Justin L. Barrett

Cognitive Science of Religion and Christian Faith: How May They Be Brought Together?

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The past twenty years has seen the emergence of an interdisciplinary study of religious thought and action known as cognitive science of religion (CSR). In this article, CSR is introduced and potential connections with Christianity are highlighted. In addition to presenting CSR's relationship with cognitive science more generally along with its brief history, common misunderstandings about CSR are addressed. The article concludes with a brief discussion of several areas that may be of particular concern to Christian audiences, including whether CSR may "explain away" religious beliefs, whether it may help provide insights concerning God's general revelation to humans, what role it could play in helping craft a theological anthropology, and what practical implications it may have for religious education and other activities of churches.

I once participated in an academic conference on a small island in the Baltic Sea that was uninhabited except for a biological research station. It was summer and the weather was fair, so during a break I took a walk in the woods with another conference participant. He was an atheist. In an isolated part of the woods with no other humans within sight or earshot, we came upon a beautiful wooden chapel from the days when this island had been a leper colony. Perhaps two hundred years old, the chapel looked like something out of a fairytale; we just had to peek inside.

No one was in it, but it had marvelously carved pews, chancel, and pulpit. I was effervescing about how beautiful it was and noticed that my conversation partner's voice had fallen to hushed tones once we entered the chapel. His quiet speech was particularly notable because there was obviously no one to disturb in this space. Wanting to take a better look at the pulpit, I went to climb the stairs and my companion grabbed my arm stopping me. He was evidently alarmed. Why? I was about to violate sacred space. I explained that, at least in my Christian tradition, I was perfectly entitled to examine the pulpit, but he—an atheist—was not convinced: I ought not to climb the stairs to the pulpit. To protect his sensitivities, I did not.

I share this story not to parade my own irreverence but to illustrate how even people with no religious background or commitments can have intuitions about religious places and their actions therein. Where did my friend's intuitions come from and why were they so strong that, even with no one to witness the alleged offence, he could not raise his voice or tolerate my alleged violation of the sanctity of this place? What accounts for the apparent contradiction between my friend's explicit beliefs concerning gods or sacredness, and his behaviors? A new scientific approach to the study of religion called the *cognitive science of*

Justin L. Barrett *is the Thrive Professor of Developmental Science in the Graduate School of Psychology, and Chief Project Developer for the Office of Science, Theology, and Religion Initiatives at Fuller Theological Seminary, Pasadena, CA. A cognitive and developmental psychologist (PhD, Cornell University), his books include* Cognitive Science, Religion, and Theology: From Human Minds to Divine Minds *(2011);* Born Believers: The Science of Children's Religious Beliefs *(2012); and* Homo Religiosus and the Dragon *(forthcoming).*

religion purports to answer these sorts of questions. Many who work in this area believe that by virtue of being human beings and growing up in ordinary human environments, we acquire certain tendencies in thought and action that easily accommodate—or even embrace—religious thought. Indeed, religious thought and action is so ubiquitous in human societies because our minds are naturally ready for it. In this article, I briefly introduce the cognitive science of religion and share a few reasons why Christians should both be interested in and involved with it.

What Is Cognitive Science?

Before turning to the cognitive science of religion, I must first introduce cognitive science. Cognitive science (or the cognitive sciences) is an interdisciplinary area of study that is focused on minds. How do minds work? What does it mean to think, perceive, and know? How are human minds similar and different from animal minds or computer minds? Cognitive science, then, overlaps substantially with psychology, but also includes contributions from anthropology, computer science (especially artificial intelligence), linguistics, neuroscience, and philosophy. Specific areas of focus within cognitive science include how we see, hear, and otherwise perceive the world around us, how we learn new things, how various memory systems work, language, problem solving, creativity, and many others.

It is easy to confuse cognitive science with neuroscience. While the two often interact and at some points overlap, they are different. As cognitive science deals with minds and thought systems, neuroscience deals with brains and nervous systems. To some ears, that might seem like a distinction without a difference. Aren't nervous systems responsible for thinking? The distinction between minds and brains also helps distinguish between different types of research questions and answers. Consider two analogies. First, cognitive science is to neuroscience as nutrition is to gastroenterology. Suppose you want to know what you should be eating for a healthy and energetic lifestyle. The relevant information you need concerns selecting particular foods because of the nutrients they have and the nutritional needs of your body. A nutritionist is the expert you need to consult. You are not concerned with how your stomach and intestines work to extract the nutrition from your food even if that may undergird your nutritionist's recommendations. Likewise, consider the difference between software and hardware on your computer. When you have some work to do on your computer—like creating a spreadsheet to manage home finances or designing a birthday invitation—you need expertise concerning the software. If you want to know how the operating system works, or how to use a specific program, and you called a computer helpline and were given explanations about microchips and motherboards, you would rightly be displeased. The hardware of a computer is only indirectly relevant to creating a birthday invitation on your computer. In some respects, minds are to brains as software is to hardware.

In the sixty years that cognitive science has been around, one of its greatest discoveries is that human minds process information differently depending upon what the information is used for or what it is about. For instance, we process the sight of other people's faces differently than we do the sight of flowers or cows. Natural human languages are processed very differently than artificial languages such as binary code. We think differently about objects that are "things" that we might be about to interact with physically than we do about other objects. All of this is to say that human minds are not passive absorbers of information; rather, they actively shape and transform information as it comes in.

If this sounds very abstract and impractical, consider the fear of snakes. Humans (and other primates) tend to react dramatically to the presence of snakes. We do not just ignore them as we might a nearby crow, turtle, or squirrel. Snakes or even snake-like forms and movement command our attention. Most of us are at least a bit uncomfortable around snakes, if not absolutely terrified. Why do we so easily learn to become afraid of snakes? It turns out that human minds are naturally prepared to form fear associations with snakes and snake-like things. A garter snake and a rose may be comparably dangerous to humans, but a child only needs to see a parent respond in fear once to a garter snake and they will likely form a fear of it, whereas dozens of parental fear reactions to a rose will probably result only in the child thinking there is something wrong with the parent!

Cognitive science has shown that human minds have natural processing predilections and biases—that they are not well characterized as a single, all-purpose generic information processor like personal computers from the 1980s. Cognitive scientists

continue to scrap over the degree of the mind's specialized subsystems or biases, where they come from, and how rigid they are; but the fact that the typical human has a specialized and contoured mind is certain. Human minds are not just extra powerful sparrow minds or a variation on the mind of a humpback whale. Human minds help us think and learn in specifically human ways.

With this fact in hand, a very interesting possibility presents itself: could it be that human tendencies to believe in superhuman beings such as ghosts, spirits, and gods could be in part a result of the type of minds that humans have? Might the well-documented human proclivity toward ritual be a product of the natural features of human minds?

What Is Cognitive Science of Religion (CSR)?

CSR takes insights from cognitive science and applies them to perennial questions in the study of religion. For example, what accounts for the distribution of contemporary forms of religious expression? how do we explain historical patterns of change and resiliency in religions? and what are the consequences of different types of religious expression on humans as individuals and as societies? Perhaps partial answers to these sorts of questions can be found in the ordinary functioning of human minds.

Where did CSR come from?

Though the roots of cognitive approaches to the study of religion reach back to the 1970s,[1] the moniker "cognitive science of religion" first appeared in 2000 to describe the body of work in the 1990s and later; these studies looked at how cross-culturally recurrent features of human minds seemed to inform and constrain certain types of cultural expression that we might recognize as religious.[2] The fundamental insight of CSR maintained that since human minds find it easier to think in some ways as opposed to others, then ideas, actions, and other types of expression that match up well with what human minds naturally do well are more likely to persist and spread to the point of being recognizably "cultural." That is, cultural expression is not random or arbitrary but is at least partially explainable in terms of how human minds tend to work. If that is so, then the same could be argued for religious cultural expression. Explaining religious expression from this perspective becomes an exercise in trying to explain why it is that certain modes of thinking and acting that we might call "religious" are supported by the way that human minds work.

This novel approach to the study of religion has become attractive to a number of religious studies scholars because of two virtues. First, appealing to features of human minds enables the making of *testable* predictions and explanations concerning religious expression within and across cultures. One challenge to any study of culture is to get beyond arguing that some people groups think or act the way they do essentially because their peers and ancestors did likewise. Consider why it is that children on playgrounds believe that boys or girls have cooties. We can say that they believe in cooties because other children taught them about cooties, but why did those children believe in cooties? Because some other children believed in cooties? But why did *they* believe in cooties? Eventually we need to find an originator of the whole cooties question and also account for why this idea persisted, whereas other playground games and concepts disappeared. When cultural expression is explained only in terms of previous cultural expression, we quickly run into explanatory brick walls or indefinite regresses. Appealing to a noncultural factor, such as how human minds work, provides an additional and powerful explanatory tool.

The second reason that CSR has become attractive to many scholars is that it leaves aside the truth of religious commitments. Rather than a glib, "people believe in ghosts because they are real," CSR tries to explain why people have the beliefs they do aside from whether the beliefs are true or false—sometimes called methodological agnosticism. After all, just because something is true does not mean people will believe it, and, conversely, many false ideas are widely believed. Remaining neutral with regard to the religious claims democratizes this approach to the study of religion. Believers and nonbelievers can (and do) collaborate in CSR scholarship.

What is it finding?

Probably the most important reason for the rise of CSR is neither its methodological agnosticism nor its ability to give explanations from outside cultural particulars. The most important reason is that it has

proven to be capable of making novel testable predictions and explanations.

To begin, CSR has been helpful when accounting for local and cultural particulars that are otherwise difficult to explain. To illustrate, Emma Cohen conducted ethnographic field research in the northern Brazilian city of Belém as part of her doctoral training.[3] There she investigated the religious practices of Afro-Brazilian spiritualists who gathered together for healings and insights gleaned from episodes of spirit possession. Through her extensive observations and interviews over many months, she discovered something peculiar: the way spirit possession was described and taught by the leader of the cult-house (the *pai-de-santo*) was not the same as it was understood by the laity. Even though the laity affirmed the authority and the trustworthiness of their spiritual guide, and even though they were taught spirit possession from him, they did not understand spirit possession in the same way. What was taught was not the same as what was received—but why? Cohen's ethnography and subsequent experiments, combined with appeals to other research, suggest that the explanation for spirit possession offered by the *pai-de-santo* is too conceptually difficult—an ill fit with how humans naturally think about the relationship between minds and bodies—for it to be easily remembered, talked about, or used to reason about their experiences.

Findings from CSR have been used to make sense of local peculiarities in religious expression from contemporary Melanesia to the Reformation in Europe,[4] but it is probably best known for its efforts to explain broad, cross-cultural questions concerning why people generally tend to be religious throughout history and around the globe, and why some religious ideas are common while others are not.[5] Some have regarded CSR as having promise for naturalistically "explaining religion,"[6] an issue I take up below.

The sort of explanations CSR offers are diverse, but they generally take the form of specifying some aspect of what might be considered "religion" (e.g., belief in superhuman invisible beings, use of rituals to solve problems, belief in an afterlife), and then identifying what ordinary psychological dynamics would make humans particularly attracted to the thought behind these aspects of "religion." If there is a conceptual system that is part of ordinary human psychology, then ideas that resonate with that conceptual system's typical way of thinking are more likely to be entertained by individuals and eventually spread across groups than ideas that do not resonate with these conceptual systems. As an example, let us examine the belief in superhuman invisible beings (i.e., gods).

From a CSR perspective, the pervasive belief in gods that are responsible for acting on the natural world is partially explained by the apparent fact that humans have minds naturally prone to explaining features of the world in terms of the actions of minded, intentional beings.[7] In a large body of research, Deborah Kelemen and her collaborators have shown that children in the UK, the US, Romania, and China are naturally disposed to say that animals and other natural objects are the way they are for a particular purpose or function.[8] For instance, birds are here to look pretty and rivers are here so that we have a place to go fishing. This purpose-based reasoning is readily attached to intentional reasoning: someone must have intended the purpose. Of course, the step from thinking that animals are here for a purpose and that someone must have intended the purpose makes it very easy for children to believe that an animal is here because a god designed it for people in a certain way. More recently, Kelemen has provided evidence (from the US, Romania, and China) that these purpose-based reasoning biases persist into adulthood unless they are tamped down by formal education or another rigorous form of enculturation.[9] Taken together, Kelemen's work suggests that human attraction to the idea that superhuman beings may account for the way things are in the world is a result of ordinary cognitive tendencies. Why humans have such tendencies is another question that remains without consensus answers.

Though the typical emphasis in CSR is on beliefs and ideas, scholars using cognitive approaches have also attempted to account for why religious rituals have frequently recurring features across cultural settings. For instance, Pierre Liénard and Pascal Boyer have argued that a natural human cognitive-emotional system for dealing with unseen contaminants or pathogens helps drive the performance of cleansing rituals and accounts (in part) for why they are so common across cultures.[10] E. Thomas Lawson and Robert McCauley have developed a theory that allegedly explains why religious rituals tend to cluster

around two types: (1) those that are performed infrequently in the life of a participant, are high in sensory adornment ("bells and smells") and emotional tenor, and are potentially ritually reversible; and (2) those that are performed repeatedly, are relatively low in hoopla and emotionality, and that people would not dream of attempting to ritually undo.[11]

This general theme—that some combination of cross-culturally recurrent conceptual systems in human minds makes belief in gods and an afterlife and engagement in rituals relatively intuitive and attractive to people—is common in CSR even if the specific account varies. Examples of treatments include Stewart Guthrie's *Faces in the Clouds,*[12] Scott Atran's *In Gods We Trust,*[13] Robert McCauley's *Why Religion Is Natural and Science Is Not,*[14] Jesse Bering's *The Belief Instinct,*[15] and my own *Born Believers*.[16] Representatively, in his book *Religion Explained*, Pascal Boyer writes that because of how human minds naturally work, "It does not require much effort to have religious beliefs" (p. 299).[17]

Clearing Up Some Common Misconceptions about CSR

Whether critiquing the field or participating in it (or both), it is important to recognize that, like most scientific approaches to a particular subject matter, CSR is constantly changing. At its core, it is about leveraging findings and theories from the cognitive sciences to help account for religious expression. Consequently, as the cognitive sciences change, so will CSR. Indeed, a scholar's own particular views about cognitive science will affect his or her cognitive science of religion. Beyond the view that humans share certain core cognitive/psychological dynamics (barring pathology or developmental abnormality) and that this cognition informs and constrains the like range of religious expression, CSR has no non-negotiable commitments.

Nevertheless, because some popularizers of CSR bring to their writing their own idiosyncratic sets of assumptions and perspectives, observers of the field may think that these assumptions are foundational to CSR. This dynamic has led to an assortment of common misconceptions about CSR that I have encountered when I speak about the area or discuss it with colleagues. I shall try to remedy a few of these below.

No particular model of human minds

No solitary understanding of how human cognitive systems work holds complete sway in the cognitive sciences. For instance, some cognitive scientists regard the "mind as computer" metaphor as helpful, others reject this metaphor, and still others say that it is not a metaphor but that human minds do computations and, thus, *are* computers.[18] Some cognitive scientists regard all thought as being fundamentally composed of sensory and behavioral experiences whereas others see minds as forming more-abstract representations that cannot be reduced to these experiences. These debates are the sort of high-level questions that get cognitive scientists out of bed in the morning, but those who study religion cannot wait until cognitive scientists all agree in order to get on with their work. Each scholar adopts the model they think best captures the available data and is most useful for their explanatory task. In this way, it would be wrong to say CSR is committed to a particular model of the mind.

CSR does not assume modularity

One contentious model of the human mind is whether or not the human mind has *modules*. That is, roughly, whether the mind is organized into largely independent subsystems that, once triggered, operate in isolation from each other. Cognitive scientists disagree about what *modularity* means, whether humans have modules, how many modules they might have, and what the relationship is between modules and specific underlying brain architecture (e.g., do "modules" require dedicated neural networks and must these neurons be in just one neighborhood in the brain?).[19] Cognitive scientists of religion likewise disagree on these matters. However, they commonly construe the mind as using specific and different methods for handling at least some classes of information that are particularly important to humans. So, for instance, human faces are processed in ways that are relatively distinctive in comparison to other kinds of visual information; basic physical objects appear to trigger a host of expectations concerning their basic attributes beginning in infancy. This kind of specialized processing is frequently termed *domain-specific* cognition and is often conflated with modularity even though it does not require modularity in the usual sense of that term.

CSR does not assume materialism

Christians and other religious observers may infer that CSR assumes humans are only physical, material beings and that human minds are ultimately reducible to the neuro-electro-chemical activities that characterize a functioning human brain. It is easy to see why it looks like CSR is committed to such a view. CSR does not (typically) bring the possibility of nonmaterial entities and factors into its causal accounts. The reason is simple: essentially all the scholarly community agrees that the physical and material properties of being human (e.g., having a body with particular biological properties, living in a material world, etc.) impinge upon how humans think and act. Even if one believes in an immaterial soul that is somehow instantiated in a body, the body (and brain) matters a lot. Since this premise is common ground, explanation building will tend to see how far it can go, just by resting on this shared foundation. It does not follow, however, that all CSR scholars reject the existence of nonmaterial realities such as gods or even nonmaterial human minds or souls.[20] The science simply does not make use of such possibilities.

CSR need not be evolutionary (in the usual sense)

Though CSR has been drawing ideas from evolutionary psychology for about fifteen years, and in the past ten has begun finding points of contact with evolutionary studies of religion, cognitive approaches need not be evolutionary—at least in the typical sense. As cognitive science has increasingly sought to use evolutionary theories to explain why human minds are the way they are, CSR has likewise made reference to these evolutionary theories. Nevertheless, it is possible to take the findings of cognitive science as unexplained brute fact and apply these facts to the study of religion in much the same way that early theorists such as Lawson and Harvey Whitehouse did.[21] They began with observations about how the human mind operates and remained largely silent about *why* human minds would operate that way. For instance, Whitehouse was concerned with how Melanesians remembered complex and dramatic rituals over long periods of time without written records, and found resources in the study of flashbulb memories (vivid memories of events of great personal significance even over decades) to account for these ritual performances. Whitehouse did not have to appeal to evolution to account for why flashbulb memories are formed the way they are; he simply applied cognitive psychology to a particular anthropological question.

It is the case, however, that much of CSR uses a different sort of evolutionary approach: cultural evolution. Scholars in this area typically reason that if a religious idea or practice is going to persist and spread successfully enough that we would recognize it as "religious" and not just an oddity of a few individuals, then those religious ideas need to survive a kind of selection process. Lots of ideas bubble into human minds for lots of reasons, but we need to account for why some survive and others do not.[22] In this sense, evolutionary thinking is used, but only as it concerns the evolution of cultural expression, and not in connection with the features of human biology.

CSR does not assume that cultural particulars do not matter

Because the most well-known CSR publications are books that paint broad pictures about whether religion is natural in some sense or why people believe in gods and the like, it may appear at first glance that CSR says nothing about cultural particulars or that cultural factors do not matter in religious expression. Such a characterization is demonstrably false, as already suggested above. CSR projects have long included those that try to marry cognitive predilections with local particulars.[23] What sets CSR off from many other approaches to the study of religion and culture is its insistence that not all human expression is merely or entirely the result of the particular history or culture of specific people. To see what is locally distinctive we need to know better what is cross-culturally common. CSR is also characterized by a tendency to see how far pan-cultural psychological dynamics can go toward explaining a particular form of religious expression before appealing to local specifics.

Why Might Christians Care?

In my experience of presenting this research area, even a brief overview such as the one above provokes anxiety in some Christians and excitement in others. The anxiety comes from the concern that CSR is yet another in a long line of attempts to "explain away" or undercut the justification for belief in God

or other Christian doctrinal foundations. The excitement, however, comes from seeing the possibility of scientific findings that resonate with theological notions or that may be useful for ministry. I sketch some of these possibilities below. As will be evident, this is meant as a few illustrative pointers only, toward some questions and applications that need to be explored by Christian scholars and ministry leaders.

Explaining away?

A cursory reading of many books and articles in the cognitive science of religion area may give the impression that CSR entails an "explaining away" of religious thought. Boyer referred to religious ideas as "airy nothing,"[24] and Ara Norenzayan in *Big Gods* likens religion to a ladder that humanity can now kick away.[25] Jesse Bering refers to God as "a sort of evolved blemish etched onto the core substrate of your brain."[26] Though it is certainly true that many scholars working in the CSR area are not theists or otherwise religious, and their disbelief can be glimpsed through their writings, it does not follow that CSR entails atheism or rejection of religious beliefs and practices.

What is fairly obvious is that having a scientific, psychological explanation for why people are inclined to believe in a god, for instance, does not by itself imply that one should not believe in a god. Undoubtedly, there is a scientific explanation to be discovered—likely an imperfect one—for why it is that certain people are inclined to believe that souls are distinct from bodies, for instance. There is also likely to be a scientific explanation for why it is that some people are inclined to believe that souls are not distinct from bodies. Whether one has (or does not have) a scientific explanation for holding a belief is independent of whether the belief is true or false. The same applies to explaining why some people believe God exists and some people believe God does not exist. To make the inference that a belief is false because it has a scientific cause—even a psychological or evolutionary cause—is to commit what philosophers call a *genetic fallacy:* even a dubious cause or origin of a belief does not necessarily mean that the belief in question is false.

To make the leap from there being a cognitive cause (or causes) that contributes to religious beliefs to the conclusion that these religious beliefs are somehow unjustified takes considerably more work than simply observing that such causes are now coming into focus. Whether or not findings and theories from CSR—particularly those concerning god-beliefs—support, challenge, or are neutral with regard to the truth, rationality, or justification of religious claims is an ongoing discussion among philosophers.[27]

Future research could examine more specifically how such scientific findings bear upon specific religions and religious beliefs. That is, instead of trying to argue broadly whether CSR "explains away" religion, it may be more helpful to consider whether CSR theories or findings undercut or support specific beliefs such as the existence of the Abrahamic God, Chinese ancestor-spirits, or Hindu reincarnation. It would be surprising if CSR has the same implications for all religious beliefs regardless of tradition or the specific belief.

Theological insights

It may turn out that CSR will provide evidence that can influence how we should think about many Christian theological ideas. I offer just two related examples: revelation and human nature.

In many Christian traditions, God is regarded as revealing himself through general revelation and through special revelation—particularly through scripture. This general revelation, which is accessible to anyone, gets expressed in various ways. Perhaps God reveals something about the divine character and attributes through creation, accessible directly through the senses. Maybe reason and reflection are resources given to us to better understand God. Additionally, common human experiences and cultural expression, including mythologies and moral codes, may be part of this general revelation, providing glimpses of the God who created us all. CSR holds the potential to influence this discussion. What are the ways in which people untutored by the special revelation of the Bible tend to naturally catch glimpses of God in the natural world? Are there patterns of thought that humans naturally gravitate toward when it comes to reflecting on human purpose and values that might be gifts pointing us toward the Gospel? Which patterns in mythology and moral codes from around the world are genuine and which of them reflect something about how God might be revealing himself to all peoples? CSR

has tools and insights that might be turned to these questions.

In a related way, CSR may give us insights regarding human nature. For instance, a God-shaped void in our hearts or an inchoate sense of the divine or *sensus divinitatis* has been posited by theologians throughout the centuries as part of human nature. We have theological grounds for suspecting such a feature of humanity, but do we have scientific evidence? If yes, what does that evidence tell us about the properties of this *sensus divinitatis,* such as when it is triggered and what it delivers to us in terms of beliefs or behaviors? Whose model of the *sensus divinitatis* is most likely to be accurate? Kelly James Clark and I have previously suggested that CSR may provide evidence relevant to these questions,[28] but a full treatment that will motivate new scientific and theological scholarship is yet to be done. Another question concerning human nature is the perennial theological question: What does it mean to be created in God's image? Assuming that being capable of a loving, personal relationship with God or being able to represent God in the creation is a key component of what it means to be God's image bearers, then CSR may contribute to discovering just what sort of conceptual equipment is related to these capacities and how they develop in humans.[29]

Practical implications

An intellectual feast may await Christian scholars concerned with these lofty theological questions, but CSR can also be usefully harnessed in practical ways in the church. Three areas come to mind for me: religious education for children, identifying challenging teachings for adolescents and adults, and rethinking rituals.

Often when we consider how to educate children, we assume uncritically that children's minds are amazingly pliable and that they will acquire almost any ideas, given the right motivation and instruction. Cognitive science teaches us that the story is not so simple. Children learn some things at specific points in their development more rapidly than at other times, and all of us are more naturally receptive to certain types of information over other types. That is, children are not blank slates waiting to be written upon or sponges that passively absorb their environment; they are active participants in shaping what it is that they will learn. Their learning is not determined by their will or their interest alone. The dynamics of their minds also influence what they will learn. CSR has begun applying these insights to how children's minds handle religious ideas. So, for instance, CSR has produced evidence that thinking about God as immortal, superpowerful, and superknowing is not as challenging to even five-year-olds as has often been assumed.[30] How to adequately harness these natural dispositions toward learning is yet to be adequately explored, but the potential exists to greatly improve upon common current practices.

CSR has also provided tools for identifying which theological teachings are likely to be especially challenging to adolescents and adults and why. As human minds develop, they acquire characteristic intuitions and heuristics that structure the dynamics of thought, but these tendencies then also make ideas that run counter to these intuitions, that is, *counterintuitive* ideas, more challenging. For instance, it may be that humans naturally form in-groups and outgroups, and it is easiest for the in-group to be people who are like us in terms of manner of speech, eating practices, and other customs. Successfully internalizing the idea of loving those who do not easily and naturally appear to be "neighbors" may require extra attention, particularly by identifying the cues we naturally use to identify in-group members and learning to see these cues better in others. Likewise, the concept of undeserved forgiveness and blessings in the face of guilt, known as *grace*, may run against our natural sense of tit-for-tat fairness. The doctrine of grace, then, may require extra attention in teaching and discipleship in order to override natural obstacles.

One of the older areas of attention in CSR is religious rituals and other practices. Interestingly, from a disinterested "outsider" perspective, scholars such as E. Thomas Lawson, Robert McCauley, Richard Sosis, and Harvey Whitehouse have built a case for the importance of collective religious actions in drawing communities together, marking important life transitions so that members of a community recognize those transitions as divinely sanctioned, and otherwise motivating religious communities to keep interacting with their God or gods.[31] McCauley and Lawson, for instance, observe that highly motivating rituals with enormous amounts of emotionally evocative pageantry that help people *feel* that God is acting in, say, uniting two people, transforming a child into an adult, or making an ordinary building

into a sacred space, are largely absent in contemporary North American Protestantism.[32] This fact, they suggest, may be detrimental to the commitment of churchgoers to their faith.

Conclusion and Invitation

As is probably obvious, this article was not meant as an exhaustive introduction to the cognitive science of religion with well-delineated implications for Christian scholars or ministry leaders. Rather, my aim here was to present enough background on CSR to pique interest in this area. Though interest in the area on the part of Christians is growing, Christian voices remain disproportionately few in scholarship in and around CSR; progress in applying this new scientific study of religion to distinctively Christian concerns and problems remains in its infancy. My hope is that this essay will encourage other Christians to explore CSR critically but constructively in order to discover how this scholarly area may service Christ and his church. ✠

Notes

[1]Dan Sperber, *Rethinking Symbolism* (Cambridge, UK: Cambridge University Press, 1975).

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[3]Emma Cohen, *The Mind Possessed: The Cognition of Spirit Possession in an Afro-Brazilian Religious Tradition* (New York: Oxford University Press, 2007).

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[8]Deborah Kelemen, "Why Are Rocks Pointy? Children's Preference for Teleological Explanations of the Natural World," *Developmental Psychology* 35, no. 6 (1999): 1440–52; Deborah Kelemen and Cara DiYanni, "Intuitions about Origins: Purpose and Intelligent Design in Children's Reasoning about Nature," *Journal of Cognition and Development* 6, no. 1 (2005): 3–31.

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