

# Philosophy, Theology and the Sciences

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# Philosophy, Theology and the Sciences

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Lari Launonen

## Why Cognitive Science of Religion Matters for Christian Theology and Philosophy: An Overview

Cognitive science of religion (CSR) raises a number of issues that are of interest to theologians and philosophers of religion. The latter have focused primarily on the epistemological implications of CSR, that is, whether science shows religious belief to be irrational or unjustified. Another broad question is whether CSR is compatible with theism and Christian theology. Theological doctrines, such as Calvin's views about *sensus divinitatis* and the noetic effects of sin, play an important part in these conversations. Less attention has been directed to how CSR can function as a source for theological and philosophical inquiry. So far, CSR has been invoked in discussions on the natural knowledge of God, classical theism and divine hiddenness. This article provides an overview of the recent philosophical and theological engagements with CSR.

*Keywords:* Cognitive science of religion, Evolution of religion, Epistemic justification, Reformed epistemology, Big Gods, Sensus divinitatis, Noetic effects of sin, Natural knowledge of God, Divine hiddenness

### 1. Introduction

One of the most vigorous contemporary science-and-theology debates concerns the philosophical and theological implications of cognitive science of religion (CSR). CSR is a multidisciplinary research program that studies the recurrent aspects of religious belief and behavior and seeks to explain them by reference to human cognitive mechanisms and biases and their evolutionary roots. The beginning of the field is usually dated to the early 1990s. However, very few Christian theologians and philosophers were probably aware of CSR before the publishing of Pascal Boyer's *Religion Explained* (2001) and Scott Atran's *In Gods We Trust* (2002). These landmark works referred to supernatural beings as 'airy nothing' and 'imagined entities and agents' (Boyer) and to religious claims as 'counterfactual' or 'quasi-propositions' (Atran). The atheist manifestos of Richard Dawkins (2006) and Daniel Dennett (2006) caught even more attention by offering blatantly

antireligious interpretations of CSR. These were followed by more robust arguments against religious belief.

To date, a good number of theologians and philosophers of religion have joined the debate over the implications of this new science of religion. The purpose of this article is to provide a selective overview of this ongoing conversation. So far, the question that has received the most attention concerns the rationality, epistemic justification, or warrantedness of theistic belief. I begin by discussing the various ways in which CSR may cast doubt on religious belief, what it takes to build a strong debunking argument against belief in God, and strategies employed by theistic philosophers in responding to such arguments. The first strategy defends the reliability of the belief-forming processes underpinning theism. The second appeals to reasons and arguments for God. I shall identify problems with both defensive strategies. I shall also show that, as CSR has progressed, the focus has moved from the epistemic reliability of individual belief-forming processes to the reliability of cultural belief-transmission processes. As a result, the epistemic credibility of Christian theology and philosophy of religion has also come under attack.

The following section focuses on the purported incompatibility of CSR and theological claims. I shall especially consider CSR's relationship to Reformed epistemology and theology by focusing on theological concepts such as *sensus divinitatis* and the noetic effects of sin. Despite some convergence between CSR and Reformed thinking, it will be argued that attempts for reconciliation introduce new problems that are not easy to reconcile.

So far, Christian thinkers have devoted comparatively little attention to how CSR can provide new empirical viewpoints to old debates in theology and philosophy of religion. This is the topic of the third section. I shall show how CSR can advance discussions on general revelation (the natural knowledge of God), on classical theism versus personalist views of God, and on divine hiddenness.

## 2. CSR and the Rationality of Religious Belief

### a) How to Build a Successful Debunking Argument

Joshua Thurow lists five ways in which CSR may 'cast doubt' (CD) on religious beliefs. Let X stand for a CSR theory about the formation of god-beliefs and Y for the proposition 'God exists.'

CD1. X entails that Y is false.

CD2. X entails that belief in Y is formed in an irrational way.

CD3. X is evidence against Y.

CD4. X removes/undermines what was once regarded as a source of evidence/good grounds for Y.

CD5. X contributes to explaining various phenomena of the hypothesis that Y is false at least almost, as well as the hypothesis that Y is true explains the phenomena (Thurow 2014a, 192; 2014b, 279).

Before focusing on CDs 2–4, I will offer just a few comments on CD1 and CD5. No one, to my knowledge, has offered a serious argument that CSR entails that God does not exist (CD1)<sup>1</sup>. CD5 is grounded on Occam's razor: "The more empirical facts that can be explained, and the better those facts can be explained, without to the appeal to the truth of Y, the less empirical reason there is to believe in Y" (Thurow 2014b, 280). Along these lines, Robert Nola argues that CSR explains away religion by providing a more satisfying account of why people believe in gods than the religions themselves (Nola 2013, 2018). As Aku Visala points out, even if CSR did not offer direct evidence against theism as such, it would seem to increase the plausibility of naturalism (Visala 2014, 71).

Claims about irrationality (CD2) have been the most common way of casting doubt on religious belief (e.g., Braddock 2016; Kvandal 2022; Nola 2013; Shults 2014; Griffiths and Wilkins 2013). These are often called unreliability arguments or (evolutionary) debunking arguments. A debunking argument is an undercutting defeater; it provides evidence that a belief is based on shaky grounds (cf. Kahane 2011). CSR purportedly offers evidence that the belief-formation process undergirding religious belief is unreliable or 'off-track.' Whether or not gods exist (*de facto*), a faulty belief-formation process would not yield justified beliefs about them (*de jure*).

Part of the reason CSR has inspired so many debunking arguments seems to do with the idea of religion as an evolutionary by-product. Adaptationist theories of religion are as old as Darwin. However, what made CSR stand out early on was the claim that supernatural beliefs are offshoots of panhuman cognitive biases and dispositions (also called "mechanisms," "systems," "tools," or "modules") (McCauley 2017, 122–23). Such mechanisms (collectively known as System 1) operate quickly, automatically, and unconsciously (Evans 2003; Kahneman 2011). System 2, however, is characterized by effortful, reflective, and conscious thinking. According to CSR, outputs of System 2 are *informed* and *constrained* by System 1 (Barrett and Lanman 2008). Implicit cognition explains our general disposition toward religious

1 Leech and Visala (2012) construct examples of such an argument before rejecting them.

thinking. This basic claim is often summarized by saying that religion is “natural” (cf. McCauley 2011; Barrett and Visala 2018). According to the by-product account, the mechanisms in question have not evolved originally for religious purposes but for dealing with fundamental challenges for survival and reproduction.

In order to debunk religious belief, however, it is not enough to point out that religious belief is a by-product and that it arises automatically and unconsciously. After all, science is also an evolutionary by-product, and most commonsense beliefs arise automatically. By far, the most widely cited CSR theory in the debunking debate has been that of the (hypersensitive) agency detection device (ADD or HADD) (Barrett and Lanman 2008)<sup>2</sup>. Natural selection has made us sensitive to cues of agency. We see faces in clouds, hear voices in the forest and steps in the attic, and feel someone’s presence when we’re alone (Guthrie 1993). Hypersensitivity means that the mechanism is trigger-happy; it regularly produces false positives. Detecting predators and prey would have been an issue of life or death for our ancestors. For this reason, HADD makes us react to ambiguous cues of agency, especially in risky environments. Just like a smoke detector that often goes off when there is no fire, it is a better-safe-than-sorry mechanism. Beliefs in invisible entities such as gods, ghosts, and goblins are by-products of HAAD. Robert Nola (2013) is one who takes this theory to argue that god-beliefs are unjustified. Because we cannot trust the deliverances of HADD to track truth, he argues, one should suspend judgment about whether gods exist<sup>3</sup>.

Theistic scholars have sought to defend the reliability of our belief-forming faculties against such claims (e. g., Barrett 2007; Barrett and Church 2013; Murray 2009; Van Eyghen 2020). Many make use of an epistemological tradition that stretches back to Augustine, John Calvin, and Thomas Reid, and that has reemerged in contemporary philosophy of religion under the label of Reformed epistemology (e. g., Baker-Hytch 2014; Clark and Barrett 2011; Clark 2019; McNabb 2018; Moon 2020). The upshot of this tradition is that religious beliefs are innocent until proven guilty, even when brought about by unreflective, automatic processes. Belief in God is justified or warranted without evidence as long as there are no defeaters in sight. We shall return to Reformed epistemology in the section on the compatibility of CSR and theology.

2 While scholars largely agree that an agency-detection mechanism exists, it is more controversial whether the mechanism is *hypersensitive*.

3 Nola also discusses theories regarding the Theory of Mind and minimally counter-intuitive concepts, but these are not as vital for his argument.

Do CSR theories provide successful defeaters for belief in God? It seems safe to say that simplistic arguments such as Nola's have been shown to hold no water. For one, HADD's reliability depends on the context (Murray 2009). It reliably informs us of agents (animals or other humans) in our vicinity in most situations. It is not also clear why HADD would not also be reliable in detecting supernatural agency unless we assume such agents do not exist. Second, HADD works in concert with other cognitive faculties such as perception and reason which confer reliability upon the belief-forming process. Initial hunches of an agent nearby are often shrugged off after closer inspection. Third, no CSR theory offers a complete causal account of any particular individual's religious belief (Leech and Visala 2011, 2012). No Christian, for example, believes in God simply because of agency-detection tendencies, and no CSR scholars argue otherwise. Finally, there is empirical evidence against the claim that people are susceptible to false positives about agents (Maij, van Schie, and van Elk 2019) and the claim that HADD reinforces supernatural belief (Van Leeuwen and van Elk 2019).

Defending the reliability of belief-forming faculties is more difficult in the face of stronger debunking arguments. Such arguments do not usually bank on any particular CSR theory. For example, the basic claim that god-beliefs are underpinned by panhuman cognitive dispositions can be joined with the fact of religious diversity (e.g., Braddock 2016; Davis 2020; Marsh and Marsh 2016). Matthew Braddock (2016) argues that the diversity and falsity of many religious beliefs people have held in the past make contemporary religious beliefs also suspect. As far as we know, the earliest humans worshipped several finite and local supernatural agents such as forest spirits, sky deities, and ancestor spirits. Monotheists such as Christians would naturally deem such beliefs as false. But since their own religious beliefs have presumably been brought about by the same (apparently unreliable) cognitive mechanisms, Braddock argues, monotheistic beliefs are likewise unjustified (unless one has independent evidence of their truth).

One way to respond to this argument would be to identify causes in the belief-forming process that could confer reliability upon it. An important cause why people believe in God is other people's testimony. Braddock, however, thinks testimony cannot confer reliability upon the belief-forming processes of modern monotheists. The religious beliefs of one's family members, friends, teachers, and pastors are likewise contaminated by unreliable CSR mechanisms. It is not enough to argue, as Hans Van Eyghen does, that testimony in the form of religious upbringing or the cultural context can tweak our belief-forming mechanisms into a more theistic direction (Van Eyghen 2020, 100). After all, such cultural factors seem no

more generally reliable than the CSR mechanisms, since such factors likewise underpin many kinds of religious beliefs that most modern believers deem as false. To my knowledge, Braddock's argument has not received a careful response.

A successful debunking argument must avoid the problem of *collateral damage*. If our cognitive machinery is unreliable in the domain of religion, why think that our moral, philosophical, scientific, and even commonsense beliefs would survive without a scratch? As Thurow notes, genealogies of theistic belief "are not nuclear weapons that wipe out the justification of religious belief; if they were, then, like real nuclear weapons, they would take out a whole lot more than the immediate target" (Thurow 2014a, 205). The point is driven home by Alvin Plantinga's (2011) famous evolutionary argument against naturalism. According to Plantinga, we cannot trust any of our belief-forming faculties to guide us to truth if there is no design plan behind cognitive evolution.

To counter full-blown evolutionary skepticism, John Wilkins and Paul Griffiths (2013) have offered a litmus test they call the Milvian Bridge<sup>4</sup>. Although evolution may not care about truth as such, in some cases, true beliefs are more adaptive than false beliefs. In order to vindicate beliefs in a given domain, we must find a link between their adaptive value and their truth value.

Milvian Bridge: X facts are related to the evolutionary success of X beliefs in such a way that it is reasonable to accept and act on X beliefs produced by our evolved cognitive faculties (Wilkins and Griffiths 2013, 134).

For instance, having true beliefs about middle-sized natural objects such as predators, prey, plants, and hand-axes is clearly more adaptive than having false beliefs about them. Even if our evolved minds would not represent reality exactly as it is, such commonsense beliefs can hardly be arbitrary with respect to the way things really are. Wilkins and Griffiths go on to argue that science is ultimately based on common sense. Empirical testing and logical thinking would have been adaptive in our ancestral environment. Thus, there is an indirect link between true scientific beliefs and reproductive success. Evolutionary theories of religion and morality, however, can explain religious and moral beliefs without any reference to their truth. Whether or not god-belief is adaptive, the reason for its emergence has nothing to do with the existence of gods. Thus, we lack reasons to think religion and morality are truth-tracking. Wilkins and Griffiths's argument

4 After the legendary military victory of Emperor Constantine, which he attributed to the favors of the Christian God.



has invited a plethora of responses that cannot be discussed here<sup>5</sup>. We will return to it below.

### **b) Is Evidence for God Necessary for Rational Belief?**

Another counterstrategy against debunking arguments is to argue that the unreliability of CSR mechanisms can be overcome by reasons and arguments for God (e.g., Jong and Visala 2014; Thurow 2014a, 2014b). Many believe in God because of special religious experiences, the morally exemplary lives of other Christians, arguments from natural theology, and so on. Since by-product theories point to panhuman cognitive features that manifest themselves across time and space, such theories do not appear to undermine – at least not initially – particular reasons and arguments for believing.

In an often-cited paper, Aku Visala and Jonathan Jong (2014) claim that debunking arguments often confuse the *causes* of belief with *reasons* to believe (or the context of discovery with the context of justification). They recapitulate an anecdote of August Kekulé, the German chemist who came up with the ring structure theory of the benzene molecule by dreaming of a snake catching its own tail. Although dreams are not truth-tracking, his theory was proven empirically. According to Jong and Visala, this shows that the context of discovery (how one first comes to believe that *p*) is epistemically irrelevant<sup>6</sup>. Whether one's belief that *p* is justified depends on reasons and arguments. If a believer lacks reasons to believe, her belief could be rendered unjustified simply by pointing out she has none. CSR would not be needed. In their response to Wilkins and Griffiths, Jong and Visala argue that reasons and arguments for God, such as those provided by natural theology, are based on commonsense reasoning, not unlike scientific theories are. If commonsense reasoning can help debug our belief-forming processes so as to allow scientific beliefs to cross the Milvian Bridge, surely the same can happen with religious belief-forming processes.

While debunkers typically claim that theistic arguments are simply post hoc rationalizations (e.g., Leben 2014), most agree that CSR does not threaten justification if the believer is aware of them. Nevertheless, cognitive science also casts doubt on the reasons and arguments themselves (CD4). Perhaps the most obvious victim is the so-called argument from common

5 See, e.g., Davis 2020; Jong and Visala 2014; McNabb 2018; Van Eyghen and Bennett 2022.

6 However, as McBrayer (2018) rightly points out, just because the genealogy of belief is sometimes irrelevant for justification (as in the Kekulé story), it is not always so.

consent, which takes the prevalence of belief in God as evidence for God's existence (Van Eyghen 2020, 129–46). Since the prevalence of religious beliefs is the most common *explanandum* of the naturalistic theories provided by CSR, it no longer serves as good evidence for theism.

Consider also reasons to believe provided by religious experiences. When Michael Shermer and Frank Sulloway inquired ten thousand Americans about their reasons to believe in God, the second most popular category of responses referred to “experience of God in everyday life” or “God in us” (20.6%) (Shermer 2003). Such experiences could be explained naturalistically by reference to a cognitive mechanism known as the Theory of Mind (Bering 2011, 37). This is our capacity to mentalize, to infer the mental states of others. This ability would have been beneficial for our ancestors in navigating their social relationships. Together HADD and the Theory of Mind could easily produce feelings of God's presence, especially when triggered by teaching that God wants to communicate with us (see Luhrmann 2014)<sup>7</sup>.

The most popular category of responses in the study referred to the “good design,” “natural beauty,” “perfection,” or “complexity” of the world/universe (28.6 percent) (Shermer 2003). Deborah Kelemen's work on what she calls *promiscuous teleology* has shed light on design intuitions. Both children and adults display an intuitive tendency to make sense of the natural world by reference to purposeful, intelligent design (Kelemen 2004; Kelemen and Rossett 2009). Scientific explanations are often non-teleological and thus unintuitive. Teleological intuitions may be due to selection pressures for tool making and using or learning how different plants might be used as food or medicine. The appearance of design also serves as a starting point for well-known theistic arguments. In their book *Natural History of Natural Theology*, Helen De Cruz and Johan De Smedt (2015) survey several arguments for God in search of their cognitive underpinnings. They suggest that research such as Kelemen's can serve as an undercutting defeater for our perception of design as well as for the inference to a designer (De Cruz and De Smedt 2015, 195).

While Thurow (2014b) thinks CSR does not hurt design arguments, he believes they undermine C. S. Lewis's famous ‘argument from desire.’ Lewis writes:

Creatures are not born with desires unless satisfaction for those desires exists. A baby feels hunger: well, there is such a thing as food. A duckling wants to swim: well, there

<sup>7</sup> Van Eyghen argues that CSR does not rob religious experiences of their evidential value (Van Eyghen 2020, 45–60).

is such a thing as water. Men feel sexual desire: well, there is such a thing as sex. If I find in myself a desire which no experience in this world can satisfy, the most probable explanation is that I was made for another world (Lewis 1996 [1952], 121).

According to Lewis, the desire which nothing on earth can satisfy is evidence of a transcendent reality. As Thurow points out, the desire to ‘commune with’ gods is certainly different from the disposition to believe in them and thus may not be the target of CSR theories. Nevertheless, he argues, from an evolutionary perspective, there is a great difference between explaining our desire for food and sex and explaining our desire for transcendence. One could also argue, by reference to the so-called Terror Management Theory (Vail, Soenke, and Waggoner 2019), that the evolutionary function of this desire is to counter our awareness of mortality. In any case, the ‘God-shaped hole’ inside each of us no longer serves as good evidence for a transcendent reality as it once did.

Therefore, appeals to reasons and arguments as a way to respond to debunking arguments have their problems. To be sure, knowledge of the cognitive underpinnings of arguments from natural theology cannot undermine them in any wholesale fashion. Consider the intuition behind the famous Kalam cosmological argument: Things that begin to exist must have a cause. While this intuition is in principle susceptible to evolutionary debunking arguments, “causal intuitions in cosmological arguments are similar to those appealed to in scientific reasoning and commonsense reasoning,” and therefore, “such evolutionary debunking arguments risk causing collateral damage” (De Cruz and De Smedt 2015, 108). A bigger problem with the evidential defense strategy is that very few believers are aware of theistic arguments. It seems to sacrifice the faith of the masses in order to salvage that of a few intellectuals. We will return to this issue below.

### c) The Newfound Importance of Culture and Groups

CSR is rapidly evolving. Recently, CSR has become divided over three questions in particular (McCauley 2020). First, is religion an evolutionary adaptation or a by-product (or possibly both)? Second, what roles do cognitive content biases (pertaining to *what kinds* of beliefs we tend to acquire) versus social context biases (pertaining to *whose* beliefs we tend to acquire) have in explaining the cultural transmission of religious beliefs and behaviors? Third, to what extent is religion the outcome of natural selection, cultural selection, or perhaps sexual selection?

By-product theories emphasize the role of content biases. That is, they underscore the ontology of religious concepts to explain why people find

them appealing. Barrett and Visala (2018) compare human minds to traps that are optimal for catching some types of cultural ideas (e.g., ‘religious rabbits’) over some other types of ideas (e.g., ‘scientific foxes’). Content biases, however, leave many important aspects of religion unexplained (Gervais et al. 2011). Recently, there has been more emphasis on social context biases, also known as model-based learning biases (Henrich 2016). People are likely to adopt beliefs and behaviors that are (1) held by several rather than few people (conformity bias); (2) held by individuals with prestige (prestige bias); (3) and supported by credibility enhancing displays (CREs), that is, costly actions signaling that cultural models are practicing what they preach.

Context biases do a lot of work in the Big Gods account of the cultural evolution of religion (Norenzayan et al. 2016). According to this theory, belief in moralizing and punitive deities such as the Abrahamic God paved the way for large-scale prosocial behavior (i. e., cooperation) by eliminating free-riding. The fear of God helped people living in large groups resist self-serving actions that threatened cooperation. Large-scale cooperation eventually gave rise to large, complex societies. Belief in Big Gods spreads via context biases like CREs. Importantly, Big-God-belief was targeted by cultural group selection. Groups that cooperate tend to overtake less cooperative ones. Cognitive dispositions that originally emerged as evolutionary by-products are recruited by Big Gods to produce belief and behavior that benefit groups at large.

In light of this account, Taylor Davis (2020) has put a new spin on Wilkins and Griffiths’s argument. The important question is not, he argues, whether the cognitive content biases are reliable but whether the cultural selection process tracks truth. The cultural function of religion is to produce prosocial behavior. The function of science, however, is to predict. The institution of science makes sure that theories that fail empirically do not survive for long. Likewise, religious beliefs without prosocial effects survive only for a time. Davis points to scientific convergence and religious divergence as evidence that science corresponds to reality, whereas religion does not. While the same science is taught in India and USA, religions vary across cultures, and their demographic is closely tied with groups (e.g., Christians and Muslims) taking over each other by force. This is to be expected if the fitness of scientific beliefs depended on empirical evidence for their truth and the fitness of religious beliefs depended on something culturally contingent. In constructing a Milvian Bridge on cultural group selection, Davis shows how a debunking argument can be reformulated once theories change.

Interestingly, the question of whether evidence is necessary for rational belief looks different from a cultural evolutionary viewpoint. Davis agrees

with Jong and Visala that having reasons and arguments for God can get the believer off the hook. But even if “a few philosophers and theologians are epistemically justified in holding religious beliefs,” the problem is that “most religious believers acquire their beliefs through cultural inheritance” (Davis 2020, 205). In their response, Lari Launonen and Aku Visala (forthcoming) have defended the epistemic status of folk religious beliefs. In light of cultural selection, ordinary people unaware of scientific evidence, say, for the theory of evolution, can nevertheless justifiably believe in evolution. The cultural selection of scientific beliefs makes sure that only empirically viable theories find their way into (and continue to stay in) textbooks and classrooms, science documentaries, and other outlets where ordinary people get their scientific beliefs. While theology is not an empirical science, it is an academic discipline that employs methods of inquiry ultimately based on commonsense reasoning. Therefore, much of theology can be considered truth-tracking just as other disciplines such as philosophy or ethics. The academic practice of theology may thus produce justified theological beliefs. Importantly, as theological beliefs get communicated via sermons and books to religious laymen, their epistemic status also trickles down from the expert level to the folk level (as with scientific beliefs). Just as most people in Western countries understand some of the evidence for evolution, many believers are aware of arguments for God’s existence or Jesus’ resurrection. However, unawareness of evidence does not automatically mean beliefs are unjustified. As Davis points out, justification depends on the reliability of the cultural processes and institutions that transmit scientific and religious beliefs.

This leads us back to the question of whether theistic arguments can survive the scrutiny of evolutionary and cognitive science. Just as Davis modifies the Milvian Bridge in the light of cultural evolution, John Teehan (2020) attacks the epistemic status of theology – not by reference to its cognitive underpinnings but its cultural function. He argues that the function of the institution of theology is to “provide internal coherence to religious MWV [moral worldview], and defend it against criticism” (Teehan 2020, 435). Moral worldviews seem indispensable for human flourishing and wellbeing. Empirical evidence for the Terror Management Theory shows that humans depend on MWVs to counter awareness of mortality. The aim of theology, Teehan argues, is not truth, but the safeguarding of religion. Convergently, Paul Draper and Ryan Nichols (2013) argue that philosophy of religion suffers from partisanship and overly polemical, defensive discourse. While no academic labor is free of cognitive bias, they contend, the coalitional features of religion that correlate with these biases make religious

philosophy easily captive to group-mindedness. The discussion over the rationality of folk religious beliefs, then, has metamorphosed into a debate over the rationality of theology and religious philosophy.

### 3. The Compatibility of CSR with Theism and Theology

#### a) Which Theism? Whose God?

CSR theories can also cast doubt on religious and theological claims (CD3) by being incompatible with them. While debunking arguments are undercutting defeaters, here, CSR serves as a rebutting defeater. Much of the science-and-theology literature deals with apparent incompatibilities. For example, evolutionary science famously challenges traditional Christian notions about the creation, the fall into sin, and the uniqueness of humanity. In case a theological claim conflicts with a scientific theory, a rational believer must seek to reject or revise one or the other for the sake of consistency.

One debate pertains to whether CSR, in positing mechanistic and physicalist explanations of religious belief in terms of mental representations, is wedded not only to methodological naturalism but to metaphysical naturalism as well. In the latter case, one could not simultaneously believe in God and hold CSR theories to be fully true. According to Leech and Visala (2011; cf. Visala 2011), scholars like Boyer and Atran exclude all non-physical entities and causes from their theories and, by implication, the existence of God. Such “strict naturalism” is also connected to eliminativist views of the mind and the like – views that theologians, as well as other human scientists, are likely to reject for both philosophical and scientific reasons (Oviedo 2018). However, according to Leech and Visala, CSR is not necessarily tied to strict naturalism. They propose a framework of ‘broad naturalism,’ which would be more open to higher-level mental processes (e.g., conscious reasoning) featuring in scientific explanations. It would also leave open the question regarding the existence of entities not observable by science (namely, God). This way, they suggest, CSR can be viewed as ‘worldview neutral.’

Leo Näreaho (2014) disagrees whether broad naturalism can make CSR worldview neutral. After all, CSR allows only natural causes, but theists typically take divine action to feature in the causal chain that gives rise to religious experiences and beliefs. As an example, Näreaho quotes Barrett who writes that a theist “could simply maintain that a god or gods put into place the natural order ... such that human brains naturally give rise to religious experiences under particular situations” (Barrett 2007, 61). Leech

and Visala do not argue along these lines, however<sup>8</sup>. They think CSR can be worldview neutral because it need not make assumptions about the totality of causal factors that might exist. Thus, CSR theories need not to be seen as positing causally sufficient theories or making strong ontological assumptions. Interestingly, while Näreaho thinks CSR is incompatible with supernatural causation, he suggests that God might function as a ‘structuring cause’ that makes religious experiences and beliefs possible instead of being their ‘triggering cause.’ This is analogous to how the technology in my computer non-causally makes possible the letters on the screen when I press the keyboard.

### **b) Reformed Epistemology, *Sensus Divinitatis*, and the Noetic Effects of Sin**

Few theistic scholars would be satisfied with the outcome that cognitive science does not rule out the existence of some kind of a deity. As Teehan points out, what they wish to show is

that the existence of a robust conception of God, the God of the Judeo-Christian-Islamic traditions, is compatible with evolutionary psychology – and it is in this regard, I believe, that evolutionary psychology raises significant challenges for religion (Teehan 2014, 171).

Indeed, alongside defending the rationality of religious beliefs, Kelly James Clark and Justin Barrett also make interesting suggestions regarding the compatibility of CSR with Reformed epistemology and theology (Clark and Barrett 2010, 2011; Barrett 2009; Clark 2019). According to Plantinga (2000), belief in God is typically not the result of analytic consideration of arguments and reasons for God. Rather, belief is produced automatically and unreflectively in existentially moving situations by a cognitive faculty that Calvin called *sensus divinitatis*. This view of belief-formation partly converges with cognitive science. Plantinga maintains that belief in God can be *properly basic*. In other words, just as belief in other minds or in the external world, belief in God needs no support from other beliefs in order to have ‘warrant.’ Clark and Barrett argue along similar lines. However, they do not think CSR supports the existence of *sensus divinitatis* as such. Instead, they coin the term “god-faculty,” by which they mean “the ordinary arrangement and function of cognitive architecture in human minds [that] often produces nonreflective, unreasoned belief in gods” (Clark and Barrett 2011, 652).

<sup>8</sup> Leech and Visala (2012) are also critical of Barrett’s line of thinking, but for a different reason than Näreaho: Since religious people take God as directly causing these, he might seem like a deceiver (*des deceptor*) if he didn’t.

Contrary to Plantinga, they suggest the god-faculty is not directed toward “Yahweh and Yahweh alone” but merely makes “humans aware of the broad divine/moral dimension of reality” (665).

It would seem like a great success for the science and theology enterprise if it could be shown that evolutionary and theological accounts of religious belief are convergent or mutually supportive. According to Halvor Kvandal (2020), however, CSR is hard to reconcile with Reformed epistemology. One has to choose over Plantinga’s *sensus divinitatis* and Clark and Barrett’s coarse-grained god-faculty. Plantinga’s view conflicts with CSR, for there is no (i) one particular faculty that produces belief (ii) in the one true God alone. Rather, there are several CSR mechanisms that make humans susceptible to a plethora of supernatural agents such as forest spirits and fertility gods. While Clark and Barrett’s view is in line with this observation, their view fails to deliver the same epistemic goods as Plantinga, namely, properly basic, warranted belief. For if belief in Yahweh also needs some cultural input (say, in the form of religious upbringing), it is not generated in the direct manner Plantinga envisions.

Clark and Barrett also suggest that God may have guided cognitive evolution in order to give rise to the god-faculty (Barrett 2009, 97; Clark and Barrett 2011, 645; Clark 2019, 93, 111). This suggestion harks to theological doctrines about general revelation and natural knowledge of God. Christian scholars attempting to reconcile their faith with the evolutionary roots of religion are likely to find it appealing. There are a few theological worries, however. As already indicated, CSR mechanisms bring about beliefs into all sorts of finite supernatural agents. The Bible, however, views many of such beliefs as instances of idolatry, and it views idolatry as sinful and evil. According to Christian theology, God wants people to believe in and worship Him and Him only. But according to CSR, beliefs in finite supernatural agents may actually be more natural than theistic belief is<sup>9</sup>. As Barrett himself puts the problem, “if God created humanity to enjoy a loving relationship with Him, why not hard-wire into our brains a fully formed belief in God?” (Barrett 2009, 97; cf. Marsh and Marsh 2016).

Consider also another worry for Clark and Barrett’s suggestion. Teehan (Teehan 2016) has put forward what he calls the cognitive problem of evil. Empathy is a capacity that makes us care for each other and keeps us from hurting each other. However, empirical studies show we empathize primarily with members of our in-groups, with those we share ethnic, religious, or other group identity markers with. The lack of empathy toward outsiders,

<sup>9</sup> See discussion in the next section.



Teehan argues, “is the psychological basis of prejudice, discrimination, and dehumanization – and all the injustice, harm, and violence that follow” (Teehan 2016, 48). The in-group/out-group bias, however, has been beneficial earlier on in human evolution. Also, it is part of System 1, our pan-human evolved psyche that also produces god-belief. If God has guided our cognitive evolution, it would seem he has also given rise to the bias that reinforces injustices, harm, and violence. But since a perfectly good God would not do such an evil thing, this means that CSR is incompatible with Christian theology, according to Teehan.

A natural theological solution to such problems is to refer to the noetic effects of sin. As examples of the noetic effects of sin, Plantinga lists false ideas of divinity as well as contempt, hatred, and prejudice against fellow humans (Plantinga 2000, 177–79). Such a response, however, invites new problems. De Cruz and De Smedt (2013) have questioned whether the concept of the noetic effects of sin can be made compatible with evolutionary epistemology. For one, the evolutionary narrative seems to exclude a historical fall into sin. Even if we forget about Adam and Eve, the further down the history of religion we gaze, the more idolatrous beliefs (say, in ancestor spirits and fertility gods) we find. Also, studies on chimpanzees (our nearest cousins) and archaeological excavations of human remains suggest that violence and out-group animosity has always been part and parcel of *Homo* behavior. All this seems to leave little room for a pristine state before the fall, which, according to many theologians (e.g., Smith 2017), is necessary for a Christian account of sin. Now, while such a prelapsarian state is certainly necessary for an Augustinian account of the fall, De Cruz and De Smedt suggest it is not necessary for an Irenaean account. They argue that the god-faculty may not be corrupted so much as *underspecified*. According to CSR, while religious belief is cognitively natural, culture largely determines whether one ends up adopting animistic beliefs, polytheistic beliefs, monotheistic beliefs, or no explicit religious beliefs whatsoever. This converges with Calvin’s view of *sensus divinitatis*. He believed that Scripture is necessary for the emergence of belief in the one true God. However, while De Cruz and De Smedt’s claim that God has endowed humans with an underspecified god-faculty seems theologically feasible, this doesn’t account theologically for the plurality of false god-beliefs in the history of religion. After all, if humans were not corrupted by the Fall, how could such idolatrous beliefs have emerged in God’s good creation<sup>10</sup>?

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10 For other problems for the attempt to make the Reformed account compatible with evolutionary science, see Launonen (2021).

Unhappy with this solution, Rik Peels, Hans Van Eyghen, and Gijsbert van den Brink (2018) attempt to salvage the Augustinian-Calvinist view of the Fall. In their scenario, the *sensus divinitatis* was reliable in the very beginning when humans enjoyed a close fellowship with God. After the fall, God withdrew his presence. Hence, the mechanism became unreliable, unable to detect the one true God. Alternatively, the environment of the first humans might have transformed after the Fall into one where *sensus divinitatis* no longer functioned properly. Of course, as the authors admit, there is no scientific evidence of the fall into sin nor of a preceding pristine state when people worshipped only the one true God. The authors respond to this worry by saying that “absence of evidence is not evidence of absence” and that for Christians, the biblical account of the fall serves as evidence of the historicity of the event (Peels et al. 2018, 211). But as is the case with many other science and theology debates, such arguments come close to sacrificing either science or theology on the altar of compatibility.

#### 4. CSR as a Source for Theology and Philosophy of Religion

##### a) A Cognitively Natural Knowledge of God

Less attention has been given to how the findings of CSR can serve as a source for theology and philosophy of religion also where there are no immediate worries about compatibility. CSR introduces new empirical perspectives into theologians’ toolkit. While arguing for the irreplaceable role of Christology for theological anthropology, Marc Cortez maintains that theological accounts of humanity “must acknowledge the wealth of information about the human person produced by disciplines like biology, sociology, psychology, and the neurosciences, among many others” (Cortez 2015, 18).

CSR offers insights, for instance, for rethinking the doctrine of general revelation and the concept of natural knowledge of God (Barrett 2021; Green 2013; Smedes 2014). Theologians separate between special and general revelation. Special revelations, such as prophecies, are divine acts that take place at a particular time and location. Often the concept of special revelation is equated with the scriptures (in the sense of scriptures *being* or *containing* revelation). General revelation, however, is something available for all people at all times and places. God’s self revelation in nature gives rise to a natural knowledge of God – a universal awareness of God’s existence and basic attributes. This theological idea overlaps with the common claim in CSR that panhuman cognitive tools reinforce beliefs about supernatural

agents in all or most ordinary human environments. No particular cultural scaffolding, such as religious texts or institutions, is needed.

According to Adam Green (2013), CSR indicates that Calvin and Thomas Aquinas, both of whom discuss the idea at length, were mistaken in viewing Greek philosophy as an example par excellence of the natural knowledge of God. Philosophy and theology are rare cultural achievements, products of reflective reasoning (System 2) by people living in complex societies. Thus, the ideas about God produced by philosophy are hardly universal or cognitively natural. Instead, natural religious belief (System 1) is “thoroughly enmeshed with the social mind being engaged in a pragmatic mode” (Green 2013, 410). Social cognition is needed for communicating and cooperating with other humans. It is our social cognition, Green argues, not our abstract philosophical reasoning, that primarily gets the credit or the blame for both true and false ideas of God generated without the aid of the scriptures. He also suggests that Paul’s account of general revelation in Romans 1:18–22 converges with CSR. Our god concepts get easily mixed with concepts of humans and other creatures. Indeed, there is good evidence that our concept of human persons serves as our blueprint for understanding what God is like (Heiphetz et al. 2016). Perhaps, as Barrett (2009) suggests, this is why the incarnation was necessary: For God to make himself conceivable to us, he must reveal himself as human-like.

CSR may also weigh in in Aquinas and Calvin’s disagreement regarding the reliability of theological reasoning unaided by special revelation. “For Aquinas,” writes Green, “philosophy is associated with the truths to which unaided human reason can attain, and, for Calvin, the best that unaided human reason can do, as witnessed to by the work of the philosophers, is empty idolatry” (Green 2013, 409). As an example of Aquinas’s optimism, the *Catechism of the Catholic Church* states that “by natural reason man can know God with certainty” (§ 50). People can become aware of the one true God without the aid of special revelation. However, as indicated above, historically, the earliest god concepts were those about ancestor spirits, fertility gods, and other such local and finite supernatural beings. According to the Big Gods account, monotheistic belief in an all-powerful, all-knowing, moralizing deity seems like a newcomer. It seems, then, that natural reason is not enough to arrive at a properly theistic god concept. In fact, here is where Calvin’s view might be more in tune with the scientific evidence. Because of the noetic effects of sin, he argued, the human mind does not produce belief in the one true God but is instead “a perpetual factory of idols” (Calvin 2008 [1536], § 1.11.8.). Reading or hearing the Christian message is necessary for bringing about true knowledge of God, according to

Calvin. This claim converges with CSR, which suggests that cultural factors ultimately determine which god(s) people come to believe in.

A contemporary theological debate to which CSR can also offer valuable viewpoints concerns classical theism versus “relational” or “personalist” models of God (Launonen and Mullins 2021). Much of theology is highly counterintuitive – just think of the doctrines of the Trinity or the hypostatic union. This makes theology unnatural and cognitively more akin to science than religion (McCauley 2011). For this reason, religious people commonly entertain beliefs that are *theological incorrect* (Slone 2004). Classical theism – the historically dominant view of God in Christian, Jewish, and Islamic theology – includes several highly counterintuitive ideas such as simplicity, timelessness, immutability, and impassibility (Mullins 2021). In a paper titled “Born Idolaters,” Jonathan Jong, Christopher Kavanagh, and Aku Visala (2015) argue that CSR – or, as they call it, cognitive science of *idolatry* – tells us virtually nothing about why some people believe in the classical God. What CSR explains is belief in human-like supernatural agents that are located somewhere in the natural world, cause some events, and can sometimes be detected. The classical God, however, is totally unlike anything created, is outside of space and time, and the ultimate cause of absolutely every event. While most believers think prayer can move God to do something he might not have done otherwise, the classical God is not affected by anything outside himself (impassibility). If classical theism is true, theological incorrectness truly runs deep. Cognitively natural ‘knowledge’ of God is nothing but anthropomorphism running wild. Be as it may, many contemporary theologians and Christian philosophers (including Plantinga) opt for a more personalist understanding of God. Instead of being impassible, for example, they believe God experiences many of the same emotions we do (Mullins 2020). If God really is more human-like than classical theists claim, our natural cognition does not seem that defective after all.

### **b) Natural Nonbelief and Divine Hiddenness**

In analytic philosophy of religion, CSR theories have been invoked, especially in debates on divine hiddenness. According to J. L. Schellenberg’s (2015) famous argument, God does not exist because nonresistant nonbelief does. In other words, there are many kinds of people who would be open to entering into a relationship with God, but who nevertheless do not/cannot believe in God. It follows that there is no ultimate reality worthy of the name ‘God.’ A perfect being must be a perfectly loving being, and a perfectly

loving God would be open for a relationship with all humans who do not resist. Since a relationship with God depends on believing in God, nonresistant nonbelief should not occur.

Defenders of the hiddenness argument need to show that nonresistant nonbelievers actually exist. One group of nonresistant nonbelievers, according to Schellenberg, is prehistoric people who lacked the concept of a high god altogether. CSR seems to support this claim. Jason Marsh argues that, with mental tools such as HADD in play, “those in the forest might come to a belief in forest spirits, whereas those in more stormy regions might come to believe in angry sky deities” (Marsh 2013, 361), but prehistoric humans could not have been theists. A relationship with the God of theism would require belief in a ‘high moral God.’ Since belief in finite gods is far removed from theism, it follows that prehistoric people were nonresistant nonbelievers. A theologically correct god concept was simply not available for them.

Matthew Braddock (forthcoming) has recently countered Marsh’ claims. He argues that evidence from archaeology and ethnography does not clearly indicate that ancient peoples lacked the concept of a high god. Moreover, psychological experiments on contemporary humans show that many divine attributes are, in fact, cognitively natural. In an earlier paper, Braddock summarizes Barrett’s list of universal content biases regarding divine attributes:

Humans are disposed to believe in non-human, invisible, disembodied, immortal, super-powerful, super-knowing, super-perceiving, infallible, morally interested, punishing/loving, causally active, and minded agents (with beliefs, desires, intentions, character, and free-will) who possess creator or designer status (Braddock 2018, 178).

According to Braddock, natural religion is *theistic-like*. It is thus not clear that a theologically correct god concept was unavailable for prehistoric humans.

CSR has also been called to support a theodicy explaining why a perfectly loving God might allow nonresistant nonbelief. According to Michael Murray (2001), God may not have endowed humans with a clear awareness of his existence because a good deal of epistemic distance might be necessary for building a mature moral character. Because of epistemic distance, the existence and presence of God are not easy to perceive. Hiddenness serves the greater good of moral formation. If we felt God watching us every time we make a moral choice, this might hinder our freedom and consequently our moral development. According to Helen De Cruz (2016), CSR gives empirical credibility to this theodicy. Numerous studies show that religious reminders tend to make people behave more honestly and generously. As

Murray and others have argued, perhaps the most formative moral choices take place in the absence of any reminders that God exists and is watching.

#### 4. Concluding Remarks

I have discussed three different ways in which CSR matters for Christian theology and philosophy. Let me finish by paying attention to what I find as the most important discussions. While contemporary philosophers of religion have built a convincing case that belief in God may be rational, justified, or warranted, CSR underscores worries with the most famous approaches to the rationality of religious belief. The first approach appeals to natural theology. Research on the cognitive and evolutionary underpinnings of philosophical arguments for God may serve to debunk or weaken at least some of them. Even if science did not undermine the best and strongest of the arguments, these might merely help safeguard the rationality of the religious beliefs of Christian philosophers and theologians themselves and perhaps of some educated believers living in WEIRD<sup>11</sup> societies. Most Christians alive today live outside of such societies, however. Just like the past generations of Christians, most of them are unaware of natural theology. Nevertheless, developments in social epistemology could offer a basis for arguing that even these people have what may be called ‘higher-order evidence’ of God. That is, they know that there are theological experts who are able to present good evidence for God’s existence.

Another famous approach – Reformed epistemology – also alleviates this problem. According to Plantinga, theistic belief can be warranted even when believers know nothing of theistic arguments. However, Plantinga’s project is partly grounded on theological claims about *sensus divinitatis* and the noetic effects of sin. These claims are not easy to reconcile with CSR or evolutionary science in general.

CSR also introduces new viewpoints into old debates in systematic theology and philosophy of religion. Here I have dealt with questions about natural knowledge of God, classical theism versus personalist models of God, and divine hiddenness. To add, CSR also sheds light on historical theology. It helps explain, for example, why the early church councils accepted the highly counterintuitive claim that the Son is of the same substance as the Father (Nicholson 2016). Furthermore, by pointing to the link between cooperation and divine punishment, the Big Gods account helps

<sup>11</sup> Western, educated, industrialized, rich, and democratic.

explain why the view of hell as eternal conscious torment was accepted over milder views of afterlife punishment (Launonen forthcoming). Historical theology is an avenue where CSR will hopefully reveal more insights in the near future.

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