BRILL

METHOD AND THEORY IN THE STUDY OF RELIGION (2017) 1-7

METHOD & THEORY in the STUDY OF RELIGION

brill.com/mtsr

The Evolution of Culture as a New Pattern for Comparative Religion

Aiyana K. Willard
University of Oxford, Institute of Cultural & Evolutionary Anthropology
51/53 Banbury Road Oxford, UK, OX2 6PE
aiyana.willard@anthro.ox.ac.uk

Abstract

In his new book, Paden argues that evolutionary theory creates new and fertile ground for the comparative study of religion. I suggest that extending Paden's argument to embrace new theories of cultural evolution will continue to broaden our ability understand the origins of both the similarities and differences in religions across societies. Religions are cultural systems and as such an understanding of our shared biology can only explain a limited amount of what religion is and does. I discuss how new cultural evolutionary theories that examine cultural variation and cultural change based on how humans learn and transmit cultural content and can improve the theoretical foundations of comparative studies of religion. Exploring different mechanisms of cultural learning can help explain why certain features of religion are found across a wide variety of religions while others are only found in specific groups.

Keywords

Comparative Religion – Cultural Evolution – Cognitive Science of Religion

Paden's book, *New Patterns for Comparative Religion*, is a testament to the utility of the comparative study of religion. He aptly describes the value of comparison and how looking across religious groups can increase our understanding of religions, and why religion is so central to so many people's lives. Paden follows his examination of traditional thinkers from religious studies and sociology with the newer theories of cognitive science and evolution. He argues that evolutionary theories can give researchers interested in comparison a set of tools

 | DOI 10.1163/15700682-12341421

that allow them to look beyond cultural contexts to something that humans all share: a biology shaped by evolution (7-8, 109-117, 152-154). An evolutionary approach to comparison within the domain of religion is central to the work I do. As such, I whole-heartedly agree with Paden on this point. I will argue that Paden's approach to these topics can be expanded much further and become more fruitful with the increased incorporation of recent theories about the evolution of culture, and that more consilience along these lines is necessary to fully grasp what religion is in human lives and cultures.

I Evolution and Cultural Evolution

Evolution took biology from a catalogue of different species and traits to a cohesive theoretic explanation for how selection leads to different species and why different traits exist. It unified the biological sciences and many have argued that it can do the same for the human sciences (e.g. Slingerland 2008: 250-296). Humans, like any other species, evolved, and our own physical and psychological traits can be understood in light of evolution. Yet, there is resistance to the idea that our biology can completely explain us. We see ourselves as fundamentally different from the rest of our evolutionary family tree. We *are* different in a very real way. Where our closest primate relatives mastered only basic tool use, we build cathedrals and rockets and have long drawn out philosophical debates about what it means to be human. We are unique in our ability to build complex cultures and accumulate knowledge and innovations across generations (Henrich 2016; Richerson & Boyd 2005: 1-57).

This immense capacity for culture *is* encoded in our genes, but looking only at our biology misses much of what culture is. We have an evolved capacity to learn by paying attention to the intentions and behaviors of those around us (Herrmann et al. 2007; Tomasello et al. 2005). This allows us to accumulate cultural innovations over time. Once this capacity for culture exists, the processes of learning and socially transmitting cultural content makes culture itself subject to evolution (Henrich & McElreath 2003). Like biological evolution, cultural evolution is not purposeful—there is no goal or end product. Cultural evolution is a set of processes that, once understood, allow us to explain how selection creates different cultures and why different cultural traits exist.

II The Evolution of Culture and Comparison

Paden's incorporation of existing evolutionary theories of religion primarily focuses on early work in the cognitive science of religion (87, 97-98, 130-131, 197-198). Much of this work concentrates on the idea that we have evolved tendencies that bias us to pay attention to, remember, and pass on certain types of religious *content* over others (see Barrett 2007; Boyer 2008). These biases explain some interesting features of religions, namely, why some types of religious content appear all around the world—such as seeing humans as having minds and souls separate from their bodies (e.g., Astuti & Harris 2008; Bloom 2005; Slingerland & Chudek 2011). Though important, these biases fail to explain the immense variety in religious beliefs and practices or the high level of commitment humans often have towards those beliefs and practices (Gervais et al. 2011). Topics like these are better explained by a different set of biases: cultural learning biases. These define the *contexts* we preferentially learn in, people we preferentially learn from, or social cues that lead us to learn in certain ways. These are part of a suit of evolved traits that prepare us to reliably learn and transmit culture (Henrich & McElreath 2003).

Cultural learning biases delineate how we learn the beliefs and behaviors of our cultural group and are central to how we accumulate culture over time. One of these biases is a preference for learning from prestigious people. Paden discusses our bias towards prestige in depth (197-211). His discussion covers our preference for prestigious people, objects, and institutions, but only briefly touches the role this prestige bias plays in learning. The effect of prestige on learning is key to understanding its impact on changing the larger cultural context. We preferentially pay attention to and learn from prestigious people (Chudek et al. 2012). If I needed to learn to grow yams, a preference to learn from the best yam grower in my community will increase the chances that I learn the most effective techniques and secure the best food. This in turn will impact the success of both my family and myself and thus increase the likelihood that other people will copy me and that this preference will spread throughout a population. What this preference cannot tell me is exactly what cultural content I should learn. What makes someone a good yam grower is somewhat opaque. A farmer could be successful because of how she plants her crops, the tools she uses for planting, or the divinations she makes before each yam is planted. Since it is difficult to know what makes someone successful, learners should copy all of these traits and the whole set will spread through a cultural group (Henrich & Gil-White 2001).

Prestige bias is only one of several known cultural learning biases. One of central importance to the spread of religions is the increased tendency to adopt beliefs when one has observed another person behave in a way that credibility displays the important—or truth—value of those beliefs (called credibility enhancing displays or CREDs; see Henrich 2009). Not all cultural content is treated equally by learners and some beliefs and practices disappear form one generation to the next. Cultural content that is maintained across time with high fidelity must use additional signals to demonstrate its value within the culture. Behavior that makes a belief seem more credible and important, such as seeing others participate in high pageantry or costly rituals, helps to instill the truth value (Willard et al. 2016) and desire to maintain that belief in a new generation of cultural learners (Willard & Cingl, in press).

This role of behavioral displays adds an additional dimension to Paden's description of annual renewal rituals' role in renewing belief (88-89). These rituals not only impact the believers themselves, but also help to increase the probability that the beliefs are learned and maintained by the new members of a group. This dimension offers us an evolutionary explanation for why such practices are so common across religions, but not one that require these rituals to be encoded directly into our genes. Religions that incorporate these practices are more likely to survive over time and even spread to new populations. The ritual practices themselves can arise independently in multiple cultures, and the specific content of rituals can vary dramatically from one group to the next. Including this framework of cultural evolution allows us to make specific predictions about what these rituals should have in common, namely, the ability to aid in the transmission of religious beliefs to a new generation or a new group through potentially costly public displays that demonstrate belief.

Paden's discussion of evolutionary theory focuses on explaining universals (107-117), but when these sorts of learning biases are taken into account, cultural evolution can encompass and explain cultural differences as well as similarities. Differences themselves can be analyzed to find universal features of human psychology. One problem that has gotten a lot of attention in the cultural evolution of religion is the problem of cooperation. All societies need to find ways to enforce societal rules and coordinate behavior. Religion can be particularly effective in this regard, but it is not a 'one-size-fits-all' solution. Belief in omniscient gods that punish every person who breaks social rules is particularly effective in societies where people regularly interact with strangers and social punishment is less effective (Norenzayan 2013). This solution may not fit other cultural contexts. In the Tyva Republic, for example, the *Cher eezi* or spirit master's knowledge and power is spatially limited to the area that

they reside (Purzycki 2011; 2013). This helps to enforce social rules for using shared natural resources and respect for borders, and reflects the needs of the pastoralists who live there.

III Evolutionary Theories of Religion Need Religious Studies

According to a recent survey of cultural evolutionists, one of the main concerns within the field was a lack of theoretical integration between social sciences and humanities (Brewer et al. 2017). The lack of shared languages across these disciplines makes this integration difficult. Evolutionary theories of religion have typically focused on the topics that are interesting to evolutionary biologists, such as problems of cooperation or increases in fertility. Topics like 'the sacred' and world-building have been left almost entirely untouched and the people doing science of religion often have limited exposure to this work. These ideas are part of religion and a theoretical framework that evolutionary theories of religion need to be able to explain. Increasing exposure of theories of religion across disciplinary divides is the first step to solving these issues.

Researchers from both the sciences and the humanities infrequently read across disciplines. When they do, the knowledge gaps can be difficult to overcome. It would be unrealistic to expect someone in religious studies to learn all the nuances of formal evolutionary theory as well as keeping up to date with their own field. In the same way, it is unrealistic for evolutionary theorists to fully integrate the knowledge that comes from decades of work in religious studies. Paden's synthesis of evolutionary theory within a religious studies framework begins to bridge this gap. By reading and synthesizing across disciplines, Paden creates an accessible guide to some of the issues within religious studies and how they relate to evolutionary theories of religion. This is equally helpful to evolutionary theorists and scholars of religious studies. Crossing these boundaries will lead to a more complete understanding of what religions—or other cultural institutions—are and why they exist in human cultures.

References

Anthony, J. I., Anigail J. Dawson, Katelyn L. Begany, Regina L. Leckie, Kevin P. Barry, Angela H. Ciccia & Abraham Z. Snyder (2013). fMRI reveals reciprocal inhibition between social and physical cognitive domains. *NeuroImage* 66, pp. 385-401.

Astuti, Rita & Paul Harris (2008). Understanding mortality and the life of the ancestors in rural Madagascar. *Cognitive Science: A Multidisciplinary Journal* 32 (4), pp. 713-740.

Atran, Scott & Joseph Henrich (2010). The evolution of religion: How cognitive by-products, adaptive learning heuristics, ritual displays, and group competition generate deep commitments to prosocial religions. *Biological Theory* 5 (1), pp. 18-30.

Barrett, Justin L. (2007). Cognitive science of religion: What is it and why is it? *Religion Compass* 1 (6), pp. 1-19.

Bloom, Paul (2005). *Descartes' Baby: How the Science of Child Development Explains What Makes Us Human*. New York: Basic Books.

Boyer, Pascal (2008). Religion: Bound to believe? *Nature* 455 (23), pp. 1038-1039.

Brewer, J., M. Gelfand, J. C. Jackson, I. F. MacDonald, P. N. Peregrine, P. J. Richerson, P. Turchin, H. Whitehouse & D. S. Wilson (2017). Grand challenges for the study of cultural evolution. *Nature Ecology and Evolution* 1, pp. 1-3.

Chudek, Maciej, Sarah Heller, Susan Birch & Joseph Henrich (2012). Prestige-biased cultural learning: Bystander's differential attention to potential models influences children's learning. *Evolution and Human Behavior* 33 (1), pp. 46-56.

Gervais, Will M., Aiyana K. Willard, Ara Norenzayan & Joseph Henrich (2011). The cultural transmission of faith: Why natural intuitions and memory biases are necessary, but insufficient, to explain religious belief. *Religion, Brain & Behavior* 41 (1), pp. 389-400.

Henrich, Joseph (2009). The evolution of costly displays, cooperation, and religion: Credibility enhancing displays and their implications for cultural evolution. *Evolution and Human Behavior* 30, pp. 244-260.

Henrich, Joseph (2016). *The Secret of Our Success: How Culture is Driving Human Evolution, Domesticating our Species, and Making Us Smarter*. Princeton, NJ: Princeton University Press.

Henrich, Joseph & Francisco J. Gil-White (2001). The evolution of prestige: freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior* 22 (3), pp. 165-196.

Henrich, Joseph & Richard McElreath (2003). The evolution of cultural evolution. *Evolutionary Anthropology: Issues, News, and Reviews* 12, pp. 123-135.

Herrmann, Esther, Joseph Call, María V. Hernández-Lloreda, Brian Hare, & Michael Tomasello (2007). Humans have evolved specialized skills of social cognition: The cultural intelligence hypothesis. *Science* 317 (5843), pp. 1360-1366.

Norenzayan, Ara (2013). *Big Gods: How Religion Transformed Cooperation and Conflict*. Princeton, NJ: Princeton University Press.

Purzycki, Benjamin G. (2011). Tyvan cher eezi and the socioecological constraints of supernatural agents' minds. *Religion, Brain & Behavior* 1 (1), pp. 31-45.

Purzycki, Benjamin G. (2013). The minds of gods: A comparative study of supernatural agency. *Cognition* 129 (1), pp. 163-179.

Richerson, Peter J. & Robert Boyd (2005). *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago, IL: University of Chicago Press.

Slingerland, Edward (2008). *What Science Offers the Humanities: Integrating Body and Culture*. New York: Cambridge University Press.

Slingerland, Edward & Maciej Chudek (2011). The prevalence of mind-body dualism in early China. *Cognitive Science* 35 (5), pp. 997-1007.

Tomasello, Michael, Malinda Carpenter, Joseph Call, Tania Behne & Henrike Moll (2005). Understanding and sharing intentions: The origins of cultural cognition. *Behavioral and Brain Sciences* 28, pp. 675-735.

Willard, Aiyana K. & Lubomír Cingl (in press). Testing theories of secularization and religious belief in the Czech Republic and Slovakia. *Evolution and Human Behavior* (http://dx.doi.org/10.1016/j.evolhumbehav.2017.01.002).

Willard, Aiyana K., Joseph Henrich & Ara Norenzayan (2016). Memory and belief in the transmission of counterintuitive content. *Human Nature* 23 (3), pp. 221-243.