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# THE ROOTS OF RELIGION

EXPLORING THE COGNITIVE SCIENCE OF RELIGION

EDITED BY  
ROGER TRIGG AND JUSTIN L. BARRETT



ASHGATE SCIENCE AND RELIGION SERIES

# The Roots of Religion

Exploring the Cognitive Science of Religion

*Edited by*

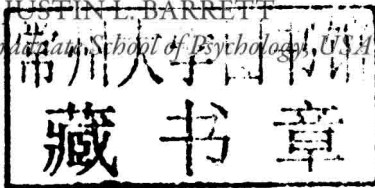
ROGER TRIGG

*University of Warwick and Ian Ramsey Centre, University of Oxford, UK*

and

JUSTIN L. BARRETT

*Fuller Graduate School of Psychology, USA*



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Published by  
Ashgate Publishing Limited  
Wey Court East  
Union Road  
Farnham  
Surrey, GU9 7PT  
England

Ashgate Publishing Company  
110 Cherry Street  
Suite 3-1  
Burlington, VT 05401-3818  
USA

[www.ashgate.com](http://www.ashgate.com)

#### **British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

#### **The Library of Congress has cataloged the printed edition as follows:**

The roots of religion : exploring the cognitive science of religion / edited by Roger Trigg and Justin L. Barrett.

pages cm. – (Ashgate science and religion series)

Includes bibliographical references and index.

ISBN 978-1-4724-2731-1 (hardcover) – ISBN 978-1-4724-2776-2 (ebook)

– ISBN 978-1-4724-2777-9 (epub) 1. Psychology, Religious. 2. Cognitive science.

I. Trigg, Roger, editor. II. Barrett, Justin L., 1971–editor.

BL53.R585 2014

200.1'9–dc23

2014013545

ISBN 9781472427311 (hbk)  
ISBN 9781472427762 (ebk – PDF)  
ISBN 9781472427779 (ebk \_ ePUB)



Printed in the United Kingdom by Henry Ling Limited,  
at the Dorset Press, Dorchester, DT1 1HD

## THE ROOTS OF RELIGION

*An outstanding set of authoritative essays, essential reading for all who are interested in the nature of religion.*

Keith Ward, Christ Church, Oxford, UK

The cognitive science of religion is a new discipline that looks at the roots of religious belief in the cognitive architecture of the human mind. *The Roots of Religion* deals with the philosophical and theological implications of the cognitive science of religion which grounds religious belief in human cognitive structures: religious belief is 'natural', in a way that even scientific thought is not. Does this new discipline support religious belief, undermine it, or is it, despite many claims, perhaps eventually neutral? This subject is of immense importance, particularly given the rise of the 'new atheism'.

Philosophers and theologians from North America, UK and Australia, explore the alleged conflict between truth claims and examine the roots of religion in human nature. Is it less 'natural' to be an atheist than to believe in God, or gods? On the other hand, if we can explain theism psychologically, have we explained it away. Can it still claim any truth? This book debates these and related issues.

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## Editors

**Justin L. Barrett:** Thrive Professor of Developmental Science, Fuller Theological Seminary, California

**Roger Trigg:** Emeritus Professor of Philosophy, University of Warwick, and Senior Research Fellow, Ian Ramsey Centre, University of Oxford

## Contributors

**Robin Attfield:** Emeritus Professor of Philosophy, Cardiff University

**Robert Audi:** John A. O'Brien Professor of Philosophy, University of Notre Dame, Indiana

**Kelly James Clark:** Senior Research Fellow at the Kaufman Institute and Professor of Liberal Studies, Grand Valley State University, Michigan

**Steven Horst:** Professor of Philosophy, Wesleyan University, Middletown, Connecticut

**Jason Marsh:** Assistant Professor of Philosophy, St Olaf College, Minnesota

**T.J. Mawson:** Fellow and Tutor in Philosophy, St Peter's College, University of Oxford

**Dani Rabinowitz:** Junior Research Fellow, Somerville College, University of Oxford

**John Teehan:** Professor of Religion, Hofstra University, New York

**Joshua C. Thurow:** Assistant Professor of Philosophy, University of Texas at San Antonio, Texas

**Aku Visala:** Postdoctoral Researcher, Department of Anthropology, University of Notre Dame, Indiana, and Faculty of Theology, University of Helsinki

**Graham Wood:** Lecturer in Philosophy, University of Tasmania

## Acknowledgements

This volume arose from a joint venture of the University of Oxford's Centre for Anthropology and Mind and the Ian Ramsey Centre. The project was the Cognition, Religion, and Theology Project and was funded by a grant from the John Templeton Foundation to Justin Barrett and Roger Trigg, for which we are grateful. This grant provided support for the chapters in this volume among other activities. A subsequent grant from the Templeton World Charity Foundation (to Barrett), concerning how the 'naturalness thesis' of the cognitive science of religion stands up to new research conducted with Chinese populations (past and present), has provided support that allowed for this volume's completion. Many of the authors in this volume make reference to how religious beliefs and practices arise in large part as a normal, natural function of human cognitive systems. Fortunately for this volume, the new data from the China project do not threaten this thesis.

We also thank Tyler Greenway, Matthew Jarvinen, and Thomas Paulus for editorial assistance for the entire volume.



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# Chapter 1

## Cognitive and Evolutionary Studies of Religion

Justin L. Barrett and Roger Trigg

Does the Cognitive Science of Religion (CSR) and allied evolutionary approaches to the study of religion (ESR) present epistemic challenges to religious belief, or support? This central question unifies this volume, recurring in one form or another repeatedly. Popular treatments of the area and even comments by scientists working in the area often suggest that the answer to this question is trivial. In this initial chapter we introduce CSR to argue that simple epistemic conclusions cannot readily be drawn either in support of or against religious beliefs. That is, by itself the science appears neutral with regard to whether or not religious (or non-religious) knowers are warranted in their beliefs. It appears to us that to either challenge or support religious beliefs by use of CSR, scholars must combine its insights with other philosophical commitments, and also restrict their arguments to particular religious beliefs and not attempt to paint them all with the same broad brush. Those arguments offered subsequently in this volume illustrate and support this contention. Insofar as they are successful, their success lies in their appropriation of extra-scientific considerations to frame the findings of CSR in a philosophically potent way and also their restriction to particular religious concepts, such as the existence of a supreme creator God.

### Some Historical Observations Concerning CSR

Ryan Hornbeck went to Wuhan, China to study the online gaming activities of late adolescents and emerging adults. He discovered that at least a sizable minority of his informants regarded playing Chinese World of Warcraft as an opportunity for moral development and many regarded it as rich in “spiritual” experiences (Hornbeck, 2012). Why would young people find spiritual and moral meaning in a virtual world, sometimes more frequently than in the real world?

Emma Cohen (2007) conducted ethnographic field research in the northern Brazilian city of Belém, investigating the religious practices of Afro-Brazilian spiritualists. 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 a cult-house (*pai-de-santo*) did not approximate how it was understood by the laity. The reason was not a disregard for the *pai-de-santo*'s expertise; the lay spiritualists affirmed the authority and trustworthiness of the leader's teachings (Cohen, 2007). Nevertheless, what was taught was not the same as what was received, but why?

Fortunately for Hornbeck and Cohen, they could draw upon insights and strategies from the Cognitive Science of Religion (CSR) to address these problems. Humans in all cultures have a number of conceptual tendencies by virtue of being *Homo sapiens*, and these ideas inform and constrain religious and other cultural expression (Barrett, 2000; Boyer, 2003). For instance, in the absence of the uncommon conditions experts enjoy, ideas that deviate too far from cognitively natural thought are subject to confusion and distortion, a phenomenon termed *Theological Incorrectness* (Slone, 2004).<sup>1</sup> The people Cohen observed were suffering from Theological Incorrectness, because the taught conception of spirit possession (a fusing or mixing of two spirits in a host's body) was too unnatural or *counterintuitive* to be easily communicated faithfully. The laity adopted a view of possession closer to the default-settings of human thought: the spirit fully displaces the agency of the host when it enters the body because only one mind can occupy a body at a single moment.

Hornbeck combined insights from evolutionary psychology concerning moral intuitions to argue that his informants were drawn to Chinese World of Warcraft because of the affordances of the game play for expressing basic moral intuitions, affordances frustrated or confused in their day-to-day lives in a strictly controlled, heavily programmed, materially-oriented urban environment. Further, Hornbeck observed how the team-based play objectives and features of the gaming experience seemed to trigger states readily identified as spiritual or as soul-mergers. As with Cohen's work, Hornbeck combined traditional ethnographic techniques with insights from the cognitive and evolutionary sciences to posit causally plausible explanations for the phenomena they observed.

Just two decades ago, the intellectual resources for such projects did not exist. What has come to be called cognitive science of religion (CSR) was in its infancy,

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<sup>1</sup> Slone chose this term because *Theological Incorrectness* is a corollary of *Theological Correctness*, a demonstrated distinction between stated theological beliefs and conceptually simpler beliefs used in real-time information processing (see Barrett and Keil, 1996).

and most scholars of religion and culture did not know it existed. Harbingers of a cognitive approach to the study of religion appeared decades ago (Sperber, 1975; Guthrie, 1980), but the sustained, collaborative effort to approach religion from cognitive *and* scientific perspectives did not emerge until the 1990s. Four important books taking cognitive approaches appeared in the first half of the 1990s (Lawson and McCauley, 1990; Guthrie, 1993; Boyer, 1994; Whitehouse, 1995). Notable was the fact that only Stewart Guthrie's line of research (1980; 1993) had any ambitions to provide anything like a comprehensive explanation of religion. Rather, these cognitive approaches were motivated by the modest goal of providing the scholarly study of religion (as practiced by anthropologists, comparative religionists, and the like) with causal explanations for this or that feature of religions by appealing to relevant psychological sciences. For instance, Whitehouse's work (1995) was standard social anthropology except that he creatively drew upon findings from cognitive psychology concerning memory systems to account for patterns he observed in the field.

In 2000, the general cognitive approach was dubbed "Cognitive Science of Religion" (Barrett, 2000), and in the subsequent years closer ties with evolutionary approaches were forged: early titles being Pascal Boyer's *Religion Explained* (2001) and Scott Atran's *In Gods We Trust* (2002). These books were evolutionary in two respects. First, they justified their appeal to pan-human conceptual systems by appropriating theoretical claims and empirical findings from evolutionary psychology. That is, rather than positing pan-human tendencies or psychological mechanisms merely because of the explanatory work such hypotheticals could provide, they drew upon the scientific research of evolutionary and developmental psychologists who had been showing that humans infants and young children seem to solve certain conceptual problems around them in very predictable ways, perhaps to solve important survival problems in our ancestry. Boyer's and Atran's works were also evolutionary in the sense that they proposed that psychological mechanisms place selective pressure on ideas and behaviours, and so, identifying how human minds tend to favour some ideas over others goes a long way to explaining why some types of ideas (and related behaviours) become recurrent within and across cultures. Persuasive leaders and external peculiarities are not the whole story; if an idea is more readily entertained by human minds, it is more likely to be communicated effectively, and spread from person to person and generation to generation.

Atran's book also foreshadowed new connections between CSR and the emerging area now known as evolutionary studies of religion (ESR; e.g., see Wilson, 2002; Johnson and Kruger, 2004; Bulbulia, 2009; and Sosis, 2009). The emphasis of this approach to the study of religion has been on whether

certain religious practices and social arrangements may have been (and perhaps still are) adaptive to humans. For instance, does the performance of collective religious rituals serve to make groups more cooperative, thereby accruing fitness benefits, and if so, why? These evolutionary approaches have not always been cognitive (i.e., explicitly concerning themselves with cognitive/psychological mechanisms), but attempts to fuse ESR with CSR are beginning to take shape (e.g., Bering, 2011).

We begin with these historical points about CSR to clarify a few common confusions concerning the area that may be important to philosophers and theologians concerned about implications of this scholarship. First, CSR is not a conspiracy of scientists to take over the study of religion or to “explain away” religious entities, but the chief impetus for the area was (and is) from religion scholars wanting to “science-up” the study of religion, and seeing the cognitive sciences (and evolutionary psychology) as particularly promising resources. Nevertheless, some promoters of CSR regard it as a wholly secular, naturalistic approach to the study of religion, which may entail epistemic problems for religious beliefs.

Second, though there is increasing crossover between the two areas, CSR is not the same as ESR even though both use the language of selection and insights from evolutionary sciences. The level of explanation on which the two areas typically work is different. CSR primarily focuses on cognitive mechanisms exerting causal influences on cultural expression. ESR primarily focuses on how considerations of biological fitness may account for the persistence of certain genetic, cultural, or gene-culture complexes. Exactly what is being explained and how it is being explained may have consequences for drawing philosophical implications. For instance, many cognitive accounts regard religious ideas (such as belief in gods) as evolutionary by-products—non-adaptations that piggyback on adaptations that solve problems unrelated to these religious thoughts. As by-products, these ideas, then, have not necessarily been winnowed via natural selection, and so what are the implications for whether they are warranted? The answer could be very different—or at least the argument would be different—if the guiding science suggests that the religious belief in question is an adaptation that has been encouraged by natural selection, as many ESR approaches suggest.

### **Foundational Commitments of Cognitive Science of Religion**

Primarily CSR draws upon the cognitive sciences to explain how pan-cultural features of human minds, interacting with their natural and social environments, inform and constrain religious thought and action. For instance, how might

belief in some kind of afterlife or in superhuman intentional beings (gods) be explained in terms of underlying cognitive structures? CSR research may also consider how particular religious, cultural, and environmental factors stretch or modify natural cognitive tendencies, but such a possibility is largely undeveloped at this point.

A number of foundational convictions, derived from the cognitive sciences, frame the CSR approach. Importantly, CSR scholars reject full-bodied cultural relativism and the idea that minds are blank slates or passive sponges, equally able and willing to learn and use any type of information equally well. Humans naturally have numerous cognitive biases and predilections by virtue of their species-specific biological endowment plus pan-cultural regularities of the environments in which they grow up (e.g., babies have mothers, humans live in groups, etc.). A second presumption, then, is that at least some important and content-rich aspects of human cognition are pre- or extra-cultural. Uncontroversial examples include preferential attention to and processing of human faces (Meltzoff and Moore, 1983), reasoning about the properties and movement of bounded physical objects, and the distinction between ordinary physical objects and *agents*, those objects that can move themselves in a goal-directed manner (Spelke and Kinzler, 2007). Other well-supported domain-specific cognitive subsystems that appear to be largely invariant in terms of their basic parameters and developmental courses include language, folk psychology (or Theory of Mind), folk biology, and some aspects of moral thought and social exchange reasoning (Hirschfeld and Gelman, 1994). Barrett has referred to these various extra-cultural, content-rich cognitive systems as *mental tools* (Barrett, 2004; 2011). These mental tools inform and constrain the ways people will typically think, but certainly do not determine human cultural expression.

The precise relationship between these mental tools and cultural expression continues to develop, but a common way of framing the relationship between these cognitive system and explicit beliefs is a two-systems approach (Kahneman, 2011; for examples in CSR, see Boyer, 2001; Barrett, 2004; 2011; Gervais and Norenzayan, 2012). In brief, these domain-specific mental tools are components of a fast processing system that operates largely independent of conscious awareness or volitional direction. Given certain input conditions, they generate specific outputs, often registered as intuitions. The slow, reflective system receives intuitions and other outputs of the fast system and then produces syntheses or judgments from those fast system outputs. For instance, Boyer has suggested that religious ideas that resonate with intuitions (delivered by the domain-specific components of the fast system) are more likely to be regarded as true by the slow, reflective system. Following Boyer, Barrett (2004; 2011) redescribed

the outputs of these two systems in terms of non-reflective and reflective beliefs,<sup>2</sup> with non-reflective beliefs serving as the default assumptions for the reflective system.<sup>3</sup> That is, rather than beliefs being formed through the weighing of various pieces of evidence including intuitions, intuitions will generate explicit beliefs *unless* sufficient contrary evidence becomes salient. Indeed, based on numerous experimental studies, Daniel Kahneman argues that ideas that merely come to mind easily (even if not natural deliverances of these mental tools) are given the benefit of the doubt in terms of their truth and goodness, a dynamic he calls the accessibility bias (2003).

The relationship between these two different systems—particularly the ability of the fast system to influence the outputs of the slow system—generates a third commitment of CSR: mental tools inform and constrain religious thought, experience, and expression. For those scholars interested in the variability more than the recurrent patterns, CSR is still helpful in helping to identify just which aspects of religious expression are more likely to be explainable in terms of cultural particulars—those that deviate considerably from the natural outputs of mental tools.

A fourth commitment of CSR is a focus on ideas that are distributed across individuals and not on individual religious experience or expression. Drawing upon Sperber's epidemiological approach to explaining cultural expression (Sperber, 1996), an idea that is not shared by a community of individuals is not religious, but is idiosyncratic and CSR has little (or nothing) to say about it. Consequently, CSR has little to say about why one individual holds the religious beliefs they do, but only why people generally tend to hold some kinds of beliefs and engage in some kinds of actions as opposed to others. It follows that the task for CSR is to account for recurrent patterns of religious expression—types of ideas, identifications, experiences, and practices—that are distributed across some population (or even across cultures). "Explaining religion," then, is explaining how mental tools working in particular environments resist or encourage the spread of these ideas and practices we might call "religious."

Finally, in general CSR scholars do not regard *religion* as a coherent natural kind meriting a *sui generis* approach. CSR scholars have typically avoided trying to define *religion* as a whole. Instead of defining *religion* as a whole, they have chosen to approach "religion" in a piecemeal fashion, by identifying human thoughts or practices that are generally considered religious and then try to explain why those

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<sup>2</sup> Earlier, Sperber (1996) dubbed these intuitive versus reflective beliefs.

<sup>3</sup> Possible parallels with aliefs versus beliefs (Gendler, 2008) and with Reidian epistemology (Wolterstorff, 2001), may be drawn.



are cross-culturally recurrent. If the explanations turn out to join up in accounting for larger recurrent complexes of cultural expression, all the better.

This final commitment, that religion is not a natural kind, is particularly important for drawing appropriate epistemic conclusions from the findings. An explanation of one sort of religious belief, such as belief in gods, may or may not apply to another class of religious belief, such as belief in an afterlife. Even within categories, it could be that belief in one type of god (e.g., a cosmic creator) has a different causal pathway than belief in another type of god (e.g., an ancestor spirit). It follows, then, that even if an explanation of one religious idea raises epistemic concerns for it, these concerns do not necessarily apply to all religious ideas. Likewise, a defense of a particular religious concept's rational justification may fail to generalize to all religious concepts by virtue of the two diverging causally, a point we expand below.

### **Topics of Exploration**

An enduring thread in CSR has been trying to account for the prevalence of beliefs in superhuman agents (gods) (Guthrie, 1993; Barrett, 2004; 2012; Bering, 2011). But CSR is much broader than that, having made starts on many topics including: afterlife, prelife, and death beliefs (Bering, Hernández-Blasi and Bjorkland, 2005; Astuti and Harris, 2008; Emmons, 2012); magic (Sørensen, 2005); prayer (Barrett, 2001); religion and morality (Boyer, 2001; Hornbeck, 2012); religious development in children (Barrett, 2012); religious ritual and ritualized actions (McCauley and Lawson, 2002; Malley and Barrett, 2003; Liénard and Boyer, 2006); religious social morphology (Whitehouse, 2004); scripturalism (Malley, 2004); the relationship among souls, minds, and bodies (Bloom, 2004; Cohen and Barrett, 2011); spirit possession (Cohen and Barrett, 2008a, b); teleofunctional reasoning and origin of the natural world (Evans, 2001; Kelemen, 2004); transmission of religious ideas (Boyer and Ramble, 2001; Gregory and Barrett, 2009); and various superhuman agent concepts (Barrett, 2008).

Depending upon the particular topic, different causal accounts may apply. Thus, the temptation to treat all religious beliefs (or the motivations for religious practices) as relevantly comparable in terms of epistemic considerations borne of the causal accounts should be avoided. For instance, it may be that belief in ghosts and ancestors is a function of strong natural intuitions that support mind-body separation (Bloom, 2004), the relative difficulty of simulating complete mental state cessation (Bering, 2006), the adaptiveness of assuming that one may be