

The cognitive science of religion

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and the ways in which religious and scientific explanatory frameworks are reconciled.

The study of religious cognition

The cognitive science of religion has recently emerged as an important topic of study by both cognitive psychologists (e.g. Rosengren, Johnson, & Harris, 2000; Legare & Gelman, 2008) and anthropologists (e.g. Boyer, 2001; Whitehouse, 2004). How can we explain a phenomenon as diverse and variable as religion in terms of the universality of the human mind? Recent research has demonstrated that the explanation for religious beliefs and behaviors can be found in basic features of human cognition (e.g. Bering, 2004; 2006; Shtulman, 2008). Although religion is increasingly recognized as a legitimate subject for study by cognitive scientists, this area of human experience remains somewhat neglected by experimental psychology. In this symposium we consider the emerging experimental literature on religious cognition from a psychological and an anthropological perspective, with the goal of advocating an interdisciplinary, developmental approach to the field. The symposium will focus on two themes. Legare and Shtulman will begin by considering the development of religious concepts, as well as the ways in which cognitive processes facilitate both scientific and supernatural thinking. Bering and Whitehouse will consider the cognitive and evolutionary underpinnings of religious thinking and the resilience of religious beliefs.

The development of religious cognition

Religious thinking is shaped by a host of cognitive processes and concepts (Bering & Bjorklund, 2004; Bering, 2006; Shtulman, 2008), many of which facilitate other kinds of thinking (Boyer, 2001; Legare & Gelman, 2008). These talks will consider the ways in which these processes and concepts undergird the development of religious cognition

Legare: The co-existence of scientific and supernatural explanatory frameworks across development

Access to scientific and supernatural explanatory frameworks is a universal psychological experience, and coordinating these distinct belief systems is a general cognitive problem. One approach to investigating the relationship between different explanatory frameworks is to study contexts where both scientific and supernatural explanations are used to interpret the same events (Legare & Gelman, 2008). Constructing explanations for existentially arousing topics such as biological origins, illness, and death provide just such an opportunity (Evans, Legare, & Rosengren, in press). Legare will discuss new findings of how intuitive and "scientific" explanatory systems co-exist with religious or supernatural explanatory systems across development in diverse cultural contexts.

Cristine Legare is an assistant professor of psychology at UT Austin. Her interests include mechanisms of knowledge acquisition, culture and cognition, and the development of scientific and supernatural reasoning. Her work has appeared in journals such as *Cognitive Psychology*, *Cognitive Science*, and *Child Development*.

Shtulman: Developmental differences in the interpretation of religious claims

Religious claims, like claims about the nature of the deities one's culture endorses, are transmitted not only from adult to adult but also from adults to children. How children understand such claims undoubtedly influences the course of their transmission. In this talk, Shtulman will present data suggesting that children do *not* interpret religious claims in the same manner as adults. Rather, they interpret them on the basis of untutored, highly anthropomorphic

concepts not clearly differentiated from fictional concepts. These findings challenge standard models of religious transmission in that they undermine the assumption that religious concepts remain stable both within and across generations.

Andrew Shtulman is an assistant professor of psychology at Occidental College. His interests include concept acquisition and belief formation, and his work has appeared in such journals as *Cognitive Psychology* and *Cognitive Science*.

Cognitive and evolutionary foundations of religious thinking

A central objective of the cognitive science of religion is to explain principal causes of both the universal religious repertoire and the substantial variability in religious belief in terms of underlying cognitive mechanisms (Whitehouse, 2004; Bering, 2006). These talks will consider the cognitive and evolutionary bases of religious thinking and the resilience of supernatural beliefs in the face of disbelief.

Bering: Implicit theism in self-professed atheists

Since many people argue that they are immune to any form of supernatural reasoning, recent theoretical claims regarding the 'universality' or 'default' bases of religious belief are justifiably met with skepticism by non-religious individuals. Indeed, atheists pose a special problem for cognitive accounts of religion because they appear to contradict the assumption that human beings intuitively reason in supernatural terms. Although religious belief is increasingly the subject of empirical attention by cognitive scientists, the phenomenon of *disbelief* has been a comparatively neglected topic of investigation. Either atheists are qualitatively different types of thinkers from religious individuals (lacking supernatural intuitions) or they somehow manage to suppress or executive-override their supernatural intuitions. In this talk, Bering will present new evidence tentatively supporting the latter hypothesis. In a series of semi-structured interviews, a large sample of self-professed atheists who were told they were participating in a study of autobiographical memory frequently answered questions about their major life events in teleological-intentionality terms—that things happened to them “because they needed to learn a lesson” or were “meant to be at that time.” Findings from ongoing experiments on atheists’ willingness to “tempt fate” will also be presented.

Jesse Bering is director of the Institute of Cognition and Culture and a reader in history and anthropology at Queen’s University, Belfast. His interests include the evolution of religion and the psychological foundations of afterlife beliefs. His work has appeared in such journals as *Developmental Psychology* and *Behavioral and Brain Sciences*.

Whitehouse: Explaining religion

Much research in the cognitive science of religion is concerned with explaining widely recurrent features of religious thinking and behaviour in terms of the shaping and constraining effects of evolved cognitive mechanisms (Whitehouse, 2004). But there is also growing evidence that many religious concepts and concept-clusters require considerable cognitive, social, and technological resources to create, remember, and pass on. In this talk, Whitehouse will discuss these more 'costly' features of the religious repertoire which exhibit considerable variability from one tradition to the next and as such serve as admirable identity markers of religious coalitions. The implications of this for patterns of belief resilience (resistance to argument-based or evidence-based rebuttal) and more generally for the maintenance and spread of religious traditions are increasingly the focus of experimental, naturalistic, and descriptive studies in this field, affording considerable opportunities for combining the approaches of social, cognitive, and biological sciences.

Harvey Whitehouse is professor of social anthropology, head of the school of anthropology, director of the Centre for Anthropology and Mind, and a fellow of Magdalen College, at the University of Oxford. His interests include recurrence and variation in religious thinking and behavior, and he has published many books and articles on this topic.

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