THE DUALISTIC, DISCARNATE PICTURE THAT HAUNTS THE COGNITIVE SCIENCE OF RELIGION

by David H. Nikkel

Abstract. A dualistic, discarnate picture haunts contemporary cognitive science of religion (CSR). Cognitive scientists of religion generally assert or assume a reductive physicalism, primarily through unconscious mental mechanisms that detect supernatural agency where none exists and a larger purpose to life when none exists. Accompanying this focus is a downplaying of conscious reflection in religious belief and practice. Yet the mind side of dualism enters into CSR in interesting ways. Some cognitive scientists turn practitioners of religion into dualists who allegedly believe in disembodied spirits. By emphasizing supernatural agency, CSR neglects nonpersonal powers and meanings in religion, both in terms of magical thinking and practice and of nonpersonal conceptions of divinity. Additionally, some cognitive scientists of religion declare that all humans are innate dualists. They use this alleged dualism to explain beliefs about both an afterlife and transfers of consciousness. Finally, some call on this dualism to serve a salvific function, trying to salvage some meaning to human life.

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A dualistic, discarnate, deracinate picture of human beings and the world has held sway in the West for hundreds of years, abstracting and separating us from our bodies and our convivial natural and social worlds. This picture becomes philosophically explicit in Descartes: humans possess a God-like mind that knows things clearly and distinctly, without—or with only incidental—mediation, and with certainty. Material things have no meaning, no value in themselves. As observed by religionist William Poteat, following Maurice Merleau-Ponty, this picture received artistic expression

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in various Renaissance paintings, where all is crystal clear in foreground and background (Poteat 1985, 59; Merleau-Ponty 1973, 149–50). The view is that of a disembodied eye, the eye that God would have if God had an eye, a view from the outside, a view from nowhere.

Models of reason based on this picture have benefitted humankind, not least through advances in science. However, when a strictly objective and scientific model of reason analyzes human nature and meaning, we become objects, mere things, lacking personhood. The modern—and postmodern—tendency has been to choose one side or the other of the dualism: an idealistic or a physicalist monism. This either-or misses the radical—getting to the root of the matter—alternative of overcoming the dualism by taking as surd or starting point our embodiment in nature and society as intrinsically meaningful, indeed even sacred. A mutually constitutive relationship exists through our attentive, embodied effort to make sense of the world. In this connection, Poteat coined the term "mindbody."

Monism of the mind continues to have its influence: for example, constructivism in the humanities and social sciences that ignores or downplays the constraints that our bodies and environment place on culture. Nevertheless, at least for the scientifically informed, the dominant tendency has been to opt for a physicalist monism. This affects not only those in the academy but the wider culture, as people question, "Am I just the synapses of my brain?"; "Am I merely a complex configuration of matter and energy?" Just as surely as idealism, this physicalist monism disembodies us, objectifying us and abstracting, alienating us from our experiential or lived body and its inherent meaningfulness, from our meaning-laden embodiment in the world.

This dualistic, discarnate picture haunts contemporary cognitive science of religion (CSR). Cognitive scientists of religion generally assert or assume a reductive physicalism as their own metaphysical or ontological stance. This reductionism comes primarily in the form of unconscious mental mechanisms or processes that cause humans to detect supernatural agency where none exists and to find overarching or underlying meaning when no such meaning exists. Furthermore, because this reductionism plays out in terms of allegedly illusory *agential* intentionality and causality, CSR neglects nonpersonal powers and meanings in religion, both in terms of magical thinking and practice (primal and contemporary) and of nonpersonal conceptions of divine or ultimate reality. This narrows the aspects of religion to which CSR pays attention.

Accompanying this focus on prereflective mechanisms is a downplaying of conscious reflection in the formation of religious beliefs and practices. Yet the mind side of dualism enters into the work of cognitive scientists in interesting, sometimes strange, ways. Several cognitive scientists of religion turn practitioners of religion into dualists with regard to supernatural agents, claiming that they believe in disembodied spirits. Moreover, some

cognitive scientists of religion declare all humans to be innate dualists. They use this alleged dualism both to explain the genesis of afterlife beliefs and to explain the plausibility of transfers of consciousness, whether in possessionary experiences with fairly obvious religious significance or in works of popular culture where people exchange bodies, such as the film *Freaky Friday*. Finally, some call on this dualism to serve a salvific function, precariously trying to hold on to some meaning to human life.

The Dominance of Unconscious Mechanisms

Children and unconscious mechanisms. CSR invokes two lines of support for the theory that human reflection regarding possible extraordinary, supernatural, or ultimate causes is typically overridden or overwhelmed by prereflective mechanisms: (1) that children naturally or spontaneously incline to agential or teleological explanations for many natural phenomena; and (2) that for adults reflective "theologically correct" (or "off-line") ideas are typically overridden in actual religious practice by "minimally counterintuitive" (or "online") concepts of supernatural agents.

Deborah Kelemen analyzes various studies relating to children's teleological or functional explanations for natural entities (as opposed to merely physical or mechanical explanations) and/or children's beliefs about God or other supernatural agents. She concludes that the CSR evidence indicates children are natural teleologists (indeed, "promiscuous teleologists" [Kelemen 2006, 100–02]) and "tentatively suggests" an affirmative answer to the question of her article title, "Are Children 'Intuitive Theists'?" (109). Regarding these two tendencies in children, Kelemen cites a study suggesting to her that the teleological stance and the invoking of divine intentionality in designing and creating things bear a "systematic relation" or "connection" to each other (2006, 108–09; see Kelemen and DiYanni 2005). Olivera Petrovich (2005) goes further in holding that young children possess innate "core religious concepts," since they overwhelmingly answer that plants and animals have been created by God. Based on the fact that very young children assume that other people perceive what they perceive even when not in a position to do so and on various experiments elaborating upon that fact, Justin L. Barrett hypothesizes that such children attribute to agents superpower (Barrett 2012, 74–77), superknowledge (82–96), and perhaps immortality (113–17). Thus, they are predisposed to believe in a monotheistic God. I will note that Barrett departs from the usual atheism of most cognitive scientists of religion who assume that theistic or teleological preconscious mechanisms or processes explain away religious belief; instead, Barrett views the alleged predisposition to believe in theism as according with the Calvinistic tradition of humans having a *sensus divinitatis*, or sense of the divine (see also Clark and Barrett 2011). Of course, the fly in CSR's ointment is that young children in the West

have encountered the concept of God from adults before being studied by cognitive scientists. No known cases exist of children inventing on their own, *de novo*, a concept of a powerful supernatural agent.

Furthermore, several studies or aspects thereof (three of which Kelemen mentions), which I will unpack in the remainder of this section, raise questions about how strong the proclivity of children to invoke teleological or supernatural agential explanations actually is. Kelemen parenthetically refers to a study by Frank C. Keil with one countervailing result but does not specify nor engage that result (Kelemen 2006, 101–02). As part of a series of experiments on categorizing life forms by children in kindergarten and Grades 2 and 4, Keil mentioned and asked questions about a "thing" that could enter a human body and cause harm. Subgroups were given alternative descriptions of the thing: (1) functional or teleological where the thing has to get inside people's bodies and use parts of their bodies, or it won't last long (Keil 1992, 123–24); (2) simple mechanical where the thing causes abrasions; (3) intentional "that directly attributes goals and desires" to the thing; (4) artifactual where a human designed the thing; or (5) finally no description at all (Keil 1992, 124–25). "Children at all ages thought that the 'teleological' thing did not know what it was doing any more than the mechanical one, attributing knowledge roughly three times as much to the intention/desire entity," Keil concludes (126). This result indicates that (1) teleology/functionality does not necessarily nor always entail intentionality on any agent's part, and (2) teleological/functional explanations can sometimes be more like mechanical/physical than intentional ones. If the human propensity to ascribe intentional agency were as strong as CSR generally holds, one might expect that at least the youngest children would attribute such to the "functional/teleological" thing. After all, blaming evil spirits for disease is rather common among indigenous peoples.

I appreciate that Kelemen brought to my attention a 1932 study by Margaret Mead of children from the animistic Manus culture, through her very brief discussion of it in a footnote (Kelemen 2006, 111, n. 1). She casts doubt on Mead's negative conclusions regarding spontaneous animistic thinking by the children, citing both the Mead study's use of drawings and of questions concerning malintentioned artifacts (specifically, an allegedly malicious canoe and pencil). This characterization does not do justice to the scope of Mead's fieldwork, which analyzed 32,000 spontaneous drawings as well as responses to ink blots and which involved observation of much interaction of children in play and conversation with both other children of varying ages and adults, including children's responses to adult explanations, severe illness, accidents, storms, cyclones, and animals. While the questioning designed to invoke animistic responses might better have focused on natural phenomena rather than human

artifacts, one of the six "stimuli" does seem rather evocative: Mead identified her glass wind chimes as a *ramus*, the Manus term for a charm intended to cause other people to give the possessor objects she wants. Overall, despite copious opportunities to refer to supernatural agency, such references were minimal. While adult Manus typically attribute chance events to a spirit, including blaming a spirit for the loss of a small object, and attribute cyclones to an angry spirit as punishment, no child was observed doing so (Mead 1932, 181). Only one (of 41) children spontaneously talked about ghosts, though boys have a guardian ghost assigned to them at age five or six. The boy who did talk about his guardian had suffered the death of his father two years ago, and this talk was "regarded as aberrant by his companions" (182). Though "children hear a good many reports of ghostly activity," children identified only six of their drawings as of ghosts, and these bore "no distinguishing ghostly attributes" (183). Parents warn children that they may be eaten by *tchinals*, or land devils, if they go play at a "slightly distant islet." However, children show "but slight real belief." Children invoked *tchinals* in three circumstances: (1) a light-hearted game of capture on one occasion (183); (2) labeling the result of a failed attempt to draw a human as a *tchinal*; and (3) adding "of a *tchinal*" to their description of an ink blot that bore "little resemblance to the object named" (184). The drawings identified as a *tchinal* never showed any of the features of a *tchinal's* traditional appearance (183). Finally, adult Manus believe that seeing one's reflection in fresh water will cause some of one's soul stuff to be captured by a water demon. However, because children nevertheless will look at their reflections, parents do not take children to the mainland (183).

Mead concludes that "Manus children not only show no tendency towards spontaneous animistic thought, but that they also show what may perhaps legitimately be termed a negativism towards explanations couched in animistic rather than practical cause and effect terms" (Mead 1932, 186). Kelemen concedes that, while Mead's study might support that children are not natural animists, it does not count against her theory that children are natural theists (Kelemen 2006, 111, n. 1). I would note that "theism" insofar as it contrasts with "animism" involves wider scope and greater abstraction: that is, gods of ancient polytheism are in charge of a whole realm like the sea or sky, while spirits are localized—I would say embodied—in the wind, rain, mountain, tree, and so forth. (though some hunting-gathering tribes have a Lord or Lady of the Animals). Kelemen undoubtedly would have liked Mead to have asked the Manus children how something in nature got there in the first place or came to be, thus providing an opening for them to posit a creating supernatural agent. Yet nothing prevented the Manus children from spontaneously invoking a god(dess), including a Lady or Lord of the animals—wider in scope than a

localized spirit or ghost—to explain chance events, illness, storms, or even how animals or humans came to be.

Mead even theorizes about why Western children are more prone to "animistic" thinking (or thinking about supernatural agents) than these children of an animistic culture. Relevant factors about Manus culture include a simple language without metaphors involving personification of natural or artifactual objects, the fact that young children learn "to make correct physical adjustments" to the environment with the consequence of failure being "severe punishment," and the fact that (while overhearing adult religious talk and receiving warnings about *tchinals*) children do not hear their tribe's myths nor receive explicit religious instruction, nor do they take part in religious ceremonies. In contrast, English provides a wealth of "animistic" or personalizing metaphors, while parents share stories and poems that personify animals, forces of nature, and artifacts; the physical environment for Western children in its complexity is in many ways beyond their understanding and control; and Western children participate in religious ceremonies and receive religious instruction (Mead 1932, 187–89) (and I would add learn beliefs and practices relating to not-formally-religious supernatural-type figures like Santa Claus and the tooth fairy). Mead's research suggests that study of other tribes not influenced by Western culture or adult theistic concepts, to the extent such groups can be found, would advance CSR. To her credit, Kelemen advocates "further research" to determine how well the "description" of children as intuitive theists "really holds across individuals and cultures" (2006, 109).

E. Margaret Evans (2001) conducted a study of three different age groups of children and their parents, from fundamentalist and nonfundamentalist communities, on belief in creationism versus evolution, as well as in spontaneous generation, to explain the genesis of species. Citing Ernst Mayr, she notes that "unlike Lamarckian evolution or creation, spontaneous generation explanations are nonteleological in that they do not directly invoke purpose or an underlying design" (Evans 2001, 236). In the open-ended question segment of the study, participants were asked how the first representative of the following three species came to be: an Asian sun bear, a tuatara lizard, and a human (242). This segment would be the most likely to elicit spontaneous thinking, in contrast to the closed or forced response segment. While Kelemen cites this study as supporting that children favor "creationist" accounts (Kelemen 2006, 100, 102), she does not mention the result I find the most interesting for the purposes of this article: Evans finds that among the youngest children studied, 5- to 7-year-olds, "no significant difference between creation and spontaneous generation" beliefs exist for nonfundamentalist households (2001, 246–47). As above, note that spontaneous generation is a nonteleological, indeed physical, explanation. Unless they received specific instruction—which was the case for fundamentalist households—this age group would be the least likely to

be influenced by their culture. This result clearly casts some doubt on the theory that children are strong natural teleologists or intuitive theists, as does Mead's research.

Finally, in the vein of research by cognitive scientists who see young children as "intuitive scientists," Laura E. Schultz and Jessica Sommerville conducted a series of three experiments on children between the ages of three and one-half and five and one-half years. These experiments involved lights and switches/buttons that acted stochastically. The issue concerned what inferences the children would make about possible unobserved causes. In their article, "God Does Not Play Dice," which was reported in *Science and Theology News* (Orem 2006), the experimenters conclude that young children are parsimonious in making inferences about unobserved causes and that they infer deterministic physical causes much more often than they infer chance (which would include intervention by supernatural agents in this context) (Schultz and Sommerville 2006).

The power of "theologically incorrect" mechanisms. Another way that the CSR community emphasizes unconscious mechanisms or processes over religious reflection is the claim that theologically correct ideas are typically overridden in practice by anthropomorphic concepts of supernatural agents. As both a theologian in the academy and a pastor of Christian congregations over the years, I readily grant that "popular theology," the theology of the people in the pews, often diverges from that of theologians, a divergence that includes greater anthropomorphism. Yet I judge that a major study by Justin L. Barrett and Frank C. Keil (2006) overstates the degree of unconscious anthropomorphism, thus understating the role of theological reflection. This study featured eight stories involving God, followed by a series of questions. In order to control for several variables, they ran three variations of the study, the first two including several subgroups. I find wording and structural problems in most of the stories. The authors mention that one interpretation of why subjects miss, or anthropomorphize, is that questions may entail the following: "The God items may just be more subtle, not because of the presence of an anthropomorphic God concept, but because the items emphasize very slight distinctions" (Barrett and Keil 2006, 127). A "yes" answer to the following questions was scored as theologically incorrect anthropomorphizing. (1) "God was pleased by seeing the girl put the bird in its nest." (Actual wording: "God was aware of the girl's deed and was pleased by it.") (143) (2) "God heard the woman's prayer and helped her." (Actual wording: "God responded" [to the woman's prayer and helped her].) (144) Such scoring strikes me as too picky, by assuming that "yes" answers meant the subjects took "seeing" and "hearing" literally as applied to God. Yet even as people sometimes say "I see" a point meaning "I know," so subjects may have understood "see" in that sense. Believers frequently speak of God "hearing" prayers,

indeed hearing all prayers, just as much when the prayers are silent as when spoken out loud. I believe that some incorrect answers on that item came from subjects who did not interpret "hearing" as entailing physical hearing. Moreover, the wording of at least three of the other stories themselves involve anthropomorphizing if taken literally: God "was listening," "was looking," "watched," and "enjoyed the smell" (this last one from a fourth story is admittedly ambiguous; in my theology, one would avoid simply saying "God enjoyed the smell" as if God had an olfactory system of God's own, instead holding that God experienced the enjoyment by the chef and his customers of the smell) (127, 137).

The authors also suggest another interpretation of why subjects may miss questions by anthropomorphizing God: "the context of the story" (Barrett and Keil 2006, 127). I believe some contextualization in the stories does indeed lead to a higher incidence of incorrect answers. Besides the just-mentioned anthropomorphic wording, some of the wording and structure relating to time appear to prejudice subjects towards anthropomorphizing. Many of the stories concern whether God can do two activities at once or whether God's awareness of one event can be compromised by an intervening event. Two stories state that "God *finished* listening to the birds" and "looking at the rock," respectively (137, my emphasis). Such wording contradicts divine omniscience: an all-knowing God would not "finish listening" to the birds unless and until the birds finished singing and would continue being aware of the state of the rock. This theologically incorrect, anthropomorphic wording could increase the likelihood that subjects would answer that God could not "hear" the birds when a loud jet flew by and that a cattle stampede obscured the state of the rock for a time. In another story, while helping an angel work on a crossword puzzle, God responds to the prayer of a woman lost in a forest by comforting and showing her a path out. The story closes with the sentence, "God helped the angel finish the crossword puzzle" (143). Putting that sentence at the end, without any reference to God continuing to help the angel in the middle of the story (which of course would be theologically correct) may in itself prejudice some subjects to anthropomorphize. A more obvious problem exists in relation to this story. A "yes" answer to the following question is scored as theologically incorrect: "After answering the woman's prayer, God finished helping the angel work on the crossword puzzle" (143). Assuming that God is omnitemporal rather than strictly atemporal with respect to experiencing the world (which probably characterizes most contemporary academic theology as well as popular theology), the statement is theologically correct under the following scenario, a scenario quite compatible with the story: God continues to help the angel work the crossword while helping the woman and then finishes helping the angel after helping the woman. Finally, a story about a boy apparently in danger of drowning when his leg got caught while swimming appears to rather blatantly "lead the witnesses,"

that is, bias the subjects with the following wording: "*Though* God was answering another prayer in another part of the world when the boy started praying, *before long* God responded" (137, my emphasis). A theologically correct storyteller would never use the word "though," because it is both irrelevant and inappropriate with respect to a God unlimited in scope of interaction. In conjunction with "though," the words "before long" further prejudice subjects to limit God to one activity at a time.

As I began my consideration of Barrett and Keil's 2006 study, I conceded that some anthropomorphism happens in popular theology. I readily concede that their study supports the existence of some theologically incorrect anthropomorphism in their subjects. However, given the above flaws in their study, I conclude that they overestimate the influence of prereflective processes and mechanisms in religious belief, even as they underestimate that of religious reflection. Barrett and Keil do use an interesting variation in their study in attempting to control for bias. With one group of subjects, they substituted for God the "fictitious characters," Mog, Beebo, or Swek, "from another dimension of existence" "endowed with the properties commonly associated with God" (Barrett and Keil 2006, 132, 145). These subjects did much better at avoiding anthropomorphism. However, this was the only variation of the study in which the researchers provided subjects with explicit descriptions of the extraordinary qualities of the super-agent(s), asking subjects to "try to keep in mind when reading the stories" these "fairly unusual characteristics" (145). Furthermore, this variation involved an unlimited time for subjects to answer questions with a printed transcript of the stories as well as of the descriptions of the three super-agents in front of them (132). Thus, I do not find its results conclusive as to an allegedly greater tendency to anthropomorphize God than postulated "natural" super-agents.

I will offer some concluding thoughts on the respective roles of preconscious mechanisms and conscious reflection. Some research supports the existence of two decision-making systems of mammalian brains operating at different speeds in different contexts. The faster subcortical system would manifest the stronger tendency to overdetect agency. The slower, more reflective, in certain ways more accurate, cortical system could thus serve as a corrective to overactive agency detection in religious matters (as it clearly does in everyday situations where we figure out that the rustle in the bush is just the wind rather than a harmful predator). I would caution both that I suspect the human brain is too complex to be reduced to just two systems here and that the systems sometimes influence each other rather than simply work separately. I grant then that prereflective processes affect conscious reflection. I also acknowledge Cohen, Lanman, Whitehouse, and McCauley's claim that, by researching unconscious processes, CSR does not deny the existence of other influences on religious belief and behavior (2008, 114). Additionally, philosopher of religion Kelly

James Clark and Barrett (2011), as well as philosopher Joshua C. Thurow (2013), argue that CSR theories and findings relating to hyperactive agency detection do not debunk religious belief provided independent evidence supports it, here appealing to reflective reasoning and to religious experience. (While Clark and Barrett stipulate the immediate nature of religious experience apart from the "reasoning faculty" and "propositional evidence" [2011, 670], neither they nor Thurow acknowledge that claims of such experiences could easily be suspect as being dependent on unreflective hyperactive agency detection.) I especially welcome Harvey Whitehouse's declaration that "conscious reasoning and reflection also influence the way we behave, in turn shaping and constraining processes of cultural innovation and transmission" (2007, 250; see also 267), as well as Richard Sosis and Jordan Kiper's underlining the "fallacy of . . . using a proximate mechanism to dispel a higher-order belief" and the difficulty of "a move from unreflective to reflective cognition" (2013, 260). However, this caveat of Sosis and Kiper regarding "the claims of CSR" does critique much of the CSR community. And Clark and Barrett generalize that those cognitive scientists of religion who view religious belief as an "evolutionary by-product" find such belief untenable (2001, 662–63). Furthermore, to my knowledge CSR has done little research on how conscious thinking influences religious belief or on how the beliefs of adult culture, which may reflect conscious reflection, affect children's beliefs in supernatural agency and meaning. Though all cognitive scientists of religion might accept the influence of reflection on the details of supernatural beliefs, my sense is that most assume that hyperactive detection agency adequately explains the genesis and persistence of all belief in supernatural power(s) apart from any appeal to reasons derived from reflection. In the pages of this journal, Lluis Oviedo notes the focus of CSR on "unconscious deep mechanisms" and its neglect of the "conscious mind" (Oviedo 2008a, 113–14, 118; see also Oviedo 2008b, 391). He points to the incapability of these mechanisms to explain religious conversion, in its movement from one complex system to another (Oviedo 2008a, 112, 122). Oviedo also cites several cognitivists who seem "to explain away religion as a whole" (Oviedo 2008a, 40) including Joseph Bulbulia's characterization of religion as "cognitive noise," "illusion," and "self-deception" (Bulbulia 2005, 84, 90) and the following from Pascal Boyer: "Cognitive accounts of religion even suggest that there is no good *reason* for the existence of religious thoughts and behaviors" (Boyer 2004, 40, my emphasis). Perhaps not coincidentally, Boyer titled his 2001 book *Explaining Religion.* In this vein, I would add Paul Bloom's contention that "the predisposition to believe in supernatural phenomena . . . is an incidental by-product of cognitive functioning gone awry" (Bloom 2005, 105). Finally, I would emphasize that the great complexity and detail of the religious beliefs and practices of most human societies through prehistory and history demand a large role for reflection centered

in the neocortex. Sharing a modern scientific worldview with CSR, I grant the inaccuracy of animistic beliefs. However, animistic and other religious societies, through their prereflective and more reflective thinking, may have realized a deeper wisdom than typically allowed by CSR: that our embodied existence may be imbued with sacred meaning inherent in the nature of reality.

Unconscious mechanisms and larger meaning. Speaking of meaning, as suggested earlier some cognitive scientists of religion not only regard mental mechanisms as causing belief in illusory supernatural spirits but also as causing humans to posit a nonexistent sacred or underlying or overarching meaning or purpose to life. In contrast, they maintain the reality of at most individual or group human meaning.[1] In evaluating moral meaning, Jesse Bering writes that our sense "that we *should* or *ought to* behave a certain way" (2011, 70, emphasis Bering's) and our perception of "'good' and 'evil'" (2011, 108) are wholly matters of "natural evolutionary processes" (2011, 109), "because morality works in a mechanistic, evolutionary sense" (2011, 75). Thus, "the resultant cognitive system created the functional illusion that the social behaviors of the self 'mattered' outside of human relations" (Bering 2006, 461). Not only rejecting the notion of particular events as supernatural signs—a rejection I share—Bering goes much further in denying "an inherent purpose in life" (2011, 74). Our teleo-functional proclivities, fully explained by natural selection, cause even nontheists to ask about "the purpose of life," unable to "easily shake their curiosity about this seemingly grand and obscure mystery" (Bering 2011, 46). Indeed, Bering titles one chapter of *The Belief Instinct*, "A Life without Purpose" (2011, 39–75).

Paul Bloom expounds upon our tendency to regard the natural word as artifactual, a tendency he views as cognitively mistaken in light of evolutionary theory (2004, 57–63). Evolutionary theory thus contradicts the "appealing" notion of purpose: "Artifacts have purposes, they exist for reasons, and they can be put to proper and improper use. If we are artifacts, then all of this holds true for us. Indeed, religious texts are often explicit as to what those purposes are" (2004, 63).

Like Bering and Bloom, Edward Slingerland holds that evolution explains why "our promiscuous teleology and overactive theory of mind" give rise to a concern for long-term or larger meaning (Slingerland 2008a, 286). He states that "feeling this kind of resonance between our own concerns and the functioning of the universe makes us feel really, really *good*" (2008a, 285, emphasis Slingerland's) and that "(t)he feeling that our work or life has a purpose involves embedding it in an at least implicit narrative" (2008a, 286). Such feeling is illusory, however, "involv(ing) the evolutionary hijacking of reward centers in the brain," albeit "we are apparently designed to be irresistibly vulnerable to this illusion" (2008a, 286–87).

Thus the reductive physicalism of many cognitive scientists of religion leads to rejecting the reality of any sacred or larger underlying or overarching meaning or purpose to life or to nature, and perhaps leads to the precarious status of any meaning, given the mechanistic and illusion-weaving qualities of evolution.

Disembodied Supernatural Agents

Regarding supernatural agents as essentially disembodied represents one of the ways that some cognitive scientists of religion project onto religious believers a mind-body dualism. I would note that this disembodiment is incompatible with the tendency to anthropomorphize supernatural agents emphasized by Stewart Guthrie and Barrett. Pascal Boyer writes:

> First, note that gods and spirits are not represented as having *human* features in general but as having *minds*, which is much more specific . . . . But they do not always project onto these agents other human characteristics, such as having a body . . . . Indeed, anthropologists know that the *only* feature of humans that is *always* projected onto the supernatural is the mind [emphasis Boyer's]. (Boyer 2001, 144)

This suggests that any physical attributes are incidental or beside the point. Supporting such an interpretation of Boyer is his claim later in the same work that "humans are incorrigible *dualists*. That is, we all intuitively feel that body and mind are things of a different nature" (Boyer 2001, 224, emphasis Boyer's). Bloom lists his first criterion "for creating a supernatural being" as follows: "Start with the notion of an immaterial soul." While a soul "might exist" animistically in "a mountain or a tree" or possess someone else's body, for Bloom "a spirit, ghost, or deity" has an essentially discarnate nature (212–13).

Understanding supernatural agents as discarnate runs counter to the history of religions. Primal and ancient animistic belief entailed embodiment in nature or in some kind of anthropomorphized or animalized body, as with the Toraja belief that each rice grain is a little yellow person (Eyre and Montagnon 2001). Of course, these embodied spirits may not suffer all the limitations that humans and animals endure with their bodies. And their bodies may be hidden from us or even invisible to our ordinary vision. As some ancient religions developed, in Greece for example, some animistic beliefs gave way to a god or goddess who controlled a part of nature, like Poseidon and the seas. However, such ancient gods and goddesses were blatantly anthropomorphic in body. Evolutionary biologist and philosopher John Wilkins (2007, 2009a, 2009b) theorizes about those anthropomorphic gods who began as leaders of a group and whose physical and social height and stature were mythologized into a spatially higher realm after their death. Not only did primal and ancient people typically depict deities

as embodied, they believed the actual divine bodies bore some analogy to their representations.

While ancient Judaism prohibited representation of God (the historical reality of which happened much later than depicted in Hebrew biblical narrative), it did not explicitly deny, and in some scriptural passages specifically refers to, God's body. The underlying rationale was that the greatness of God and the divine body in comparison to human or animal bodies would countenance no visual representations. The complete disembodiment and immateriality of God in learned Jewish and Christian theology resulted from a long journey strongly influenced by Greek philosophy, particularly of the Platonic and Aristotelian varieties. (Even stoicism, influential in the ancient world and in some respects on Judaism and Christianity, affirmed some materiality to the divine, even in its pure state of fire.)

Neglect of the Nonpersonal Supernatural

Another consequence of this projection of dualism is the relative neglect by CSR of magic, insofar as it involves nonpersonal supernatural powers and meanings. James Frazer famously distinguished between magic and religion, consigning them to different eras of human prehistory, as well as demarcating magic as a realm of nonpersonal or nonintentional causation and religion as the realm of appealing to the intentions of spirits or gods. Scholars of religion since then have corrected Frazer in that both realms appear in indigenous religion and that some beliefs and practices combine both. While some contemporary voices emphasize the social dimension of ritual and magic and some even would eliminate any nonintentional elements (Lawson and McCauley 1990), such elimination flies in the face of the evidence. (In a counter note, Whitehouse acknowledges both "quasi-mechanical" and "agent driven" supernatural causation [Whitehouse 2012, 280]. Additionally, Sosis assumes that the recitation of Psalms by contemporary Israelis as "magico-religious" responses to the threat of Hamas rocket attacks involves belief in not only divine intentional intervention but also more automatic processes [Sosis 2007].) Some ritual practices of indigenous peoples, as well as the use of charms and amulets, involve the belief that, if the procedure is performed correctly, a certain magical result will eventuate, or is more likely to eventuate, apart from the intentions of any supernatural agent. For example, E. E. Evans-Pritchard observed the use by the Azande of northern Africa of divination through poisoning a chicken in order to determine whose witchcraft had brought great harm to an individual (1937, 282–312), as well as their manifold explanations of why the ritual sometimes failed (338–51). Azande believe that witchcraft itself is a physical substance with supernatural powers that resides within the witch (9, 21–23), sometimes bringing harm without the knowledge or intention of the witch (121). While Evans-Pritchard uses the phrase

"poison oracle," he does not mean to suggest that a god or spirit is addressed and answers. Rather, the officiant addresses the *benge*, the poison, which provides the answer through the protocols of the ritual. Evans-Pritchard raises the following question: "Do addresses to medicines and attributions of psychic action to them justify us in concluding that Azande personify them?" He answers: "Magical action is *sui generis*, and is not explained by the presence of spirits residing in medicines nor by the attribution to them of personality and will"—they do not have mind of their own (465; see also 441). The poison oracle, healing rituals, and other traditional Azande rituals involve no invoking of ghosts or gods, nor do the explanations for failure involve the intentions of supernatural agents or of the ritual participants.[2] Even the establishment of rituals does not involve specific reference to their supreme being or other supernatural agents, with one exception: although the Azande have a general myth attributing the creation of all reality to Mbori, the supreme being, it does not specifically refer to oracles or medicines. When asked where a medicine "came from," an Azande will not mention Mbori, except when pressed on the issue of "an ultimate origin" (Evans–Pritchard 1937, 441–42) A myth concerning the setting of broken bones constitutes the one exception that involves Mbori in the institution of a healing ritual (Evans-Pritchard 1937, 498).

One can see a related phenomenon among the classical world religions. For example, the traditional Catholic doctrine of *ex opere operato* holds that having a duly ordained clergy officiate properly at a ritual ensures the ritual's efficacy, as long as the recipient has even a "virtual" intention (Eastern Orthodoxy, while not enshrining it in a doctrine, has a similar understanding). That is, the only thing that could prevent its efficacy would be for the intended beneficiary to be absolutely ignorant of the purpose of the ritual or deliberately to erect an obstacle, for example, a recipient of Holy Communion thinking to oneself, "The only reason I'm participating in this hogwash is to look good to my in-laws." In this Catholic and Eastern Orthodox understanding, as well as in *some* tribal religious rituals, (a) supernatural agent(s) may institute the ritual and its proper procedures, but then does not make interventionist decisions concerning its operation. Additionally, I would note the persistence of magical thinking in secular contexts by some people, for example, believing that wearing or doing a particular something brings good or bad luck. This involves causality outside the normal natural order, but causality not conceived of as supernatural, at least not in any explicit sense, and certainly not as involving supernatural agents.

Justin Barrett and E. Thomas Lawson (2006) conducted a study that purports to show that people's natural intuitions about what makes a ritual effective revolve around both the supernatural agent(s) involved and the human ritual agent, thereby supporting Lawson and McCauley's (1990) "social action" theory of ritual. The authors indicate that this social

action theory makes the following "specific empirical prediction" regarding the ritual agent: "since rituals are intended events evoking superhuman intervention, an agent that can reasonably intend to achieve the specified consequence of the ritual must initiate the action" (Barrett and Lawson 2006, 217). The study used twelve sets and twelve variations of fictitious rituals with "almost exclusively Protestant Christian" college student subjects. The authors regarded the relative lack of ritual activity among Protestants as an advantage, in that they could ensure that none of the fictitious rituals resembled any rituals observed by Protestants (218). I detect, however, bias in the initial instructions as to what makes a ritual "special": "For the following ratings 'special' means someone or something that has been given special properties or authority by the gods" (218). This does not account for the possibility—indeed, the reality, as I have argued—of belief in magical powers not instituted by spirits or gods among some tribal cultures. The upshot of the study was that subjects predicted that changes with regard to a special agent and/or a special instrument (in comparison to various prototypes) would affect the efficacy of the ritual much more so than changes in the action. While change in both special agent and special instrument had a greater effect than either individually, special agent changes (while rated slightly higher) "were not rated significantly different" statistically than special instrument changes (221–22). The authors do not comment on this lack of significant difference; however, given the stated importance of the intention of the ritual agent for the social action theory, I would think that this theory would predict a more significant effect from changing the special agent than from changing the special instrument. Perhaps the problematic initial definition of "special" as receiving properties or authority from the gods means that the gods' intentions trump those of the ritual agent.

The biggest problem with the study, however, has to do with the selection of almost exclusively Protestant subjects. Probably the most common understanding of ritual among Protestants is a representational or symbolic one, in the sense that the ritual does not "do" anything itself but rather is an outward sign of something that has already occurred within the participant in relation to God. This understanding manifests itself in the many Protestant denominations and churches that practice only believers' baptism. I will grant, from my experience as a pastor in a denomination practicing infant baptism, that sometimes parents not involved in the church expressed a desire "to get the baby done," reflecting some influence of a belief in the efficacy of the ritual act for ensuring that their baby would not go to hell if the child died. Behind this "just in case" attitude stands some ignorance of the fact that today all major Protestant denominations (as well as the Catholic Church) officially teach that all deceased babies will go to heaven—though I grant that some active church members may still be influenced by the older attitude. Among those Protestants who do

regard ritual itself as possibly efficacious, its efficacy for adult participants usually depends on intention, upon the faith response of the participant to the gracious initiative of God, and perhaps upon the faith of the officiant. This contrasts with the Catholic and Orthodox tradition of downplaying specific intent of the participant, as previously mentioned. Regarding the specific intent of the officiating minister, the Catholic and Orthodox Churches (before they split) dealt with that in the fourth century with the Donatist controversy, where the issue was whether baptisms performed by a priest who recanted his Christian faith under persecution were valid. The Church ruled that the validity depended only upon the priest being duly ordained, not his intention. Barrett and Lawson attempted to control for what we might call an "agent" bias in the subjects with a variation on the experiment. To rule out either that something in the design of the fictitious rituals and their permutations favored agency or that subjects belonged to "a cultural group that heavily stresses the importance of agents" regardless of context, this variant added an "other-world condition"—where the same outcomes as in the fictitious religious ritual occur, but happen without any connection to supernatural agents (2006, 224–25). Not surprisingly, with regard to this other world, the action was more important than the agent, as "participants used ordinary mechanistic causal expectations" (227). Unfortunately, this attempt to control for a general, context-neutral bias is beside the point. The bias of many Protestants is a cultural one specifically relating to religious rituals, that their efficacy depends upon the faith of the participants and God's intentions towards the faithful and God's discernment of faith in participants. As above, this Protestant understanding differs from that of traditional Catholic and Eastern Orthodox Christians, not to mention adherents of various strands of other world religions and of various indigenous religions.

The narrow focus on *personal* agency renders CSR unable to account for nonpersonal concepts of divine or ultimate reality, common in Asian religions, such as the Dao, Tian (Heaven), or Sunyata (Emptiness). I acknowledge that the Dao and Tian have also accommodated personal or anthropomorphic construal in their history, especially in terms of popular religion (Clark 2007; Clark and Winslett (2011); Puett 2004). Still, many have understood them in nonpersonal ways. With respect to Buddhism, while celestial bodhisattvas as well as the historical Buddha were understood as divine beings, they did not have ultimate status in their own right nor did they function as creator gods. Rather, they can be understood as embodiments of the ultimate reality of Sunyata, the dharmakaya (truth body), the Buddha-nature, or Nirvana, which serves as the ultimate source. This stress on personal agency also explains CSR's inability to conceive of the possibility of any overall directionality or meaning to the universe in nonpersonal terms; rather, the only possible meaning or directionality must be that intended by a supernatural agent (and of course cognitive

scientists of religion generally deny the actuality of such an intended meaning). Slingerland writes concerning the possibility of any larger meaning in the following manner. Some modern Westerners harbor "a more diffuse, nontheistic sense that what we are doing 'matters'—a conceit that makes no sense unless we project some sort of abstract, metaphorical agency onto the universe" (Slingerland 2008b, 396). He attributes this alleged projection to the sphere of social interaction, specifically the human need for social approval. I would mention that our basic biological drive for orientation to our world involves both the social and the natural—and perhaps in the human case orientation and explanation beyond our social universe and natural universe (at least when understood in a reductively physicalist way). Slingerland's opinion would apply not only to those with the vague sensibility he cites, but many Eastern believers as well as some not-so-vague Western religious naturalists who see the universe or aspects of it as divine, as involving some nontheistic directionality. These believers do attribute causality to the universe or to the underlying nonpersonal source of the universe. Slingerland's explicit (in the case of the vague "nontheists") or implied (in the cases of the others) imputation of projection of personal agency seems like question begging. That these Western religious naturalists and Eastern believers have deliberately rejected metaphors of personal agency for their version of ultimate reality, rather than embracing their alleged unconscious belief in personal agency, would seem to constitute an argument against Slingerland's assertion that our need for social approval must lie behind all belief in an ultimate or overall direction or meaning to the universe. Thus, CSR fails to recognize the complexity of religion when it comes to penultimate or ultimate supernatural meaning not conceived as involving personal or intentional agency.

Innate Dualism

While cognitive scientists of religion generally adopt a reductive physicalist stance for themselves, many regard human beings as innate, natural, intuitive, common-sense, or folk dualists in terms of the cognitive mechanisms we use in relating to other human beings. In addition to Boyer quoted above, the list of those voicing support for this theory include Bering and David Bjorklund (2004, 228; see also Bering 2006, 453), Emma Cohen and Barrett (2008, 43), Sosis and Kiper (2013, 264–65), and Steven Pinker (2002, 126). However, psychologist Paul Bloom and religionist Edward Slingerland constitute the two thinkers who have made innate dualism a central theme in their oeuvre. As suggested by Bloom's trade book title, *Descartes' Baby* (2004), this innate dualism is quite Cartesian, viewing the essential nature of human beings as disembodied minds or souls. In so doing, it interprets religion in a quite discarnate way, thus risking the reinscribing and reinforcing of a discarnate dualism (despite their own

intentions; as suggested earlier, I also see their physicalist monism as reflecting a discarnate dualism from the opposite direction than that of idealism). Of course, human beings, including very young children, do not typically make explicit their alleged dualistic cognition. As with anything tacit and inarticulate, claims about what is happening at this preconscious level are precarious. I would preliminarily opine that claims of tacit dualism are especially precarious. Bloom grounds his claim in the fact that, beginning as children, humans have two different modes of engaging the world, one for relating to "people," the other for relating to "material bodies" (Bloom 2004, 34) (here by "bodies" Bloom refers to material things in general, not merely biological bodies). To then equate people with "souls" appears to involve significant interpretation (Bloom 2004, 34, xii). It seems to assume that children, even infants, not only relate to people and things differently but somehow become cognizant of their doing so and make an intuitive effort to begin to explain it. The picture behind this may be a child thinking to the effect that "I'm different than that chair," "my mommy and daddy are different than that rug," and "we're more valuable." The thinking of a Platonic or Cartesian philosopher who maximizes the difference between the nature and value of conscious states and (merely) physical things seems to have been imported into the preconscious repertoire of all humans.

Transfers of consciousness. One type of phenomena that innate dualists point to is the transfer of consciousness to another body, as in religious claims of possessionary experiences (Bloom 2004, 213) or in literature or film such as: (1) "*The Odyssey* where the companions of Odysseus are magically transformed so that they 'had the head, and voice, and bristles, and body of swine; but their mind remained unchanged as before'" (Bloom 2004, 195); (2) the film *Freaky Friday*, where mother and daughter exchange bodies; and (3) the *Harry Potter* books and movies where Voldemort possesses another character's body. Cohen and Barrett conducted a study in which they asked subjects to imagine a mathematics classroom setting in which "somehow Beth's mind went into Amy's body" (2008, 34). Not surprisingly, the subjects concluded that the resulting person would have Beth's superior thinking capabilities, as in solving math problems, and Amy's superior physical capabilities, as in running fast. Given the description of the scenario, I would expect subjects to imagine that Beth's memories and knowledge would be transferred.[3] An initial problem in concluding that dualism underlies these phenomena is, apart from the religious claims of possession, precisely their undisputed fictional nature. Readers and viewers have suspended disbelief about something they may regard as impossible (even as cognitive scientists typically regard religious possessionary experience as impossible). Nevertheless, explaining how humans can make sense of these phenomena is the crucial substantive issue. Genuine mind-body dualism entails that a mind can exist in an absolutely

discarnate state. However, in popular fiction, no mention of any disembodied transitional state ever occurs; characters always have a body of some sort or another. Likewise, in shamanistic possessionary experiences, I do not know of a case where a shaman claims that a spirit was disembodied before possessing the shaman or where a shaman claims to be disembodied before possessing the body of an animal. It is dubious that a totally disembodied state is even imaginable or even meaningful except in terms of the most abstract language. Yet the innate dualists' position would seem to commit them to the notion that people intuit the viability of a totally discarnate state when they make sense of transfers or exchanges of bodies and consciousnesses. As with very young children, the innate dualist turns persons into tacit Platonic or Cartesian philosophers. Mark Johnson writes, "Shamans in aboriginal cultures . . . observe animals closely by empathetically 'becoming' the animals, and ritual practices in a wide range of aboriginal religions employ the movements of animals to achieve an ecstatic experience, an experience of being in the body of a very different kind of being" (1987, 556). A much more parsimonious explanation than innate dualism of why we can follow an account of a religious possession or of the exchange of bodies in popular culture is that we humans are essentially embodied beings who naturally imagine in bodily ways.

Afterlife belief. For innate dualists, that most human cultures have believed in life after death constitutes the strongest evidence for their position, because they regard such belief as tantamount to a dualistic belief in the persistence of disembodied spirits. As Slingerland puts it, in contrast to "entertaining nondualist ideas at some abstract level," "the feeling that the most important part of a person—especially ourselves and the people whom we love—might somehow subsist after death presents itself spontaneously and quite powerfully to human beings, appears to be universal, and takes quite a bit of cognitive work to overcome" (2008b, 395). Bering begins a major article with this assertion: "By stating that psychological states survive death, one is committing to a radical form of mind-body dualism" (2006, 453). Bering and Bjorklund conducted an influential study on children's beliefs about a mouse eaten by an alligator. To summarize, they conducted three experiments with varying configurations of preschool, kindergarten, early elementary, older elementary, and/or adult participants, who answered questions in response to the depiction of the mouse's demise. The types of questions in the three experiments were, respectively: (1) biological; (2) psychobiological and cognitive; and (3) biological, psychobiological, and four categories of cognitive, namely, perceptual, desire, emotional, and epistemic. General results showed that most of the younger children believed that psychological states of the mouse continued, while older elementary children and adults believed that most such states did not. Additionally, while even younger children believed

that biological states ended, they were mixed regarding psychobiological states. Though this article grants the difficulty of separating evolutionary from cultural mechanisms (2004, 218), Bering and Bjorklund conclude, and Bloom concurs (Bloom 2005, 110), that if cultural learning were the only influence, belief in continuation of psychological states should *increase* with age due to the impact of religious traditions (Bering and Bjorklund 2004, 230). At the same time Bering and Bjorklund judge that the growing biological knowledge about death that comes with age does work to *decrease* such belief (218–19). (I would note that such knowledge would combine natural developmental and cultural influences). In interpreting the continuation of psychological states, the authors do not consider the possibility that subjects might believe that the mouse continued to exist in another body, perhaps near the deceased biological body or perhaps in another world. With that possibility in mind, I will consider some of the more specific results of the study. In light of different responses for psychobiological versus biological states and ruling out cultural influence, Bering and Bjorklund asseverate, "It seems strangely counterintuitive that" younger children "stated that dead agents did not need to drink water but answered that it was possible for dead agents to be thirsty" (2004, 224; see also 229–30). If these children were strict dualists, they would realize that a truly disembodied soul would not feel thirsty. Bering and Bjorklund attribute this "counterintuitive" result to, simply put, the immaturity of young children's biological knowledge (2004, 224). While I do not doubt that this partly explains the discrepancy, an additional factor may help explain it: Young children who believed that the mouse now existed with a different body might more plausibly think that the mouse could feel thirsty without needing water than would children who believed the mouse was now a bodiless mind.

As suggested above, the Bering and Bjorklund experiments yield an overall pattern of decreasing belief with age in continuation of both biological and psychological states. And as mentioned above, Experiment 3 differentiates the questions about states into six categories: biological, psychobiological (e.g., being thirsty), perceptual, desire, emotional, and epistemic. While late elementary children show a decrease in continuation belief in all six categories compared with kindergarteners, changes in the biological category (save one question) are fairly dramatic, and those in the psychobiological quite dramatic. Changes in the perceptual category are not that dramatic, because kindergarteners already show a relatively high rate of disbelief regarding such continuation. Finally, changes in the categories of desire, emotional, and epistemic, while significant, are not dramatic. This means that a significant proportion of the older children believe in continuation with respect to several questions in each of these latter three categories. Moreover, a significant proportion of adults believe in continuation with respect to at least one question in each of these

three categories (indeed, adults showed a higher continuation belief than older children for five of the eleven questions in these three categories, although in terms of overall percentages adults showed less continuation belief) (Bering and Bjorklund 2004, 225–29). I find all of the results of Experiment 3 consistent with the following. For those who entertain the possibility of an afterlife world for the dead mouse, their picture of the nature of that world sharpens *with age*, including beliefs that afterlife denizens have more accurate knowledge about certain matters and that good predominates over evil more so than in this world (Bering and Bjorklund do notice participants' greater likelihood to attribute positive than negative feelings to the dead mouse; 2004, 228). In a related vein, adults' much higher disbelief that the mouse still wants to go home or still hopes to get better at math perhaps reflects their picture of an otherworldly existence where the mouse is already at home and does not need math. Additionally, that 100% of adults disbelieve that the mouse is "still scared of the alligator" coheres with belief in a positive afterlife world (by comparison, the next highest percentage otherwise for adults in these three categories is 88%, while the highest for late elementary children is 81%). I found particularly striking that 64% of adults responded that the dead mouse "still loves his mom" (compared with 80% of late elementary and 94% of kindergarten children). I would guess that this high percentage reflects a combination of two factors: (1) Love is strongly connected to belief in a positive afterlife world, even for some generally unsure about animal survival; and (2) Some adults who disbelieve that mouse is consciously experiencing love of mom in the present might still hold that once love has existed, in some (inchoate) sense it can never die. In relation to all the results of this significant series of experiments, I find nothing that favors innate mind-body dualism with its positing of belief in immaterial minds to explain belief in continuation of subjective states after death over belief that subjective states continue in a different form of embodiment. Interestingly, in response to criticism of Queen's University colleague Mitch Hodge, Bering in his recent *The Belief Instinct* evidences some rethinking on afterlife beliefs: "it's impossible for us to imagine all those souls clamoring about in the afterlife without also picturing them as being embodied in some form" (2011, 128). However, this rethinking does not lead him in that text to reinterpret the results of his and Bjorklund's experiments nor to directly recant his assertion that afterlife belief entails "a radical form of mind-body dualism."

The assumption that afterlife belief rests upon innate dualism flies in the face of evidence from the history of religions. Primal religions typically believe in an embodied world in some spatial relation to our present one—though unreachable until we die—and often better than our present one, without all the evils. The cliché "happy hunting ground" represents one version of this. Moreover, the spirits of ancestors as they interact with this world, though without some of the limitations of our bodies, are hardly

disembodied. Early theorist of religion E. B. Tylor reports that primal cultures, though often conceiving spirits as "vaporous," most definitely do not regard them as "immaterial." In one example, he notes how some tribal religions make sure an opening exists in a container where a spirit abides so that it could escape (Tylor 1871, 410–13). When the Toraja of Indonesia are about to sacrifice a water buffalo, they warn the spirits to keep away lest they suffer injury (Eyre and Montagnon 2001).

As ancient agricultural civilizations developed, afterlife beliefs typically changed: In some cases afterlife belief died; in many others an unhappy picture of the afterlife emerged. I attribute this change to the dominance of agriculture in these cultures and in their controlling pictures about life: just like dead plants, dead human bodies are buried in the earth. However, whereas new plants come from the soil and nourish new human life, human individuals do not revive from the grave. Typically, afterlife belief focuses on an underworld where people are mere shades or shadows of their former selves, as in the Hebrew concept of Sheol. Note that the dead do have a body, albeit a shadowy one. While they do not suffer complete disembodiment, I sense that the lack of full-blooded, full-bodied life constitutes precisely the most unsatisfactory aspect of existence in Sheol or Hades. The unhappy nature of such an afterlife takes some of the steam out of the argument for a human compulsion to believe that some (disembodied) part of us survives. Annihilation appears to be a better prospect than "life" after death in Sheol.

Additionally, I would note that resurrection of the body represents the most original version of life after death in the Western monotheisms of rabbinic Judaism, Christianity, and Islam. The influence of Greek philosophy, especially (neo)Platonism, has complicated the picture in Western theology, introducing a disembodied soul—at least until the judgment day—with which to contend. Nevertheless, I suspect that for everyday believers in an afterlife from these religions, the vast majority imagine immediate presence in heaven with a perfect body, reunited with departed family and friends whose transformed bodies they immediately recognize—a point Bering might now be willing to concede.

As suggested above, Bloom's equation of even young children distinguishing between people and things with innate mind-body dualism involves interpretation. Might a better interpretation avail? Ten years ago following his lecture at a Yale College reunion, I asked Bloom whether any of the experiments with children supported the hypothesis that humans innately distinguish between disembodied souls and mindless bodies over the hypothesis that humans innately distinguish between animate, sentient, intentional embodied beings and inanimate things. He answered in the negative. Nevertheless, in an e-mail from 2008, he indicated that he finds more "compelling" the thesis of mind-body dualism for interpreting the results of Bering and Bjorklund's experiments than that of an animate-inanimate distinction. Specifically, he wrote that the fact that most young

children believe that a dead mouse's mental states continue while its biological states do not "strongly suggests that kids think it has no body but still has a mind." As I have argued above, however, that the mouse's mental states continue in a different body explains the results as well or better than a bodiless mind. It appears that cognitive scientists of religion have begged the question of whether possessionary/transfer and afterlife beliefs entail dualistic disembodiment.

Conclusion

While Slingerland shares the "official" ontology of reductive physicalism with most other cognitive scientists of religion, innate Cartesian dualism ends up playing a peculiar role in his making sense out of life. With Pinker, Slingerland maintains that human beings cannot shake the notion or feeling that we are immaterial minds (Slingerland 2008a, 284–94). Slingerland begins by poking fun at poststructuralist types who maintain that our preferences are constructed apart from the constraining influences of our bodies and then declares that "the mind is the body, and the body is permeated through and through with mind" (Slingerland 2008b, 376–78). Despite these words supporting mind-body unity, he jettisons mind for his ontology, concluding that the fundamental nature of consciousness is the same as that of everything else in the universe—"collections of matter" and energy (Slingerland 2008b, 390) and that we are "essentially very complicated things" (2008b, 404): "human beings, like all of the other entities that we know about, appear to be robots all the way down, whether we like that idea or not" (2008b, 392). But we do not like that idea! Here is where dualism re-enters. Part of us wants to know the truth, however unpleasant (a part which I view as continuous with our biological desire to accurately orient ourselves)—in this case, the alleged physicalist truth that we are just things (Slingerland 2008b, 400–02).[4] However, to quote Jack Nicholson's character in *A Few Good Men*, another part of us "can't handle the truth." Evolution has designed us not to think of ourselves and others as mere things—even though we are (Slingerland 2008b, 392–404). Or as Slingerland puts it in a subtitle, "We are robots designed not to believe that we are robots" (2008b, 395). Evolution has programmed us to believe our subjectivity and our meanings are real and to act as if we were valuable. This evolved attitude keeps the large majority of us from being psychopaths who "conceive of themselves and other people in purely instrumental, mechanistic terms" (Slingerland 2008a, 289). Thus, for most of us, "human-level truth is inescapably 'real'"; however, "human reality is simply *not* as real as physical reality" (Slingerland 2008a, 290, emphasis Slingerland's). Along these lines, Slingerland contrasts "gene-level ultimate causation" with our "proximate level" beliefs, the sincerity of these beliefs manifesting the effectiveness of our genes (2008a, 289). Note that for Slingerland (belief in)

immaterial mind saves us in the sense that it makes life meaningful and worth living, while physical reality is meaningless mechanism. Slingerland regards this reinscription of dualism in human nature "as a testament to our human ability to hold multiple, mutually contradictory perspectives in our minds at once" (2008a, 293). To the contrary, in my judgment this dualistic thinking consigns us to irreconcilable—and unnecessary—conflict between supposed scientific and metaphysical truth, on the one hand, and what makes life meaningful on the other. At least the conflict is unnecessary given an ontology or metaphysics that accepts the full reality (even sacred reality) of embodied consciousness or sentience, of human beings as "mindbodies." Not only is there conflict, but, as above, "human level truth" is "'real'" in quotation marks and less real than "physical reality," and the (reductive) physical functions as ultimate cause in relation to the proximate human level. The poignancy of this uneven conflict comes out for me in an interview with Slingerland in which he declares intense love for his six-year- old daughter. But then he confesses that this deep feeling for his daughter is illogical, since he does not really believe in "love" (Todd 2013). Such thinking reflects a dualistic, discarnate Cartesian picture where the embodied love of a parent for one's child is supposedly less real, less true, than discarnate alleged scientific truth. That is the picture that haunts the cognitive science of religion.

Notes

1. Boyer appears to believe that discerning a larger or overall purpose for the whole universe is not even a significant aspect of religion; he dismisses explanation of "the origin of things," of the whole, as a key function of religion. Rather, religion is concerned with explaining particular occurrences relative to supernatural agents (Boyer 2001, 10–19). This position seems to ignore the commonality of origin myths in attempting to meaningfully place humans in the cosmos.
2. Failure can result from violations of taboos by the officiant before the poison oracle ceremony (Evans-Pritchard 286–87), from the witchcraft of a suspect about whom a question is asked (332–33), or occasionally from the corruption by a ghost of the *benge* that a man has gathered in retribution for his misdeed (333). None of these involve the intentions of the participants or supernatural agents at the time of the ceremony.
3. The authors tagged answers in terms of whether the subjects saw a displacement of Amy's mind or a fusion of Beth and Amy's minds. However, movement or transfer of consciousness to another body in popular fiction rarely involves fusion; unless the description specified some fusing or combining of minds, I would not expect subjects to imagine it.
4. Interestingly Slingerland cites the movie *The Matrix*, where most humans live as brains in a vat but do not know their true state (Slingerland 2008b, 400–01). Antonio Damasio contends that the absence of a body means that a brain in a vat could not duplicate embodied experience (1994, 228). Though Slingerland does not specify the disembodied state of such brains, I would opine that what the heroes fighting the Matrix, and viewers identifying with them, find unacceptable is not just the deception, but also the disembodiment.

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