup>8</sup> often produces false positives, since failing to detect a real agent can be lethal.

It might not seem obvious how HADD is relevant for theistic belief. After all, god is not your typical agent lurking in the bush. For many

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<sup>6</sup> BARRETT 2012. See also BARRETT 2004; BARRETT 2011; BERING 2011; McCAULEY 2011; PYYSIÄINEN 2009, 13–22.

<sup>7</sup> See, e.g., BARRETT 2004, 31–44; 2012, 15–42; GUTHRIE 1993; PYYSIÄINEN 2009, 13–22.

<sup>8</sup> NOLA 2013, 178.

theologians, god has little to do with any other agent we are familiar with. In CSR, however, "god" refers to any superhuman, counterintuitive<sup>9</sup> and intentional agent that is causally active in the world and people's lives: Yahweh, Allah, Shiva, a demon, or an ancestral spirit.<sup>10</sup> According to Barrett, HADD (or any other specific mental tool) is not the origin of these concepts, but it reinforces belief in the supernatural agents that we learn about through culture.<sup>11</sup> Importantly, agency detection is not only about knee jerk reactions to sudden sounds or sights that catch us off guard. We are also prone to seek for intentional and purposeful explanations for striking phenomena in nature and in our personal lives. As an evolutionary byproduct of our naturally selected agency-detection tendencies, we refer to supernatural intentions and purposes when mundane explanations seem insufficient to us.

Furthermore, CSR is not interested in theology, but in folk religion, that is, how people tend to think about gods intuitively. This brings us to an important distinction between two types of thinking, intuitive and reflective.<sup>12</sup> Reflection is characterized by concentrated, effortful thinking and explicit beliefs one is aware of having. Intuition, however, pertains to unconscious, quick and automatic outputs of the mind and to beliefs we do not often recognize having. Even non-believers who explicitly deny god's existence may have intuitions about intelligent design in nature and about a deeper purpose behind some life events (brought about by "pseudoagents" such as Fate or Destiny, perhaps).<sup>13</sup> In confessing believers, these intuitions are matured into full-blown reflective beliefs.

Therefore, god-beliefs can be partly explained as a byproduct of our trigger-happy HADDs. John Wilkins and Paul Griffiths are ones maintaining that, if the theory is true, then "people believe in supernatural agents which do not exist for the same reason that birds sometimes mistake harmless birds passing overhead for raptors".<sup>14</sup> In other words, HADD

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<sup>9</sup> The idea of minimal counterintuitiveness means that ideas of unembodied agents (gods and spirits), for instance, run counter to our intuitive expectations that personal agents with psychological properties also have physical and biological properties. See BOYER 2001.

<sup>10</sup> BARRETT 2011, 97. This definition excludes, for instance, the god of Deism.

<sup>11</sup> BARRETT 2009, 88.

<sup>12</sup> See BARRETT 2004, 1–17; EVANS 2003.

<sup>13</sup> E.g., BARRETT 2012, 212–216; BANERJEE & BLOOM 2014.

<sup>14</sup> GRIFFITHS & WILKINS 2013, 143–144.

produces false positives and is therefore unreliable. We should be skeptical of its outputs. Their argument can be laid out using Kahane's formula.

*Causal premise.* S's belief in god is explained by the operation of HADD

*Epistemic premise.* The operation of HADD is an off-track process

Therefore

S's belief in god is unjustified.

Let us call this argument an EDA against theism. Before proceeding, it should be noted that CSR scholars are hardly unanimous about the relevance of HADD in explaining religious belief. However, this mechanism is part of the "standard model" of CSR and is commonly discussed in the debunking literature. Importantly, similar debunking arguments and counter-arguments can be (and have been) presented with regard to other standard CSR theories.<sup>15</sup> Therefore, for the sake of argument, I will assume that the causal premise is true in the sense that HADD plays an important causal role in the formation of god-beliefs.

### *A Reliability Response*

One way to defend the rationality of god-belief is to deny the epistemic premise of the EDA against theism.<sup>16</sup> The idea then is to show that HADD is actually not as off-track as the argument supposes. In fact, philosopher Michael Murray thinks the device is rather reliable.<sup>17</sup> In our daily lives HADD does not seem to be a source of constant false positives. Rather, it generates mostly true beliefs about other people and animals. No doubt it sometimes makes us postulate a nonexistent agent, but this does not mean that god is one of them.

HADD might be unreliable when I hear creaking noises in the abandoned house down the block, but might be quite reliable when I hear a whistled tune in the

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<sup>15</sup> These theories pertain to cognitive abilities and dispositions such as the *Theory of Mind*, *Promiscuous Teleology*, and *Common-Sense Dualism*. See, e.g., McCAULEY 172–221; PYYSIÄINEN 2009, 12–30; VISALA 2011, 65–74.

<sup>16</sup> See, e.g., CLARK & BARRETT 2011; MURRAY 2009.

<sup>17</sup> MURRAY 2009, 169–171.

hall. Is HADD more like the former or the latter when it comes to religious belief? Merely asking the question makes it plain that the reliability of HADD can only be assessed with reference to the contexts in which it is activated – HADD is quite reliable as a belief-forming mechanism in some conditions and not in others.<sup>18</sup>

Murray argues that unless we already assume no gods exist, we cannot know that the contexts in which HADD generates intuitions of a supernatural agent are similar to situations in which the device produces a false positive (e.g., about a spooky agent in an abandoned house). In fact, as Justin Barrett and philosopher Kelly James Clark point out, if the Judeo-Christian god exists, then perhaps we have been created with cognitive equipment helping us to perceive god's existence and fingerprints in the world.<sup>19</sup>

Murray's second point is that we are not slaves to HADD.<sup>20</sup> Rather, HADD works in concert with other mental tools that balance out its shortcomings in assessing the evidence for agency. In situations where our immediate reaction is to look for an agent, we often find another explanation and stop the search. If I mistake a garden hose in tall grass for a snake, it does not take me long to realize that there is no dangerous agent in front of my house. Hence, in the case of a false positive, other cognitive processes often stop the process of an intuitive belief becoming a reflective belief. Here the critic might object that gods and spirits are different in that we can never verify their presence or absence. Perhaps so, but it seems clear that our ability to critically assess the outputs of HADD extends to beliefs about extraordinary agents, such as ghosts.

Murray provides an example of what I call a *reliability response*. It accepts the basic EDA schema, namely, that beliefs generated (solely) by off-track processes are unjustified. It denies the epistemic premise of the EDA against theism: it is not obviously true that HADD is unreliable in producing god-belief.

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<sup>18</sup> MURRAY 2009, 171.

<sup>19</sup> CLARK & BARRETT 2011.

<sup>20</sup> MURRAY 2009, 171.

### *A Reasons Response*

Debunking arguments can be tackled also from a different epistemological starting point. As we have seen, EDAs link justification to the reliability of the relevant belief-forming process. However, psychologist Jonathan Jong and philosopher Aku Visala argue that justification rather has to do with the reasons, arguments, and evidence one has for her belief.<sup>21</sup> They write that EDAs commit the genetic fallacy by confusing causes with reasons, or the *context of discovery* with the *context of justification*. The context of discovery "pertains to how one comes to believe something, the source or origin of the belief", whereas "the context of justification pertains to how one comes to prove, defend, or otherwise justify the belief, the arguments and evidence for it".<sup>22</sup>

Jong and Visala recount a story of the German chemist August Kekulé. It is told that Kekulé discovered the ring structure of benzene by dreaming about a snake seizing its own tail (context of discovery). Afterwards Kekulé was able to gather evidence to support his theory (context of justification). Although the theory originated from an off-track process (dreaming), this fact is irrelevant to the question of whether Kekulé should have believed that benzene has a ring structure. After all, scientific questions should be resolved solely on the basis of proper evidence and arguments. Similarly, Jong and Visala argue, if one has evidence or arguments in support of their belief in god (such as traditional arguments from natural theology), the process that originally gave rise to the belief is irrelevant to whether the belief is reasonably held.

Now, in the CSR debunking debate many critics of religion do recognize that independent evidence can safeguard god-belief.<sup>23</sup> In fact, Jong and Visala suspect that perhaps EDAs are supposed to pertain only to situations in which one has no "epistemically respectable reasons" to believe.<sup>24</sup> In this case, if we assume that one's god-belief is *wholly* produced and sustained by an off-track process, their belief is rendered unjustified

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<sup>21</sup> JONG & VISALA 2014. See also LEECH & VISALA 2011; THUROW 2013; 2014; VISALA 2011; 2014.

<sup>22</sup> JONG & VISALA 2014, 246.

<sup>23</sup> See, e.g., NOLA 2013, 169; TEEHAN 2014, 184; WILKINS & GRIFFITHS 2013, 142.

<sup>24</sup> JONG & VISALA 2014, 246–248.

as soon as this matter is brought to their attention. However, Jong and Visala point out that in this case the EDA has very little work to do. Their argument can be compressed with little help from Kekulé. Imagine that Kekulé believes benzene has a ring structure but he has not yet obtained any evidence for his theory. In addition, he has forgotten how he arrived at it. However, his wife reminds him that the theory was the result of a dream. Since dreams provide no proper evidence for scientific beliefs, Kekulé is no longer justified in believing the theory. But notice that no real debunking has taken place here, because there were no grounds to be undercut. The wife could have simply asked Kekulé what evidence he has for his theory, and the realization that he has none should have brought him to withhold his belief. Importantly, the fact that the belief was originally a product of a dream is not evidence against the ring structure theory. Kekulé should simply stay agnostic about it until he finds real evidence.

Similarly, if a believer in god has no evidence or arguments for her belief, making her aware of the questionable genesis of her god-belief is practically equivalent to pointing out that she lacks good reasons to believe. Hence, an EDA seems superfluous. Furthermore, the information about the unreliable belief-forming process is not evidence for the falsity of her belief. She should stay agnostic until she finds some evidence in favor or against god's existence. Jong and Visala point out, however, that things would be different if her belief was caused by a process that is *falsehood-tracking* or *perniciously deceptive*, that is, one producing far more many false beliefs than true beliefs.<sup>25</sup> In this case, CSR would provide a more serious challenge on one's faith than someone pointing out their lack of reasons to believe. But according to Jong and Visala, we have no evidence that our god-belief-forming processes would be falsehood-tracking or perniciously deceptive (a point that may have escaped many debunkers).

### *Which Response Better Safeguards Religious Belief?*

It seems that a successful EDA against theism is not easy to formulate. This becomes even more apparent when we acknowledge that CSR theories

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<sup>25</sup> JONG & VISALA 2014, 248.



only explain the general tendencies among human populations to believe in some kinds of supernatural agents, but they form a very small part of the full explanation of any individual's specific belief in the God of Christian theism (or in any other divinity people actually worship).<sup>26</sup> However, it seems that those defending the reliability of our cognitive machinery may have more work to do than those focusing on our reasons to believe. Above I have reviewed Murray's response to an argument from hypersensitivity (or false positives), but there are at least four other ways to argue for the unreliability of HADD.<sup>27</sup> Every argument has to be met individually, whereas the reasons response just points out that the whole EDA is misplaced.

Nevertheless, the reliability response may have some advantages over the reasons response. While Jong and Visala think that believers should have at least some "epistemically respectable reasons" in order to justify their faith, Murray's strategy safeguards justification even for those who lack evidence and arguments. In addition, the reliability response may be theologically more attractive. HADD could be seen as part of a "God-faculty" – a God-given natural ability to perceive the divine – or what Calvin called *sensus divinitatis*.<sup>28</sup> Calvin's concept has been recently reinvigorated by Alvin Plantinga, whose description of the formation of god-belief overlaps with CSR in interesting ways.<sup>29</sup> If the cognitive processes that CSR describes are reliable enough in tracking truths about god, then one can argue that what we have here is scientific evidence for *sensus divinitatis*.

Moreover, the reasons response does not completely safeguard theistic belief from CSR. New scientific findings might cast doubt on some of our favorite evidence and arguments for god's existence. Consider the so-called argument from common consent, which takes the universality of theism as evidence for god. CSR weakens the argument by offering a competing, naturalistic explanation for the fact why belief in god is found all over the world.<sup>30</sup> Or take C. S. Lewis's "argument from desire".<sup>31</sup> The argument

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<sup>26</sup> LEECH & VISALA 2011.

<sup>27</sup> See MURRAY 2009; VISALA 2011, 171.

<sup>28</sup> See CLARK & BARRETT 2010.

<sup>29</sup> See PLANTINGA 2000.

<sup>30</sup> See DE CRUZ & DE SMEDT 2015, 184–185.

<sup>31</sup> LEWIS 2002, 136–137.

begins with the realization that desire for the transcendent is a sort of human craving, isomorphic to cravings for food or sex. Lewis infers that, if the desires of the hungry and the horny point to something real, so does a deep longing for god. However, CSR undercuts the evidence on which this argument is based. Its theories "entail that we would have these desires, in a world like ours, whether or not a transcendent being existed".<sup>32</sup> Although these arguments rarely figure in contemporary philosophical defenses of theism, the argument from desire (the "god-shaped hole" in every man's heart) is part of the popular apologetic rhetoric. Similarly, CSR may cast doubt on popular-level versions of the argument from design by showing that our tendency to see design all around us is as hypersensitive as our tendency to find agency.<sup>33</sup>

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<sup>32</sup> THUROW 2014, 287.

<sup>33</sup> See DE CRUZ & DE SMEDT 2015, 195.

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