

# The Naturalness of Religious Belief: Epistemological Implications

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No passions, therefore, can be supposed to work upon such barbarians, but the ordinary affections of human life; the anxious concern for happiness, the dread of future misery, the terror of death, the thirst of revenge, the appetite for food and other necessaries. Agitated by hopes and fears of this nature, especially the latter, men scrutinize, with a trembling curiosity, the course of future causes, and examine the various and contrary events of human life. And in this disordered scene, with eyes still more disordered and astonished, they see the first obscure traces of divinity.

Hume (1757, 14–15)

## Naturalism, Cognitive Science of Religion, and the Reasonableness of Religious Beliefs

In recent years, analytic philosophers have been increasingly drawn toward naturalism. They attempt to bring philosophical claims, for instance about knowledge, the human mind, and ethics, in line with findings from the sciences. Naturalistically inclined philosophers want to explain or reduce phenomena to natural (as opposed to supernatural) causes. Alvin Goldman (1999) has developed what he terms a “moderate naturalistic” position, where epistemic warrant or justification<sup>1</sup> is a function of the psychological processes that produce or preserve belief. To understand such processes, Goldman recommends that philosophers rely on findings from the cognitive sciences, such as neuroscience and cognitive psychology. In other words, if we want to know whether particular beliefs we hold are

1 There is a continued debate in epistemology on what makes beliefs warranted or justified, and what these terms mean. I will not attempt to define them here, but will use them in a loose sense to denote states that give beliefs a positive epistemic standing.

warranted, we need to get a better understanding of the psychological processes that underlie these beliefs, and cognitive science can assist us in this.

The question of whether religious beliefs are warranted or justified has been an enduring topic of debate in philosophy. Can people ever be justified in believing in God? Over the past few decades, a new scientific approach to religion has arisen. The *cognitive science of religion* (CSR) is the multidisciplinary study of religious beliefs and practices, incorporating findings from anthropology, evolutionary theory, and developmental and cognitive psychology, among other fields. Like other cognitive scientists, CSR scholars aim to understand the human mind by examining how we process information through the study of cognitive processes like perception, memory, and reasoning. If, as Goldman argues, the psychological processes that underlie beliefs are indeed relevant for their epistemic status, naturalistically inclined philosophers of religion should take findings from CSR seriously.

In this chapter, I will examine the implications of CSR for the epistemic standing of religious beliefs by focusing on the naturalness of religious beliefs. Many cognitive scientists of religion, such as Paul Bloom (2007) and Robert McCauley (2011), have characterized the belief processes and practices that underlie religions across the world as “natural”; I will refer to this as the naturalness of religion thesis (NRT). I start out by tracing the origins of NRT in early modern natural histories of religion. These works traditionally had an antitheistic agenda, which partly explains why CSR is still regarded as a project that has mainly negative implications for the rationality of religious beliefs. Next, I will briefly discuss assumptions underlying CSR. I will then analyze the term “natural” as it is used in CSR, focusing on McCauley’s concept of maturational naturalness. In the final section, I will argue that, because of CSR’s self-imposed methodological limitations, NRT as it is currently developed in CSR does not have negative implications for the epistemic standing of religious beliefs.

## Natural Histories of Religion

CSR, a relatively recent research program that originated in the 1980s, has ancient roots. Since Antiquity, philosophers have attempted to seek the natural origins for belief in supernatural beings. For example, Xenophanes thought that religious imagination is constrained by how we conceptualize other human beings: “If cattle and horses and lions had hands, or could paint with their hands and make art like humans can, horses would paint or sculpt gods resembling horses and cattle would make them resemble cattle, each according to how they look” (6th century BCE/1903, 54, author’s translation). Euhemerus (late 4th century BCE) believed that the gods were deified renowned ancestors and rulers, and that myths have their roots in historical events that have, through retelling, become increasingly exaggerated.

The most direct intellectual precursors to CSR are 17th- and 18th-century natural histories of religion.<sup>2</sup> Natural history differs from contemporary scientific practice primarily in its methodology: rather than testing hypotheses through controlled experiments, natural historians formulated a causal story that they supported by reports and anecdotes from various sources, which were collected in a loose and unsystematic way (e.g., Buffon 1766).

<sup>2</sup> The term “natural history” does not correspond to any scientific discipline in its current form, though it is most closely associated with the life and earth sciences, as is still reflected in the term “natural history museum.”

Next to this descriptive component, natural historians also had a metaphysical agenda: they wanted to provide naturalistic explanations for domains of human behavior and culture. This agenda is clearly discernible in authors such as d'Holbach and de La Mettrie, who sought to explain domains like religion, emotions, and morality in terms of physical, nonsupernatural causes (Wolfe 2009).

Sociologist of religion Rodney Stark (1999) has argued that natural histories of religion were implicitly or explicitly motivated by an antitheistic agenda. Authors like Bernard Le Bovier de Fontenelle were not so much concerned with writing objective accounts of the origin of religion as with tracing its roots to irrational beliefs. While these natural histories ostensibly aimed at discrediting indigenous religions (which the authors only knew about through hearsay) and pagan religions, Christianity often formed the real target.

For example, de Fontenelle's *Histoire des oracles* (1728) recounts the historical origins of pagan oracles, and indirectly criticizes all religious beliefs – just as the consulters of oracles were irrational in believing their forecasts, so too are contemporary Christians for believing in miracles and other supernatural phenomena. In *De l'origine des fables* (1724/1824), he contends that the earliest humans, ignorant of causes in their environment, invented supernatural phenomena to account for them, as people are naturally attracted to stories with wonderful and miraculous elements. If one has no explanation for a given phenomenon, the supernatural becomes the default explanation: “To the extent that one is more ignorant, or one has less experience, one sees more miracles”<sup>3</sup> (1724/1824, 295, author's translation). Myths are thus created to provide ad hoc explanations for otherwise inexplicable phenomena. The history of myths could be summed up as “a history of the errors by the human mind”<sup>4</sup> (1724/1824, 310, author's translation). According to de Fontenelle, the falsehoods of myths gradually became replaced by factual accounts of past events thanks to the slow development of reason in Western civilization. The same would happen in other cultures, given enough time.

Hume's *Natural History of Religion* (1757) is a late offering in the natural history tradition. Probably owing to his reputation in philosophy, this work is often read in isolation, but it fits very well in the French tradition of natural histories of religion (see also De Cruz in press for a contextual discussion). Like his predecessors, Hume thought that religious beliefs are rooted in features of human psychology, in a way that makes the rationality of these beliefs doubtful. He combined, in a piecemeal and haphazard fashion, his knowledge of Greco-Roman, Egyptian, and other historical religions with second-hand reports of non-Western religions to construct his natural history, which can be summarized as follows. Historically, humans were ignorant about natural causes of occurrences like famines, droughts, and diseases. They feared such events, and were strongly motivated to gain some degree of control over their environment. As a result, they anthropomorphized their surroundings by inventing spirits, gods, and other supernatural beings that could be placated, bribed, or cajoled into doing what humans desired. In line with their own political organizations, they tended to endow one of these spirits or gods with more power than the others, leading to some form of henotheism. Eventually, in several traditions, this important deity overshadowed all the others, leading to monotheism. However, the cognitive inclination toward polytheism remains very strong, as can be seen, for instance, in the reverence of saints in Roman Catholicism.

3 *A mesure que l'on est plus ignorant, et que l'on a moins d'expérience, on voit plus de prodiges.*

4 *Ne cherchons donc autre choses dans les fables, que l'histoire des erreurs de l'esprit humain.*

Did Hume mean to criticize *all* forms of religious belief, or just what he called the “gross polytheism and idolatry of the vulgar” (1757, 35)? Some Hume scholars, like Peter Kail (2007), argue for the former. By contrast, Lee Hardy (2012) writes that Hume’s natural history outlines two roads to monotheism: the high road of philosophical reflection and the observation of design in nature, and the low road of haphazard, irrational thought processes. Benjamin Cordry (2011) interprets Hume as an atheist who was nonetheless open to the intellectual virtues of a thin, philosophically informed theism. However, even if Hume was open to rational theism, he thought that most people, even those who believe in the God of Christianity, are unjustified in their beliefs: “Even at this day, and in *Europe*, ask any of the vulgar, why he believes in an Omnipotent Creator of the world; he will never mention the beauty of final causes, of which he is wholly ignorant” (1757, 42). To Hume, the conclusion that the religious beliefs of the vast majority of people are unjustified is inescapable:

in all nations, which have embraced polytheism or idolatry, the first ideas of religion arose not from a contemplation of the works of nature, but from a concern with regard to the events of life, and from the incessant hopes and fears, which actuate the human mind. (1757, 14–15)

During the 19th century, the sciences became increasingly specialized. Disciplines such as anthropology, sociology, and psychology of religion replaced natural histories of religion. Yet, even in these fields, the scientific study of religion was rarely motivated by a dispassionate search for the psychological and social processes involved. The assumption that religious belief had its roots in non-truth-tracking psychological processes continued to drive theorizing. Auguste Comte (1841), for example, saw the intellectual progress of humanity as proceeding through three stages. The theological state (*état théologique*) is the most primitive of these, starting out with fetishism, and gradually evolving from polytheism to monotheism. The metaphysical stage depersonifies God, and conceptualizes him as an abstract being. Eventually, this abstract God concept gives way to the positive stage, where scientific explanation has replaced religion, and where scientific inquiry is the sole means of regarding the world. Émile Durkheim (1915) saw religion as a set of imaginary beliefs that serve as a social glue; the only factuality of religion is its social nature. Sigmund Freud (1927) considered religion as an illusion, a childlike longing for a father figure caused by a feeling of helplessness. His account was one of the last of its kind, a grand explanation for religion which was not grounded in scientific observations, and was explicitly formulated to discredit religious beliefs.

In the course of the 20th century, the scientific study of religion became more descriptive. Anthropologists like Bronislaw Malinowski (1925/1992) and Edward Evans-Pritchard (1937/1965) began to study the religious beliefs of non-Western people from small-scale societies *in situ*, rather than relying on second-hand reports. They found that religious beliefs in these cultures had a high degree of sophistication. For instance, Malinowski noticed that Trobriand Islanders invoked magic only for deep-sea fishing, a mode of subsistence that was risky and had uneven returns, but not for everyday lagoon fishing, which was safe and had stable returns. Evans-Pritchard found that the Azande (Central Africa) were well aware of natural causes, such as termites, that might cause a house to collapse. They invoked witchcraft to explain why a particular house has collapsed, and reasoned that witches might well use termites and other natural causes to accomplish their ends.

It became glaringly obvious that earlier studies of religion were not only based on incorrect, highly biased ethnographic accounts, but were also racist. For instance, Durkheim

(1915) paid special attention to Australian aboriginal religion (in particular, totemism) because he believed Aborigines were the most primitive people, the lowest point on a linear scale of civilization and mental development. However, fieldwork demonstrated both the particularity and the complexity of non-Western small-scale societies – for example, Aborigines have their own complex religious beliefs, such as the Dreamtime, which have no Western parallel. With the disappearance of the myth of the primitive mind, and an increasing recognition of religious diversity and complexity across cultures, anthropologists and other social scientists of religion abandoned their attempts to provide a unified history of religion through successive stages that all cultures have to progress through.

## Cognitive Science of Religion

Renewed attempts to explain religion in its entirety started in the 1980s, with the anthropologist Stewart Guthrie's programmatic essay "A Cognitive Theory of Religion" (1980) and his later monograph *Faces in the Clouds* (1993). Guthrie proposed that religious beliefs are products of anthropomorphism, a common and universal disposition in human cognition. Humans have an overactive tendency to see anthropomorphic faces and agency in their environment, a "reasonable illusion with highly general causes" (1980, 182) that has adaptive benefits: it's better to mistakenly "observe" an agent than to fail to discern one that is present. This idea has been further explored by Justin Barrett (2004), who proposes that religious beliefs are outputs of a hyperactive agency detection device (HADD), a hair-trigger propensity to see agents everywhere in the environment.

CSR authors, in books like *Religion Explained* (Boyer 2002) and *Why Would Anyone Believe in God?* (Barrett 2004), have sought to explain religious beliefs by appealing to universal and normally developing features of human cognition. In this respect, CSR resembles natural histories of religion in its aspiration to provide a comprehensive account of religion. However, unlike natural histories of religion, work in CSR is supported by controlled empirical observations and detailed, first-hand anthropological studies. Moreover, contrary to natural histories of religion and their immediate successors, the identification of causes for religious belief in CSR is descriptive rather than normative. While natural historians of religion hoped to contribute to a more rational frame of mind by exposing the unreliable, primitive origins of all religious beliefs, CSR identifies mundane cognitive processes shared by humans across cultures.

One of the key assumptions of CSR is that religious beliefs and practices are not purely the result of cultural dynamics but are partly shaped by universal and stable features of human cognition, which can be discovered by studying thought processes in young children. They assume that young children are less influenced by cultural expectations and schemas than adults; their spontaneous beliefs reveal central and early-developed features of human cognition. For example, in a classic experiment that probed the origins of afterlife beliefs, preschoolers and elementary school children were shown a puppet alligator eating a toy mouse (Bering and Bjorklund 2004). Though the children understood that the mouse was dead, and could not eat, drink, or breathe anymore, they believed it still had emotions and desires (e.g., the dead mouse still loves its mother). Interestingly, preschoolers made more continuity responses than older children, indicating that children do not intuitively equate the self with the body, but with something nonmaterial. On the basis of this and other experiments, Bloom (2007) concludes that children are intuitive substance dualists.

If children spontaneously believe that mental states can survive the physical death of an agent's body, it is unsurprising that so many cultures have afterlife beliefs, such as the belief that the soul can reincarnate in a different body.

Most CSR authors assume that the human mind is not an undifferentiated blank slate; rather, it is composed of several specialized inference systems, which are termed "intuitive ontologies" (see De Cruz and De Smedt 2015 for an overview). These systems help us gain knowledge about different aspects of the world, such as how inanimate objects move (intuitive physics), how plants and animals grow and behave (intuitive biology), and the mental states of others (intuitive psychology). On this standard picture, we are naturally disposed to think about minds and bodies as separate entities, and religious beliefs are a byproduct of the way our brains have evolved. For example, intuitive dualism emerges as a result of an inherent tension between different inference systems for physical objects and mental states. The inferences of our intuitive psychology do not require or stipulate a physical object (the human body) to perform the cognizing, making it difficult to grasp that a person's mental states have stopped once his or her physical body no longer functions. Though humans have physical bodies, our intuitive psychology makes it quite easy for us to imagine what a deceased agent would think about a state of affairs, as is clear in phrases like "Grandma wouldn't have liked this," or "It's what she would have wanted." CSR is at present a highly successful and proliferating research program. Examples of topics of investigation include rituals, intuitive creationism, the relationship between folk religious beliefs and theology, prayer, belief in supernatural beings, souls and other nonphysical parts of a person, and belief in the afterlife.

### The Concept of Naturalness in CSR

CSR authors frequently claim that religion is a natural phenomenon, as is illustrated by titles such as *Religion is Natural* (Bloom 2007) and *Why Religion is Natural and Science is Not* (McCauley 2011). In these studies, the term "natural" is used in at least three distinguishable senses: metaphysical naturalness, phenomenological naturalness, and developmental naturalness. Together, these three senses constitute the NRT.

*Metaphysical naturalness* is the claim that religion is the result of natural, as opposed to supernatural, processes. This view continues in the tradition of 17th- and 18th-century natural historians, who reduced religion to nonreligious psychological dispositions and social factors. For example, Guthrie (1993) explains belief in supernatural beings by appealing to a cognitive mechanism which has as its evolved function the detection of natural beings, viz., humans and other agents. Similarly, Deborah Kelemen's (2004) hypothesis that children are intuitive theists hinges on the claim that children are naturally prone to see purposiveness and design in nature. This "promiscuous teleology," which gives rise to belief in supernatural creators, has a natural origin: our ability to successfully understand the designer intentions of artifacts. Bloom's (2007) intuitive dualism, likewise, does not originate from an interaction with nonphysical minds, but from an intuitive distinction between minds and bodies.

*Phenomenological naturalness* refers to the intuitive plausibility and ease with which religious beliefs are acquired and held. For example, Barrett (2010) argues that religion is a mode of thinking that emerges spontaneously as a result of the workings of our cognitive capacities. Folk religious ideas are easy to come up with and to grasp, and require little cognitive effort.

This claim seems plausible when we look at the global distribution of religious beliefs: 85–90% of the world's population believes in one or more gods (Zuckerman 2007). By contrast, atheism is rare and requires cultural support, such as a well-developed secular worldview.

*Developmental naturalness* is the claim that religious beliefs, such as belief in God, souls, and an afterlife, emerge early, as a spontaneous output of normal cognitive functions that become operational early in development. McCauley (2011) emphasizes this aspect of the NRT. He distinguishes between two kinds of naturalness: maturational and practiced. This distinction teases apart two developmental trajectories of skills and practices that we perform effortlessly, such as cycling, running, and surmising what other people desire or believe. While these skills are phenomenologically natural, they come about through two radically different developmental trajectories. Given that McCauley's account is one of the most detailed conceptual analyses of the naturalness of religion to date, I will critically discuss it in detail here.

Speaking one's mother tongue, walking, and chewing are what McCauley terms *maturationally natural skills*. They are culturally ubiquitous and arise early in human development without explicit instruction. They do not require institutions or material support – as a matter of fact, infant walkers do not speed up walking, and educational DVDs for babies do not speed up infant language development. Such skills are acquired through everyday interactions. Children acquire them with ease, and spontaneously engage in them. While there is natural variability in maturationally natural skills (e.g., some people are better in speaking their first language than others), there is no clear notion of expertise. Maturationally natural skills typically address central human challenges and concerns, such as navigating one's environment or communicating with others.

By contrast, *practiced natural skills*, like reading, driving, and playing a musical instrument are more restricted across times and cultures. They often require years of effortful training, supported by teachers, and material culture. They do not arise as a result of species-typical cognitive development. In fact, they often subtly alter the brain's anatomical structure. For example, the brains of people who have learned to read as adults show structural differences in connectivity compared to those of adults from the same community who learned to read as children (Carreiras et al. 2009). Because of their reliance on sustained practice, practiced natural skills have experts: people who are recognized by others in the field as proficient, such as chess grandmasters, professional musicians, and calligraphers.

McCauley contrasts ordinary religious beliefs and practices with theology and science: the former are maturationally natural, whereas the latter are practiced natural only to the select few (theologians and scientists) and completely unnatural to the majority of human beings. This explains why religion is cross-culturally ubiquitous, and easily acquired, whereas science and theology are culturally restricted, requiring extensive material and institutional support. McCauley offers glossolalia (speaking in tongues) as an example of a maturationally natural skill. This is a religious practice that draws extensively upon natural language, a maturationally natural skill set. While the utterances may sound like a foreign language, upon closer scrutiny they appear to draw exclusively on phonemes and stress patterns that occur in the language of the utterer. The speech-like patterns spontaneously elicit a quest for meaning and interpretation in listeners, precisely because they draw on our maturationally natural capacities to interpret language.

McCauley's claim that religion is maturationally natural should be nuanced. Glossolalia is not cross-culturally universal, but appears in only a few religious traditions, such as

Pentecostal and Charismatic Christianity. It requires specific techniques and a form of expertise; according to its practitioners, speaking in tongues and knowing how to interpret such speech are gifts of the Spirit, which are not manifest in everyone. The Internet offers several detailed tutorials on how to speak in tongues – if glossolalia are so natural, why do people need guidance on how to produce them? Presumably, being part of a culture where speaking in tongues is a common practice provides the exposure necessary to speak in tongues. In non-Pentecostal churches, parishioners do not spontaneously speak in tongues. For example, the Episcopalian minister Lauren Winner (2006, 257–258) recalls in her autobiography how for several months she tried it in vain.

A religious practice like glossolalia seems more akin to music (a practiced natural capacity) than to language. Though musical scales could divide an octave into infinitely many different parts, cross-culturally most of them fall within a small set of scales, comprising only five to seven tones. Scales that are most in line with harmonic series (which correspond to human vocal fold vibrations) are most prevalent (Gill and Purves 2009). Understanding melodies thus depends on maturationally natural capacities, involved in human voice discrimination. Nevertheless, understanding musical structure and understanding harmony are practiced natural skills. In a series of experiments, David Huron (2006) asked Balinese and American musicians to guess the next note in a piece of gamelan music. The best American musicians were less accurate than the weakest Balinese – though they performed far above chance, learning to predict gamelan tunes rapidly. Presumably, the American subjects did better than chance and were such quick learners because gamelan music depends on a constrained set of musical scales. These align closely with harmonic series, to which our ears are naturally attuned. Music critically depends on maturationally natural capacities, but extends them radically as well; it is both practiced and maturationally natural (see De Cruz and De Smedt 2015 for a further development of this point).

The same can be said about other religious beliefs and practices. Even if the cognitive underpinnings of religious beliefs are maturationally natural, children do not spontaneously generate fully-fledged religious systems like Zoroastrism or Christianity. Anthropologists read up extensively on the religious systems they will examine in the field, and they immerse themselves in the culture for weeks or, preferably, months to come to grips with the religions they study. In her recent fieldwork, anthropologist Tanya Luhmann (2012) provides a detailed case study of the practiced naturalness of ordinary religious belief in the Vineyard Church, communities of Evangelical Christians in Chicago and Palo Alto. The aim of her work is to examine how people learn to internalize and experience as real the religious beliefs of the community they are part of. She demonstrates that the religious experiences of Evangelical Christians require a radical and counterintuitive reconceptualization of one's theory of mind: they have to accept their minds as porous, with some of their thoughts not their own, but coming from God. It is difficult to discern, however, which thoughts are caused by God and which aren't. This requires extensive practice, such as ~~by~~ imagining God as a friend who is sitting next to you during prayer. These communities extensively rely on material culture, such as a special room (or, in one instance, a special closet) used for prayer, an object to fixate on while praying (e.g., a candle), and prayer journals (for tracking fleeting thoughts). In this material culture, the Bible occupies a central place: it serves as a springboard of communication with God, as some passages jump out and speak to the reader. In the Vineyard Church, some people are recognized as experts in prayer: they can discern God's voice with more clarity than others, and occasionally hear clearly spoken messages. Such experts are typically congregation members with many years of prayer

experience. The claim that prayer is hard work is not only put forward by Luhmann's interlocutors. For instance, the 16th-century mystic Teresa of Ávila describes in *The Interior Castle* a combination of contemplative prayer, meditation, and other mindful practices that prepare the mind to become receptive to God.

Religious belief, at least as experienced by Christians, does not seem to fit the description of maturational naturalness. With its reliance on material culture, the importance of continuous and sustained practice, and its recognition of experts, it is better described as a practiced natural skill, with roots in maturationally natural capacities (presumably, most practiced natural skills build on maturationally natural capacities). As CSR indicates, conceptualizing a supernatural being (God) who is concerned with our moral conduct and who has special knowledge and powers is maturationally natural. Learning to effectively communicate with a triune God is a practiced natural skill.

### NRT and the Rationality of Religious Belief

How does the NRT impact the rationality of religious beliefs? To examine this question, I will look at the three senses of naturalness discussed earlier, and how they relate to the epistemic standing of religious beliefs. Metaphysical naturalness has frequently been marshaled as a way to debunk religion. Once we regard religion as a natural phenomenon, Dennett (2006) contends, we can lay the idea that religion lies beyond the scope of scientific investigation to rest. "Breaking the spell" means finally opening religion up to scientific scrutiny; something that has been hampered by religious people.<sup>5</sup> Many scholars reduce religion to nonreligious causes, denying that religiosity itself has any effect at all. For example, the observation that religious people are happier or healthier is explained by the fact that belonging to a church provides one with a social network of friends one can rely on and socialize with. Religiosity is thus reduced to nonreligious variables, such as belonging to a social network (Stark 2000).

The scientific study of religion presents a picture in which the religious believer can scarcely recognize herself. Brad Gregory recounts his attempts to understand why Mormons (adherents to the Church of Jesus Christ of the Latter-Day Saints, LDS) believe and live as they do:

However satisfactory my explanations were to me, or to others who shared my assumptions, those explanations failed to help me understand the members of the LDS Church any better... In fact, because such explanations are inherently reductionist, in the literal sense of reducing religion to something else, they led *away* from any sense of what Mormon experience, beliefs, and behaviors were like. As the colloquial phrase goes, I did not "get" Mormons, not despite but *because* of my explanations, since all of them implied that Mormonism is not what Mormons take it to be. (2006, 133–134)

This reductionist paradox – explaining religion by reducing it to nonreligious causes, and thereby removing what has to be explained – also affects CSR. It precludes understanding religion *as* religion. Take, for instance, Bloom's explanation of belief in the afterlife. Does his

5 Curiously, this claim disregards the fact that religion has been the subject of scientific study since at least the 17th century. In fact, we see that metaphysical naturalism has always been a prominent feature of natural histories of religion.

intuitive mind–body dualism say anything meaningful about the hope for the general resurrection among Christians; that is, the belief that human beings will rise from the dead and have a renewed physical body? Or about the belief that reincarnation is an endless cycle of suffering, from which one would want to break free? CSR provides an explanation only for dispositions to believe in gods, ghosts, and souls, but does not explain why, in particular cultures, people believe in beings like the God of Abraham, Shiva, or the Rainbow Serpent. Thus, CSR “explains” only a very small subset of religious beliefs. For example, Boyer (2002) is a study of memory and transmission biases: it examines which beliefs are most memorable, which in turn explains how religious beliefs get spread, but it says relatively little about their origins.

Metaphysical naturalists using CSR data might respond that though CSR explanations are not exhaustive in detail, and do not adequately account for thick, elaborate religious beliefs, they nevertheless provide convincing naturalistic accounts. Appealing to parsimony, they could argue that there is no need for a supernatural explanation. However, given that CSR is methodologically naturalistic, it is unsurprising that it uncovers only natural explanations for religion. Imagine a scientific discipline that studies body mass in animals and which excludes *a priori* the possibility that body mass could be influenced by sexual selection. Unsurprisingly, its practitioners will find that sexual selection plays no role whatsoever in determining body mass, which will be explained by factors like latitude, predation, and other features involved in natural selection. To be sure, some variability may remain unexplained, but this will not bother these scientists, from the outset convinced that sexual selection does not influence body size. Similarly, as CSR and other scientific approaches to religion discount *a priori* the role of revelation or religious experience in the formation of religious beliefs, it is unsurprising that they only uncover natural causes. CSR has enhanced our understanding of the cognitive basis of religious beliefs, but given its self-imposed methodological limitations, it is precluded from saying anything meaningful about the epistemic standing of religious beliefs.

Interestingly, phenomenological naturalness has been traditionally invoked as evidence for the truth of religious beliefs. Cicero, for example, argued that the existence of the gods is an idea natural to everyone, and engraven upon the mind (Cicero 45 BCE/1967, bk. 2). The theologian and reformer John Calvin wrote that humans have an innate sense of the divine that makes religious belief a deep-seated conviction in them; it can be perverted by sin and unwillingness, but it is nevertheless universally present:

There is within the human mind, and indeed by natural instinct, an awareness of divinity... God himself has implanted in all men a certain understanding of his divine majesty... Yet there is...no nation so barbarous, no people so savage, that they have not a deep-seated conviction that there is a God...From this we conclude that it is not a doctrine that must be first learned in school, but one of which each of us is master from his mother's womb and which nature itself permits no one to forget. (Calvin 1559/1960, 43–46)

Following Calvin, Reformed epistemologists like Alvin Plantinga (2000) have argued that belief in God can be properly basic. A properly basic belief is a belief that is warranted even without relying on propositional arguments. For example, we believe in a basic way that the world is more than just a few minutes old, that other people have minds, and that our memories are generally reliable, even though there are no good arguments in support of these claims. Similarly, so it is argued, people can hold a spontaneous belief in God that is not based on arguments. Kelly James Clark and Justin Barrett (2010; 2011) have argued that

CSR provides empirical evidence for the proper basicity of religious beliefs, as it indicates that they are phenomenologically natural: they are held in the absence of arguments, and they emerge spontaneously as a result of normal cognitive processes. If religious beliefs are properly basic, we are justified in holding them without argument, just as we are justified in believing in the presence of other minds and the mind-independent external world. The Reformed case based on CSR indicates that phenomenological naturalness is not a promising starting point from which to debunk religious beliefs.

Turning to developmental naturalness, we have seen that some religious beliefs are the result of practiced natural skills. Some skilled practices are plausibly truth-tracking, whereas others are not. For example, a birder can accurately distinguish a buzzard from a sparrowhawk using visual clues such as differences between their silhouettes (e.g., tail shape) and their behavior (e.g., hovering). An astrologer who reads someone's horoscope relies on expertise about different signs and houses, and uses material tools like natal charts. The first practice is plausibly truth-tracking, but the second is not. The mere fact of being practiced natural says little about whether a particular skill provides one with justified beliefs. Without an in-depth examination of a practice, one cannot know whether it is truth-tracking. The question of whether religious practiced natural skills track truth cannot be answered as long as CSR attempts to reduce religious beliefs and practices to the nonreligious (e.g., byproducts of cognitive adaptations), without also acknowledging they are involved with a subject matter that is religious.

## Conclusion

I have argued that NRT does not challenge the epistemic standing of religious beliefs. One reason why it does not is that CSR, like other scientific disciplines that study religion, has systematically attempted to reduce religion to other, nonreligious domains. For example, belief in an afterlife or reincarnation is regarded as a natural byproduct of an intuitive mind-body dualism. By not treating belief in God as belief in God, but as the output of a HADD or anthropomorphism, CSR leaves the epistemic standing of such beliefs unaddressed. Unlike natural histories of religion, CSR works descriptively, rather than normatively. However, if, as I have argued, religious practices and beliefs are not merely maturationally natural, but also practiced natural, we need to take them seriously as domains of skill and knowledge in their own right, and not just as phenomena that can be reduced to nonreligious domains.

## Acknowledgments

Many thanks to Johan De Smedt and to the graduate students who participated in my cognitive science of religion seminar series at Oxford University for comments and discussion. This research is supported by a postdoctoral research fellowship (pf130006) from the British Academy.

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