

## Two Questions for the Cultural Evolutionary Science of Religion

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The last few years have represented a significant step forward for the scientific study of religion, thanks in large part to the Evolution of Religion and Morality (ERM) project. The ERM project has not only made methodological progress by combining field studies, historical databases, and experimental methods; it has made bold theoretical predictions about the co-evolution of religion and culture. This combination of methodological and theoretical ambition has drawn new scholars to the science of religion, and I count myself in that group. When I began my PhD in 2016, the early findings of the CERC consortium were beginning to appear in press. Five years later, these findings continue to inspire new questions that guide my research. Here I summarize two of these questions, and how they build on insights from the ERM project.

### **Where do Moralizing and Punitive Gods Come From?**

High gods who monitor and punish human behavior are now common—more than half of the human population believe in God and Allah alone—but this wasn't always true. A worldwide survey of hunter-gatherer societies from the ethnographic record found that 15% of societies believed in active high gods (Peoples et al., 2016), and a survey of small-scale societies in Austronesia found that only 6% of societies believed in moralizing high gods (Watts et al., 2015). A central goal of the ERM project was to explain why these gods became so prevalent.

Papers from the ERM project have focused on distal and group-level factors in the rise of moralizing high gods, arguing that moralizing high god belief spreads because it promotes large-scale cooperation, which allows societies to expand and spread without large-scale defection (Norenzayan et al., 2016). The target article summarizes some evidence for this claim, such as correlational findings that people who believe in more punitive and moralizing high gods donate more to distant co-religionists than people who believe in less punitive high gods (Purzycki et al., 2016). Yet the target article also acknowledges that this evidence cannot prove causation, and there may be other mechanisms explaining the rise of moralizing high gods.

Some of these other mechanisms may involve the proximal psychological reasons why people might embrace beliefs in moralizing high gods (Jackson et al., 2021). My colleagues and I have focused particularly on cultural changes to “tightness-looseness”—a society's strictness of norms and tolerance for deviance (Gelfand et al., 2017)—which could make punitive and watchful high gods more appealing. Past studies have found that people living in tighter cultures often show more reactance to witnessing norm violations, and support more authoritarian leaders who are less tolerant of rule breaking (Jackson et al., 2019; Mu et al., 2015). We have shown that a similar dynamic characterizes religious beliefs (Jackson et al., 2021). In one study, we analyzed the content of Bible passage references in published literature to show that historical increases in cultural tightness preceded increases in references to God as more punitive. In other experimental studies, we found that increasing the appeal of cultural tightness can lead to punitive views of God, an effect that is mediated by the motivation to punish norm violators.

Modeling the role of cultural tightness also explains why moralizing and punitive high gods have historically been more common in geographical regions with high levels of ecological threat (e.g., regions with frequent natural hazards) (Botero et al., 2014). Cultural tightness typically

increases after ecological threat as societies strengthen norms to improve cooperation and coordination (Roos et al., 2015). Our studies find that this cultural tightening can statistically explain why people are more likely to believe in punitive high gods following periods of conflict (Caluori et al., 2020), and why belief in Hell is most common in American states with high levels of historical ecological threat (Jackson et al., 2021).

These studies add to growing evidence that there are many antecedents to belief in moralizing and punitive gods that have little to do with large-scale cooperation. For example, Watts and colleagues (2016) have argued that moralizing high god belief may have partly spread because of active Abrahamic proselytizing (see also Watts et al., 2018), which explains why many of the moralizing high gods in the ethnographic record are derived from Christianity or Islam (Murdock & White, 1969). Acknowledging the role of factors like Abrahamic proselytizing and cultural tightness need not undermine the ERM project's insights into the distal functions of moralizing high gods for cooperation. But these other factors imply that there are many cultural evolutionary paths to moralizing high gods.

### **How do Other Features of Gods Impact Cultural Evolution?**

The ERM project's focus on moralizing high gods follows in a longstanding interest on moral characteristics of gods in our field (Swanson, 1960). This interest is partly methodological, since one of the most longstanding widely coded variables in the ethnographic atlas is Murdock's "High Gods" variable (Murdock & White, 1969). But this focus on moralizing high gods means that we know little about other features of gods and how they intersect with cooperation and cultural change. For example, does belief in gendered deities relate to gender-based inequalities in society? Do "universal" gods encourage parochial cooperation more than gods that are associated with specific places or groups? Do societies that believe in high gods which require ritual sacrifice show higher rates of cooperation because of more frequent costly signaling?

Many theories and measures of moralizing high gods conflate these diverse features of gods. For example, Abrahamic believers think of God as moralizing and punitive, but they also think of God as male, as a creator, as universal, and frequently as the only true God. Disentangling these features could add valuable texture to the science of religion and cultural evolution and could even address open questions from the ERM project, such as the puzzling finding that moralistic and punitive features of high gods—but not local deities—increased parochial cooperation. With data on different features of gods from ethnographic codes or cross-cultural surveys, studies can isolate the features of Abrahamic high gods that encourage parochial cooperation.

### **Conclusion**

This is an exciting time to be studying religion and cultural evolution. The ERM project has opened dozens of new directions of inquiry in the evolutionary science of religion. Here I have described two of these new directions and their potential for future cultural evolutionary models of religion. With new methodological advances, collaboration between scientists and humanities scholars, and integration of empirical data and evolutionary models, it is a bright future indeed.

## References

- Botero, C. A., Gardner, B., Kirby, K. R., Bulbulia, J., Gavin, M. C., & Gray, R. D. (2014). The ecology of religious beliefs. *Proceedings of the National Academy of Sciences*, *111*(47), 16784–16789.
- Caluori, N., Jackson, J. C., Gray, K., & Gelfand, M. (2020). Conflict changes how people view God. *Psychological Science*, *31*(3), 280–292.
- Gelfand, M. J., Harrington, J. R., & Jackson, J. C. (2017). The strength of social norms across human groups. *Perspectives on Psychological Science*, *12*(5), 800–809.
- Jackson, J. C., Caluori, N., Abrams, S., Beckman, E., Gelfand, M., & Gray, K. (2021). Tight Cultures and Vengeful Gods: How Culture Shapes Religious Belief. *Journal of Experimental Psychology: General*. Manuscript in press.
- Jackson, J. C., Caluori, N. E., Gray, K., & Gelfand, M. (2021). The new science of religious change. *American Psychologist*, *76*.
- Jackson, J. C., Van Egmond, M., Choi, V. K., Ember, C. R., Halberstadt, J., Balanovic, J., Basker, I. N., Boehnke, K., Buki, N., & Fischer, R. (2019). Ecological and cultural factors underlying the global distribution of prejudice. *PLoS One*, *14*(9), e0221953.
- Mu, Y., Kitayama, S., Han, S., & Gelfand, M. J. (2015). How culture gets embrained: Cultural differences in event-related potentials of social norm violations. *Proceedings of the National Academy of Sciences*, *112*(50), 15348–15353.
- Murdock, G. P., & White, D. R. (1969). Standard cross-cultural sample. *Ethnology*, *8*(4), 329–369.
- Norenzayan, A., Shariff, A. F., Gervais, W. M., Willard, A. K., McNamara, R. A., Slingerland, E., & Henrich, J. (2016). The cultural evolution of prosocial religions. *Behavioral and Brain Sciences*, *39*.
- Peoples, H. C., Duda, P., & Marlowe, F. W. (2016). Hunter-Gatherers and the Origins of Religion. *Human Nature*, *27*(3), 261–282. <https://doi.org/10.1007/s12110-016-9260-0>
- Purzycki, B. G., Apicella, C., Atkinson, Q. D., Cohen, E., McNamara, R. A., Willard, A. K., Xygalatas, D., Norenzayan, A., & Henrich, J. (2016). Moralistic gods, supernatural punishment and the expansion of human sociality. *Nature*, *530*(7590), 327–330.
- Roos, P., Gelfand, M., Nau, D., & Lun, J. (2015). Societal threat and cultural variation in the strength of social norms: An evolutionary basis. *Organizational Behavior and Human Decision Processes*, *129*, 14–23.
- Swanson, G. E. (1960). *The birth of the gods: The origin of primitive beliefs* (Vol. 93). University of Michigan Press.
- Watts, J., Bulbulia, J., Gray, R. D., & Atkinson, Q. D. (2016). Clarity and causality needed in claims about Big Gods. *Behavioral and Brain Sciences*, *39*.
- Watts, J., Greenhill, S. J., Atkinson, Q. D., Currie, T. E., Bulbulia, J., & Gray, R. D. (2015). Broad supernatural punishment but not moralizing high gods precede the evolution of political complexity in Austronesia. *Proceedings of the Royal Society B: Biological Sciences*, *282*(1804), 20142556.
- Watts, J., Sheehan, O., Bulbulia, J., Gray, R. D., & Atkinson, Q. D. (2018). Christianity spread faster in small, politically structured societies. *Nature Human Behaviour*, *2*(8), 559–564.