

Religion

BENJAMIN GRANT PURZYCKI, JORDAN KIPER, JOHN SHAVER,
DANIEL N. FINKEL, and RICHARD SOSIS

Abstract

Religions are complex systems that can adapt to diverse environments because of the dynamic relationship of their internal parts. The most fundamental of these parts includes supernatural beliefs, rituals, and myths. The social scientific study of religion focuses on these parts and builds on previous generations of research to provide distal explanations for religion as a dynamic phenomenon. In recent years, interest in the social science of religion has turned to the cognitive and behavioral studies of religion. The cognitive science of religion documents the mental organization and structure of religious thought, while the behavioral science of religion focuses on ritual behavior as the building block of sociality. Key issues for future research include the ontogeny of religion, the cognitive and cross-cultural representation of religious concepts, the relationship between religion and reproduction, and the evolution of religion. With these new frontiers have come a variety of novel methodologies but also an emphasis on the need for comparative ethnography.

INTRODUCTION

The social scientific study of religion has an extensive and diverse history that began in the late nineteenth century. Early cultural anthropologists expended considerable effort documenting and making sense of the religious traditions found around the world. Such research continues to this day with additional focus on understanding the evolutionary, cognitive, and behavioral bases for religious traditions. Members of virtually every human community have complex supernatural beliefs and devote significant resources toward ritualistic behavior. Variations in such beliefs and behaviors are the products of cognitive and behavioral developments that arose in the course of human evolution. Provided the centrality of religion to the human experience, it is no wonder that religion has captured the attention of generations of anthropologists and remains an important avenue of research today.

Although religions exhibit systematic variation, anthropologists observe that religions are not the static and conservative systems that some scholars of religion presume them to be. Instead, religions are complex systems that

can acclimate to diverse environments, largely due to the dynamic interaction of their interrelated parts. The three most important of these parts, which we will discuss throughout this piece, are the following:

- *Supernatural beliefs*: beliefs in discarnate agents who interact with and possess knowledge about the world, and beliefs about forces and essences that permeate this and unseen worlds.
- *Rituals*: patterned behaviors that are explicitly directed toward nonempirical or supernatural agencies to achieve some goal on behalf of participants.
- *Myths*: narratives of unseen events that often explain natural and supernatural phenomena.

The cross-cultural examination of these features of religion, and others (e.g., taboo, moral obligations, authorities), has revealed to anthropologists that religion appears to have a phylogenetic history, with recurrent patterns of systemic variation across environments. Both of these aspects, in addition to evidence that religion can promote survival and reproductive success, suggest that religion has an evolutionary origin as an adaptive system with advantages for individuals. Of course, religions often appear to be quite taxing for participants and even counterproductive to their own self-interest, which poses a central and vexing problem for social scientists of religion: If religion has a distal explanation (i.e., promoting individual survival and reproduction), what is it?

In this essay, we provide an overview of the intellectual foundations and social scientific approaches to understanding religion. This overview is then followed by a discussion of contemporary research and how it draws from and develops the previous generations' insights. We focus specifically on the cognitive and evolutionary study of religion, both of which offer new insights into the complex relationships between mind, culture, and the social and natural forces that shape them. We then turn to a discussion of what lies on the horizon for future endeavors.

FOUNDATIONAL RESEARCH

The term *religion* comes from the Latin root *religare*, which means "to bind." However, what is being bound, and to what? Although this question remains, and is likely to remain, open to various interpretations, social scientists largely agree that religion binds individuals to their community through (among other things) myths, rituals, and beliefs. Discovering how religion "binds" communities is one of the core pursuits of contemporary research, which suggests that religion has been at the center of human

communities for some time. Archaeological evidence in the form of burials from the Upper Paleolithic suggests that humans have practiced religion for at least 30,000 years. Furthermore, anthropologists have long observed that, contrary to modern societies in the West, where there is a clear demarcation between religious and secular life, traditional cultures do not necessarily make this distinction and religious beliefs and practices often permeate all domains of life. As a result, anthropologists have spent considerable effort documenting religion as a means to describe other cultures, and also outlining the manners in which religion shapes the very fabric of society.

Following traditional studies of religion in western history (e.g., Herodotus, Euphemus, Denis Diderot, Max Müller), early anthropologists, such as Edward Burnett Tylor and Sir James Frazer, studied the function of magic and myths in non-western societies. They surmised that magic and myths were central to most societies, because they together served as a kind of “primitive science” and substantiated beliefs in supernatural beings. These beings were not only thought to control nature and human affairs, but also the order of society itself.

Of course, these early studies were rather crude representations of religion and largely based on “arm chair” speculations. It was not until the work of Émile Durkheim, Bronislaw Malinowski, and A. R. Radcliffe-Brown that the anthropology of religion truly began in its own right. All three theorists recognized that myths were not primitive sciences or naïve worldviews, but rather narratives that impart content and semantic understanding to ritual. In turn, ritual serves as the heart of religion insofar as it ameliorates anxieties, promotes collective conscience, and encourages social solidarity, all of which bind members to one another with deep and abiding loyalty. For example, Malinowski observed that religious rituals among Trobriand Islanders functioned to increase social participation in the social and economic transactions of the community, and also to ameliorate individual anxieties over gardening and deep sea fishing. In short, these scholars adopted varieties of functionalism—one being the idea that society is comprised of parts that work together for stability—and ascribed religion in particular with social and individual functions.

Subsequent anthropologists built on these seminal observations. For instance, E. E. Evans-Pritchard and Clifford Geertz observed that rituals bind communities together by endowing them with common symbols, moods, and concepts, which engender the community with a collective understanding of reality. Likewise, Victor Turner, among others, noted that ritual behavior is fundamentally communicative, conveying messages between group members, the most significant of which is commitment to group membership and beliefs. Building on this insight, Roy Rappaport showed that because ritual signals acceptance of community values and

individual responsibilities therein, it constitutes the very nature of the social contract. Modern scholars continue to expand on the importance of ritual as a means to group ethos and social institutions with evidence that it promotes high levels of cooperation and large-scale social organization.

In addition to research on the relationship between myth and ritual, and the value of ritual for cooperation, considerable research has focused on supernatural beliefs, namely, the structure and forms of such beliefs. Both Sigmund Freud and Émile Durkheim believed that supernatural beliefs arise from, and are constrained by, the projection of human social interaction onto unseen agents, and the desire to rely on such agents to make the unexplainable intelligible. Clifford Geertz extended this intellectualist stance of religion insofar as he characterized religion as a symbolic system wrenched in truth-value (i.e., treated as being true rather than being internally understood as merely symbolic). This led many anthropologists to focus on religion as a system of meaning making and to promote methodological interpretivism in order to make sense of how other societies made sense of their worlds.

Following the ethnographic tradition of Franz Boas, anthropologists in the early twentieth century expended considerable effort documenting the enormous cross-cultural variation in religious systems. Perhaps the most important outcome of this work is the recognition that the nature of religious diversity is not arbitrary, but rather reliably reflects significant features of socio-political organization and ecology. To illustrate, anthropologists often recognize four major types of religious institutions: shamanic, communal, Olympian or polytheistic, and monotheistic. Early studies showed that the main predictors of these institutions were the following: subsistence strategies (e.g., foraging, horticulture, pastoralism, and agriculture), economic specialization, sovereignty of decision-making groups, and the presence or absence of written culture. For example, foragers were often shamanistic, horticulturalists and pastoralists were often communal, and agriculturalists were often Olympian or monotheistic. Later anthropological research has revealed remarkable correspondence between religious institutions and cultural variation. For instance, shamanic religions often focus on individual health concerns, group cooperation, and ecological management. Communal religions unite different clans or lineages under ancestor or totemic worship. Many polytheistic religions exist in large and interconnected communities with priesthoods dedicated to religious knowledge. Monotheistic religions typically exist in state-level societies and, unlike other religious systems, worship a transcendent god who places significant moral demands on large populations.

However, because cultures and religious systems are not isolated phenomena, most cultural research on religion in the late twentieth century has focused less on broad classifications and more on the components of religion

in cultural contexts. For instance, inspired by Arnold van Gennep, Victor Turner showed that beliefs concerning rites of passage have a common structure and are always embedded in local understandings of change, transition, and identity. In so doing, Turner not only demonstrated that rites of passage are structurally similar across cultures, but also that they correspond to key features of their respective societies. Such research continued in the tradition of Boas by embracing particularism (i.e., documenting a specific culture) but went beyond it by crafting models that were applicable to multiple traditions. For instance, Roy D'Andrade and Melford Spiro found that the relationship between gods and their believers tended to reflect the nature of the parent–child relationships characteristic of the society in question. In a similar vein, Guy Swanson demonstrated that high gods and punishing gods vary across cultures but are disproportionately found among large, agricultural, and socially stratified societies. These findings suggest that even though religious systems are locally unique, they are neither arbitrary nor unbound collections of beliefs and behaviors. Rather, religious systems are at the very least correlated with specific environments, but quite likely change in order to overcome problems in specific environments.

This observation dovetailed nicely with the cognitive revolution and generative linguistics, which thereafter prompted anthropologists to embrace a more universalistic view of cultural systems. It once again became acceptable for anthropologists to explore the instinctual bases of culture and to isolate particular faculties constituting human nature. However, inspired by the nativist turn, anthropologists also undertook wide-ranging investigations into the complex relationship between culture and human cognition. At about the same time, evolutionary psychology emerged as a new science of the mind. With the aim of understanding how evolution constrained modes of cognition, evolutionary psychology postulates and tests aspects of human thought, such as propensities, biases, predispositions, and generative faculties. In so doing, it has identified a host of mental faculties that are prevalent today but evolved to overcome the adaptive challenges of our ancestors. It was in this context of inquiry—that is, amid the study of cultural variation and cognitive evolution—that the cognitive science of religion was born.

Presently, there are disagreements about the evolutionary processes that led to the emergence of religion. Generally, cognitive approaches assume that the mental faculties required for religious concept formation and retention evolved for other purposes, and that there is no specialized mental faculty devoted to religion. As such, many cognitive researchers treat religion as a by-product of evolved cognition rather than an adaptation in and of itself, despite the widespread recognition that religious beliefs often promote adaptive behavior, even in modern contexts. Behavioral researchers typically argue that religion is indeed an adaptation that displays signs

of fitness-enhancing qualities. Although the general consensus is that religion is impossible without preadaptations and biological constituents, there remains considerable debate regarding the status of religion as an adaptation.

With that in mind, the following section centers on the latest research in the social scientific study of religion. Specifically, it offers a brief survey of contemporary understandings regarding the cognitive and behavioral study of religious systems, which remain the two most distinctive forms of inquiry today.

CUTTING EDGE RESEARCH

THE COGNITIVE STUDY OF RELIGION

Contemporary research on supernatural belief focuses on documenting the cognitive organization and structure of religious thought. Beginning with Stewart Guthrie, cognitive scientists of religion have attempted to understand how supernatural beliefs are constrained by the limits of cognitive processing, why humans attribute mental states to entities such as gods or spirits, and why such entities are so often concerned about what people do. Significantly, research spearheaded by Jesse Bering, Pascal Boyer, Dominic Johnson, Ara Norenzayan, and Azim Shariff shows that supernatural agents are particularly concerned with socially strategic information and breaches of prosocial contracts.

Many within the cognitive science of religion hold that the human mind has domain-specific organization and is comprised of modules that evolved for handling specific types of information. For instance, the cognitive mechanisms designed to compute linguistic information are not the same as those used to make sense of spatial depth or to detect pain. With foundations rooted in this perspective, researchers began to apply evolutionary theory to these proposed mental faculties in order to investigate how such faculties may have been adaptive in our past. As such, current research devotes a considerable amount of attention to understanding the universal qualities of religious concepts by appealing to the cognitive systems that all humans share.

The mind's ability to attribute mental states to other entities is central to contemporary understandings of religious cognition. Humans do this so effortlessly that it can often be difficult to convince ourselves that something *does not* have mental states. Stewart Guthrie laid the theoretical foundations for this work, arguing that promiscuous agency-detection and anthropomorphism undergird a considerable amount of religious thought. Humans are equipped with a variety of agency-detection systems, often collectively referred to as a *theory of mind*. While there is considerable

debate over whether or not nonhuman primates have the ability to detect internal mental states of other beings, it is quite clear that humans rapidly make sense of things by appealing to the thoughts, beliefs, feelings, and perceptions of other beings. Many researchers, including Justin Barrett and Scott Atran, argue that supernatural agent concepts are natural extensions of these systems insofar as people assign agency in an attempt to explain events, weird happenings, and misfortune to name a few.

Another central theme of the cognitive study of religion, which developed in the wake of the nativist turn, involves the ways in which humans make systematic inferences about various objects in our world. According to Pascal Boyer, these inferences appear to be a part of our evolved conceptual repertoire, and religious concepts often violate such inferences. For instance, “a man who walks on water” violates deep assumptions we have about physics—things normally sink. A “statue that listens to your prayers” applies mental states to a human-made object. Such ideas are often disclosed in narratives that are not only easy to remember, but also tend to be unverifiable and unfalsifiable. In some cases, these ideas appear to have a memory advantage over more mundane ideas (e.g., “a squirrel that drinks water”) and also over maximally strange ideas, which are too taxing to compute (e.g., “a couch that disappears on Wednesdays but only when the moon is new”). This literature is now regularly referred to as *minimally counterintuitive theory* (or MCI Theory). Mythological narratives often have such counterintuitive agents, objects, and events in them, and their counterintuitiveness offers a particular salience that heightens retention and transmission.

In an attempt to develop a cognitive theory of religious ritual, Harvey Whitehouse articulated what he calls the “modes of religiosity.” This is a theory that aims to understand how religious rituals fall into two general categories (doctrinal and imagistic), which correspond to the two primary memory systems (long-term memory and episodic memory). The two categories of ritual are the doctrinal and imagistic, while the two memory systems are long-term memory and episodic memory. On the one hand, the “doctrinal mode”—frequently repetitive and low arousal rituals, such as communion—corresponds to long-term memory insofar as it combines with complex religious teachings to be woven into the worldview of the adherent. On the other hand, the “imagistic mode”—infrequent but highly arousing rituals, such as fire walking—corresponds to episodic memory insofar as they are imbued with emotional salience that allows the adherent to retain information from the particular ritual.

This research is largely devoted to making sense of the defining properties of religious thought and behavior and what cognitive mechanisms are responsible for those properties. However, these studies do not generally focus on what religion does. Still, other studies have systematically assessed

the functional effects of religion or religious priming, a line of work which tests the Supernatural Monitoring or Punishment Hypotheses. Religious priming has been shown to increase human cooperation and generosity, as well as reduce rates of breaching social rules and expectations (e.g., cheating). Interestingly, this occurs when people are primed with punishing god concepts; but when people are primed with forgiving god concepts, they actually increase cheating behavior. Accordingly, research on punishing gods—or what Ara Norenzayan calls “big gods”—points to an important distal function of religion, which is to promote prosocial behavior and minimize antisocial behavior.

THE BEHAVIORAL STUDY OF RELIGION

As we have already seen, because most early anthropologists agreed that ritual behavior builds social solidarity, they argued that ritual was a building block of sociality. Since then, anthropologists have shown that religion is an important part of early socialization into groups. With adolescence as a period of “experience expectant” learning, young individuals are at a prime age for being ritually indoctrinated into groups and taught supernatural worldviews. Religious training and indoctrination at this point in the lifespan imbues cultural precepts and symbols with emotional valences, which occurs just as the cognitive and motivational systems of the brain are maturing. Besides inculcating religious worldviews, this process is central to the internalization of the particular moral norms of society, which become enlivened by being couched in religious narratives.

Regardless of whether the ritual concerns indoctrination, sacrifices, or rites of passage, anthropologists observe that rituals are often extremely costly, both physically and materially. For this reason, William Irons suggested that it was the extreme costs of rituals—and all religious behaviors for that matter—that makes them such reliable forms of communication. In other words, rituals and other religious behaviors are costly signals that convey the intentions and commitments of adherents. To demonstrate the logic behind this observation, consider the problem of cooperation. Individuals in all societies must decide whom to trust. Although people can tell one another that they can be trusted, they can also lie about such commitments. However, if persons are expected to undertake costly behaviors, which are too hard to fake, then their commitments can be discerned. According to Irons, religious behaviors constitute such costly acts. By going on vision quests, performing initiation rites, or memorizing religious texts, a person communicates to others that he or she is trustworthy and committed to the group. Because these behaviors are difficult to fake, those who pay the costs in performing them are rewarded with increased cooperation. This

suggests that the costliest religious behaviors will occur where the payoffs of cooperation are the greatest.

Research by Richard Sosis *et al.* has provided empirical support for the costly signaling hypothesis of religious behaviors. For example, Sosis undertook a series of empirical studies of nineteenth century US communes and found that religious communes out-survived their secular counterparts. Sosis has also found that levels of cooperation vary between religious and secular kibbutzim in Israel, with the former being far more cooperative. Studies have also found that groups engaged in long-term warfare, which face the collective action problem of motivating warriors, often employ the most taxing of initiation rites. Such research demonstrates that investments in the form of religious behavior generally incur high levels of cooperation. Moreover, studies along these lines support the hypothesis that religious behavior can be adaptive.

KEY ISSUES FOR FUTURE RESEARCH

The multifaceted nature of religion affords the scientific study of religion enormous potential to bridge cognitive, psychological, behavioral, and ecological sciences. Given that religious beliefs and behaviors often appear to be adaptive, and comprised of an evolved suite of cognitive mechanisms that motivate diverse behavioral responses to variant ecologies, future work must be multidisciplinary and simultaneously research multiple levels of religious phenomena. On the one hand, future work must address the nature of religious development in individuals. On the other hand, research must explore the nature of the evolution of supernatural belief systems, as well as the interaction of individual level and group level evolutionary dynamics. Important to the study of religious phenomena is the systematic collection of ethnographic data, and that data collection at all levels of specificity allow for cross-cultural comparison. In the present section, we point more specifically to directions in which future research may lead.

THE ONTOGENY OF RELIGION

The developmental literature of religious cognition draws primarily from the psychological literature, but important new work suggests that a considerable amount of religious cognition is quite intuitive. There is evidence that children prefer teleological explanations even when their parents prefer other options. Moreover, children's innate tendency toward belief in a Cartesian duality of mind and body may prime them for other supernatural beliefs, such as souls, afterlife, or non-corporeal/invisible supernatural agents. There is also emerging support of the prediction that children are

particularly adept at attributing supernatural agents with more knowledge than normal humans. Rebekah Richert and Justin Barrett's "preparedness hypothesis" suggests that children effortlessly make sense of gods' agency, and recent work shows that children intuitively ascribe supernatural agents with perceptual abilities above and beyond normal agents. Future research would benefit from examining whether or not children intuitively ascribe particular domains of knowledge to gods as well such as socially strategic or moral information about people (see above). This would serve to further unify the cognitive and evolutionary sciences of religion. Of course, there is a dearth of cross-cultural developmental work conducted in non-Abrahamic traditions. A likely outcome of such cross-cultural work would be a renewed interest in the foundational works of van Gennep and Turner on rites of passage and transition.

Recent work has also acknowledged that both natural and supernatural explanations for events can and do coexist harmoniously in our minds. For example, while in the developing world there is now a clear understanding of the biological aspects of the transmission of HIV, witchcraft is still cited as an explanation for it. This new understanding, along with evidence that supernatural explanations actually increase rather than decrease with age, suggests that as children develop they are able to conceive of more sophisticated causal explanations, combining their growing understanding of the natural world with their accumulated cultural knowledge of theological specifics. Future research must acknowledge the role of supernatural causal explanation as integral, rather than a simplistic mode that is quickly outgrown.

COGNITION, CULTURE, AND COMMUNICATION

Human cognitive representational systems are remarkably complex with structures still largely mysterious to scientists, but models of cognitive architecture will undoubtedly become more refined as time passes. Similarly, cognitive scientists of religion are still a very long way off from understanding the cross-cultural variation in religious cognition. As contemporary cognitive scientists of religion largely focus on Western populations to assess the merit of their theories, one central question that needs to be pursued is whether or not religious cognition varies across populations to any significant degree. Of course, it does so superficially insofar as people have different deities, varying models of their gods' knowledge and concerns, mythological traditions and so forth, but how various pan-human faculties interact with acquired habits and representational structures requires investigation. Do different populations employ different cognitive systems when reasoning about supernatural agents or rituals? More concretely, if supernatural agents are perceived to be the spirits of ancestors, are kin recognition

systems engaged? Are spatial systems employed when reasoning about totemic spirits? Are the cognitive systems designed to make sense of human dominance hierarchies triggered when deities are seen as all-powerful? Such questions bring cognitive concerns to bear on the anthropological tradition. Such an approach would wed concern for cognitive systems with context.

Also key to progress is uncovering how, when, and why people communicate religious ideas to each other. While cognitive approaches largely focus on the content of religious communication, and cultural evolutionary approaches to learning focus on transmission and retention biases people have, we have little understanding of the contexts in which people glean religious information. One area of importance is the cultural evolutionary approach of Robert Boyd and Peter Richerson and their students. Cultural evolutionary theorists regularly discuss a number of transmission biases that maximize the “cultural fitness” of social learning. The prestige bias, for instance, is the tendency to replicate behaviors and beliefs that are expressed by successful individuals. In the case of religion, it should be fairly clear that religious leadership often expresses, transmits, maintains, and modifies doctrine. The conformist bias on the other hand explains that people will tend to follow what the majority is doing. Tendencies for conformist learning inform mental models just as much (if not more so) than what we learn from our elders and other prestigious individuals.

RELIGION, REPRODUCTION, AND DIVERSITY

It is also becoming increasingly important to investigate the nature and effects of different levels of parental investment in religious socialization on adult behavior, particularly on adult reproductive behavior. Research has shown that religious individuals exhibit higher levels of fertility than nonreligious individuals, and that there is extraordinary variation in fertility levels across religious groups. The mechanisms by which religions positively impact fertility levels are unclear, and future work must examine how religious beliefs impact fertility, how energetically costly religious behavior is coordinated with reproductive pursuits, and how religious communities foster cooperative breeding niches.

Understanding the relationship between religion and fertility is also crucial to understanding why some religions spread and stabilize more successfully than others. Recent research by Corey Fincher and Randy Thornhill demonstrates that the amount of religious diversity in a geographic region is positively correlated with pathogen stress in the physical environment. While we have focused here on the variation of religious systems as responses to diverse socioecological environments, in a rapidly globalizing world, other

religions and the degree of religious diversity in the environment are becoming increasingly important selective pressures that likely shape the evolution of religious systems.

Another important avenue for future research in an increasingly global world is the relationship between religion and human rights, especially as institutions and inter-cultural practices. In this respect, the main issues are the following. First, it remains an open question whether human rights, as a global institution, can remain divorced of religion, as in the West, or whether it requires religion to have moral traction in nonwestern societies. Second, debates continue between anthropologists over the foundations of human rights: namely, whether human rights are universalizing because they emerge from—and countenance—world religions, or whether human rights are a new form of ethics for the globalized world. Third, many anthropologists are finding that human rights are only realizable for cultures outside of the West if they are grounded in local religious systems. However, it remains unclear what types of religious systems are generally accepting or rejecting of human rights claims, and why. Finally, it is unknown how human rights will influence religious systems, and vice versa.

EVOLUTIONARY STUDIES OF RELIGION

If it is the case that religious systems do solve locally specific problems that social and natural environments pose for people, how this is accomplished is likely to generate some of the more compelling debates within the field. As it currently stands, cognitive anthropologists attempt to understand the structures of the human mind responsible for the content and distribution of religious concepts in attempts to uncover cognitive biases which all humans share. However, behavioral approaches are generally unconcerned about internal motivational states, evolved cognitive mechanisms, and mental models pertaining to religion. Cultural evolutionary approaches to religion focus on the source of transmission. In particular, who transmits ideas plays a very important role in which ideas are retained and made prevalent throughout a population. A more dynamic view attempts to come to terms with all of these processes and how the content of religion corresponds to the aforementioned problems found in our environments. Some have attempted to begin to make sense of religion dynamically by appealing to religion as a niche in its own right; people must navigate religious environments, which impose their own rules, regulations, expectations, and consequences for breaching them.

An area of particular interest with potential links to ritual behavior is inter-personal synchrony. Research into the behavioral impact of synchronous action provides a possible proximate mechanism by which rituals

may lead to social bonding. It appears that synchronous movement as well as synchronous vocalizations can enhance feelings of affiliation, boost trust and cooperation, promote compassion and helping, and lead to more generally positive affect toward fellow group members. Many rituals feature synchronous behavior including music, chanting, dancing, or other forms of rhythmic and/or vocal entrainment. This could well be one way in which religious participation leads to social cohesion, and may even be one primary mechanism by which the costly signaling theory of religion operates. Long bouts of synchronous behavior can also lead to altered states of ecstatic consciousness, during which participants may feel both a “loss of self” and a simultaneous “connection with other.” This state, likely mediated by physiological and hormonal changes similar to those brought about by the use of psychoactive substances, could be part of a process in which an individual identity becomes extended or merged psychologically with a group identity. Future research into this phenomenon should examine both the physiology underlying the effect by measuring changes in relevant hormones as well as exploring areas of the brain that could be involved in such responses. It is possible that there is an important role for parts of the brain involved in Theory of Mind, including mirror neurons, which are known to be active when individuals observe others’ actions.

Despite the progress in understanding how religion benefits people, the social sciences of religion have little understanding of cases when religious systems *fail* people. In such cases, are members investing too much into their religion? Are there cases when religious costs are not expensive enough to reliably indicate commitment and therefore the religion dissolves? Are there cases where the relationship between ritual and belief are in some way qualitatively incompatible such that a system cannot last? If so, what were the evolutionary processes that lead to these outcomes? Such research may be primarily limited to the historical record, but nevertheless it is an important missing piece for understanding why it is that people are religious.

METHODOLOGY

Regardless of the theoretical orientation of the research, we are in dire need of thorough and directly comparable ethnography. Cross-cultural work is of the utmost importance, particularly at a time when traditional economies and worldviews are increasingly becoming more globalized. As anthropologists have long known, important elements of religious worldviews correspond to local economy and social structure. As such, religious diversity around the world is quite likely to be reduced in significant ways. A reinvigorated ethnographic science of religion is in order, and we are sorely in need of rich, descriptive, and comparable data for testing predictions borne out by the

social sciences of religion. This requires a systematic regime of data collection in order to craft consensus models of what it is people claim they believe in and how these models have some impact on the world. Such an undertaking would be quite expensive in terms of travel, organization, and management, but without it, our understanding of variation in religion will remain impoverished.

A related concern that warrants consideration is the often-expressed lack of methodological rigor in the data collection process of ethnography. Crudely put, there is a gap between qualitative and quantitative ethnographic data that needs to be narrowed in order to make progress. A new generation of ethnographers has emerged who embrace quantitative data collection in order to frame their focus of studies in such a way as to make studies directly comparable and falsifiable. Emma Cohen's work among Afro-Brazilian cults and Dimitris Xygalatas' work with fire-walkers in Greece and Spain point to the fact that not only are ethnographers enriching our understanding of particular traditions, but they are also paving the way for approaches which inform concerns for cognitive universals and the evolutionary forces which shape their expression.

Regardless of the theoretical background or methodology of the research, the future social scientific study of religion has as a bright future as it does an illustrious past. Its study has the potential to unify what are now distinct approaches into a comprehensive understanding of the fundamental elements of human social life. While we cannot know for certain what the future study of religion will bear, we have faith that it will be fruitful.

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BENJAMIN GRANT PURZYCKI SHORT BIOGRAPHY

Benjamin Grant Purzycki earned his PhD. in anthropology at the University of Connecticut. He works on the evolution of religious systems and religious cognition, particularly how people make sense of their gods' minds. He has conducted fieldwork in the Tyva Republic (Tuva) and has published works in a variety of journals including *Current Anthropology*, *Cognitive Science*, *Religion*, *Brain and Behavior*, and *Skeptic Magazine*.

Professional webpage: <http://bgpurzycki.wordpress.com/>

Curriculum Vitae: <http://bgpurzycki.wordpress.com/cv/>

JORDAN KIPER SHORT BIOGRAPHY

Jordan Kiper is a PhD student in anthropology at the University of Connecticut. He works on human sociality and cooperation, collective violence, and the evolution of religion and morality. He has conducted fieldwork in the Balkans.

JOHN SHAVER SHORT BIOGRAPHY

John Shaver is a post-doctoral Research Fellow at the Laboratory for the Experimental Research of Religion, Masaryk University. He works on understanding intracultural variation in ritual behavior, the relationships between religion and fertility, and the evolution of syncretic religions. He has conducted fieldwork in Fiji.

DANIEL N. FINKEL SHORT BIOGRAPHY

Daniel N. Finkel is a PhD Candidate in the Department of Anthropology at the University of Connecticut. His research interest is the impact of engaging in synchronous action on social cognition, particularly cooperation and trust.

RICHARD SOSIS SHORT BIOGRAPHY

Richard Sosis is James Barnett Professor of Humanistic Anthropology and Director of the Evolution, Cognition, and Culture Program at the University of Connecticut. His work has focused on the evolution of cooperation and the adaptive significance of religious behavior, with particular interest in the relationship between ritual and intragroup cooperation. To explore these issues, he has conducted fieldwork with remote cooperative fishers in the Federated States of Micronesia and with various communities throughout Israel, including Ultra-Orthodox Jews and members of secular and religious kibbutzim. He is cofounder and coeditor of the journal *Religion, Brain & Behavior*, which publishes research on the biological study of religion.

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