

Belief in God: A Cultural Adaptation With Important Side Effects

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Abstract

This article integrates a recent spate of findings regarding beliefs in or thoughts about God and how they influence behavior. I first describe a fast-emerging cultural evolutionary perspective on *why* people believe in powerful, watchful, and morally invested Gods. I then apply this perspective to the recent spate of findings, arguing that those three culturally evolved features of Gods are responsible for certain additional effects beyond those thought to be their original adaptive function. These effects pertain to self-regulation, the reinforcement of social norms, risk taking, and more. I end by spelling out the theoretical leverage gained by applying a cultural fitness lens to these findings.

Keywords

belief in God, religion, self-regulation, cultural evolution

Religious beliefs emerged 100,000 years ago (Greenspan, 2006) and continue to influence society (e.g., fueling intergroup conflict and political violence) and individual lives (e.g., shaping moral judgment and self-construal; see Cohen, 2015). In all, 84% of humans identify with a religion (Pew Research Center, 2012); most believe in some sort of God (WIN/Gallup International, 2015). Here, I leverage one prominent theory on the origin of belief in God to integrate a recent collection of findings on how this belief influences behavior.

The Gods We Believe in

There is large variation in the Gods people believe in: Some monotheistic religions prohibit supernatural beliefs outside the specific belief in a single God, while adherents to polytheistic religions worship multiple Gods, and pantheists believe that God is unbounded, encompassed by all reality. This theodiversity notwithstanding, recent findings point to some commonalities in practically held beliefs within religions of large-scale societies. With few exceptions, they portray single Gods with three specific characteristics: These Gods are powerful—directly influencing human outcomes—watchful—keenly aware of human actions—and morally concerned—preferring humans to behave morally (Norenzayan, 2013). Some scientists dispute this general

rule (e.g., Baumard & Boyer, 2014); however, growing evidence indicates that even oft-cited exceptions (e.g., gods of ancient Greece and Rome) may conform to it more than previously thought (e.g., Mikalson, 2010; Rives, 2007; Slingerland, 2013).

Scholars have different theories for prevalent beliefs in God. One argument is that they result from an over-application of normal human cognition (e.g., Boyer, 2001). For instance, we may believe in God because of our tendency to perceive minds (e.g., Barrett & Keil, 1996) or to believe that everything has a purpose (e.g., Evans, 2001). Or our belief in God may be explained by a dual process model, where it is specifically human intuitions that account for commonalities between religions (Baumard & Boyer, 2013). Other views posit that beliefs in God proliferate because they satisfy various intrapsychic needs (e.g., Laurin & Kay, 2017).

However, yet another perspective that is quickly gaining prominence accounts for specific beliefs in not just any God, but powerful, watchful, morally invested Gods—“Big Gods”—through cultural evolution (Norenzayan et al., 2016). Cultural evolution is one theoretical account of how human beings and societies

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change across generations (see Laland & Brown, 2011). Just as genetic evolution posits that certain genetic permutations are adaptive to the reproduction of individuals, and therefore proliferate over time in the gene pool, *cultural* evolution posits that certain *cultural* features are adaptive to the growth of *societies*, and therefore become widespread.

The cultural evolution account of Big God beliefs is that they emerged, in concert with religion more broadly, as a culturally adaptive solution to the problem of large-scale cooperation. Genetic and reputational mechanisms explain why people cooperate with kin and with others whom they see regularly (e.g., Henrich & Henrich, 2007). But once societies expand beyond about 150 people (Dunbar, 2003), those mechanisms break down and society splinters (Chudek, Brosseau-Liard, Birch, & Henrich, 2013). The cultural invention of religion, and of Big Gods in particular, helped solve that problem by enforcing cooperation: If group members believe in a Big God, they know that if they cheat a neighbor, even anonymously, the Big God will see it (he is watchful), frown on it (he is morally concerned), and punish it (he is powerful enough to do so). So instead they cooperate.

Thus this perspective argues that Big God beliefs spread because a cultural evolutionary pressure selected for them: Cultures that promoted shared beliefs about Big Gods could continue to cooperate as they grew; those that did not could not grow beyond a certain size without dissolving in conflict. Indeed, the presence of Big Gods closely tracks a culture's size and other indicators of its need for cooperation (Peoples & Marlowe, 2012; Roes & Raymond, 2003).

Secondary Effects of Culturally Evolved God Beliefs

Features that evolve because they serve one particular adaptive function can nevertheless have other, sometimes unrelated, effects (Buss, Haselton, Shackelford, Bleske, & Wakefield, 1998). For example, birds' feathers evolved to regulate their temperatures and only later provided them the benefit of flight (Sumida & Brochu, 2000). And people with ancestry in malaria-ridden regions have a genetic adaptation that protects them against the disease but that entails the cost of increased vulnerability to anemia (Williams et al., 2005).

Thus, genetic adaptations can have harmful, beneficial, or merely benign effects that are sometimes entirely unrelated to the evolutionary pressure that originally caused them to emerge. The same applies to the cultural level: Even if Big God beliefs became prevalent because they served the culturally adaptive function of promoting cooperation,¹ these same beliefs may also

influence human behavior in other ways—ways that might promote either societal success or failure. Thus, in an inversion of the theories referenced above claiming that beliefs in God *are* side effects of (genetically) evolved human cognition, I argue that each of the three (culturally) evolved characteristic features of Big Gods have *engendered* their own side effects, as reflected by a recent collection of findings on how beliefs in or thoughts of God influence behavior.

Watchfulness

The watchfulness of Big Gods has effects primarily on self-regulation (see also McCullough & Willoughby, 2009). Self-regulation means guiding and correcting one's behavior in pursuit of goals (Carver & Scheier, 1998), and it rests on the convergence of two factors: a set of skills and the motivation to apply those skills (see Laurin & Kay, 2016). The watchfulness of Big Gods can improve self-regulation through each of these factors.

Regarding skill, Big Gods exert their culturally evolved function by making people feel that God is watching them, which reminds them that they need to adhere to God's moral rules. When people feel watched, though, they tend to watch themselves, which may be why thinking about God can encourage people to self-monitor (Kitchens, 2015). Self-monitoring is, in turn, a critical skill of self-regulation (Carver & Scheier, 1998): If a student sets a goal for her GPA, she must continually note her performance and compare it with her goal if she is to detect and reduce discrepancies. Thus, by reminding people to monitor themselves, Big Gods may make people better self-regulators (Carter, McCullough, & Carver, 2012).

Regarding motivation, when people feel watched, they do not merely want to avoid misbehaving according to the watcher's standards (Baldwin & Holmes, 1987)—that is, God's moral standards. Rather, they want to avoid misbehaving more broadly (e.g., Dahl, Manchanda, & Argo, 2001). In the context of self-regulation, misbehaving means succumbing to temptation: For the student with the GPA goal, attending a friend's birthday dinner instead of studying might constitute misbehaving. Thus, Big Gods' watchfulness, by making people feel monitored, motivates them to resist temptations—even temptations God may not care about (Laurin, Kay, & Fitzsimons, 2012).

Although the findings in this section have been linked theoretically to God's watchfulness, few studies demonstrate that they are indeed caused by this particular characteristic. One of these studies demonstrated that thinking about God only increases the motivation to resist temptations among participants who agree God

is watchful (Laurin, Kay, & Fitzsimons, 2012). Thus, some evidence suggests Big Gods' culturally evolved watchfulness is responsible for secondary effects on self-regulatory motivation, but future research must more closely examine self-regulatory skill.

Power

The culturally evolved power of Big Gods has secondary effects on self-regulation and people's willingness to help reinforce norms. The self-regulatory effects of Big Gods' power are less straightforward than those of Big Gods' watchfulness. On one hand, powerful Gods reassure people that the world is orderly and structured (Kay, Gaucher, Napier, Callan, & Laurin, 2008), which they need to sustain their motivation: In a random world where consequences do not predictably follow actions, there is no sense in pursuing goals (Kay, Laurin, Fitzsimons, & Landau, 2014). For this reason, particularly when people feel that order is lacking, powerful Gods can restore their sense of order and thus their motivation to self-regulate (Khenfer, Tafani, Roux, & Laurin, 2017; see Laurin & Kay, 2017). Thus, by making the world feel orderly and predictable, powerful Gods enhance people's motivation to self-regulate.

On the other hand, powerful Gods can also make people feel less responsible for their outcomes (Dijksterhuis, Preston, Wegner, & Aarts, 2008). When people can rely on others to help them reach their goals (Karau & Williams, 1993), or when they merely sense that their success depends on factors beyond their control (Bandura, 1997), they feel it is less worth their while to invest effort. For this reason, powerful Gods sometimes *decrease* people's motivation to invest effort in self-regulation (Khenfer et al., 2017; Laurin, Kay, & Fitzsimons, 2012).

This same sense that perhaps God is responsible for outcomes can make people unwilling to take on the social responsibility of punishing those who fail to comply with norms of cooperation (Laurin, Shariff, Henrich, & Kay, 2012). For instance, participants primed with their own belief in a powerful God spent fewer of their own resources to punish another participant who short-changed a stranger. This phenomenon has dangerous societal implications: Groups whose members refuse to invest in enforcing prosocial norms tend to dissolve into conflict (e.g., Fehr & Gächter, 2000).

In nearly all the studies described in this section, researchers have taken pains to isolate the powerful component of God, for example, comparing participants made to think about a powerful God with those made to think about a more removed God. Thus there is good evidence that the secondary effects in this section are attributable to Big Gods' power, specifically.

Moral concern

Researchers have identified a broad set of effects that may be attributable to Big Gods' moral investment. I argue that these disparate effects can all be traced back to the idea that just as Big Gods punish wrongdoers, they also protect the virtuous (Shariff & Norenzayan, 2011). In conjunction with the truism that most people believe themselves to be virtuous (e.g., Sedikides, Meek, Alicke, & Taylor, 2014), this means most people believe Big Gods will protect *them*. One consequence is that Big Gods can make people take more risks (Kupor, Laurin, & Levav, 2015). Another may be that people experience a connection with God similar to, and even substitutable with, the one they experience with human relationship partners (Granqvist, Mikulincer, & Shaver, 2010; Laurin, Schumann, & Holmes, 2014): It is no great leap from believing that God is protecting you to believing that God loves and cares about you.

No studies in this section have empirically tied their findings to God's moral concern. Moreover, although others have alluded to the idea that people view God as more benevolent than punitive (Shariff & Norenzayan, 2011), the current article is the first to argue that the idea of God's benevolence may come from the moral investment of Big Gods, in conjunction with people's generally glowing self-views (see Johnson, Cohen, & Okun, 2016, for a different perspective). Thus future research is needed to confirm whether any of these effects should properly be attributed to Big Gods' moral concern.

Why Bother Applying the Cultural Evolutionary Lens to These Effects?

Applying the cultural evolutionary lens, and specifically the concept of adaptiveness, to the findings I have just described can lead to important theoretical inroads. For one thing, it helps bridge evolution-based theories with motivational accounts of religion (e.g., Laurin & Kay, 2017): The motivation-satisfying properties of Big Gods—and of religions more broadly—may be secondary effects of this culturally evolved idea. For another, it provides insights into the dynamics of religion over time. Evolution is not a finite process; it is ongoing and always subject to change, and part of what causes evolutionary change can be the secondary effects of prior evolutionary changes. We know this at the genetic level. For instance, once birds began to use feathers for flight, rather than just for warmth, a whole new set of evolutionary pressures emerged, and today's birds' feathers are less well suited to thermal insulation, their original adaptive function, than to flight, their subsequent adaptive function. Likewise, cultural evolutionary pressures

likely continue to shape human social institutions, and the secondary effects of Big God beliefs can feed back into the cultural evolutionary forces shaping the form and prevalence of these very beliefs.

Identifying the secondary effects of Big God beliefs beyond those discussed here, and quantifying the consequences of all these effects on societal-level fitness, will enable two important theoretical developments. First, it will enable researchers to predict the temporal trajectory of these beliefs' prevalence. The survival of Big God beliefs over time depends on the strength of the cultural evolutionary pressures selecting for them. This strength in turn depends on the answers to three questions. How much do the societally adaptive secondary effects cause societies to thrive, pushing for *stronger* beliefs in Big Gods? How much do the societally destructive secondary effects cause societies to suffer, pushing for *weaker* beliefs in Big Gods? And to what extent does the modern world continue to select for the original cooperation-promoting function of Big Gods, given that civic institutions may be able to implement the same kinds of surveillance and punishment, and thereby promote the same kind of cooperation, as Big Gods (Shariff & Norenzayan, 2007)?

Second, answering the question of adaptiveness enables researchers to make predictions about *how* Big God beliefs will evolve over time. If the secondary effects of Big Gods' watchfulness are culturally adaptive, cultures that strongly emphasize this aspect of God more may thrive and spread their creed more widely. Or conversely, as state-sponsored surveillance becomes more powerful, the watchful character of Big Gods may become less important and fade out of the representation.

Conclusion

Quantifiable answers to the questions of how much Big God beliefs help ensure human cooperation, and of how much their various effects promote or prevent societal flourishing, will guide future research into the continued evolution of Big God beliefs. These answers require researchers to identify secondary effects, to confirm theoretical speculations about the exact consequences for societal fitness of those we believe we already know about, and to investigate how widespread the effects are, cross-culturally.

More broadly, the cultural evolutionary lens I applied here could be extended beyond Big God beliefs to consider other facets of religion—rituals, moral codes, and communities (Saroglou, 2011). Learning about their secondary effects, their interactions with those of Big God beliefs, and their consequences for societal-level fitness is crucial for scholarship on the evolution of religion as a whole.

Recommended Reading

- Gray, K., & Wegner, D. M. (2010). Blaming God for our pain: Human suffering and the divine mind. *Personality and Social Psychology Review*, *14*, 7–16. This article describes another reason why people might believe in Big (moralizing) Gods, which could be responsible for other secondary effects.
- Laurin, K., & Kay, A. (2016). (see References). This chapter reviews scholarship on religion and self-regulation; secondary effects of Big Gods on self-regulation are one focus of the present article.
- Laurin, K., Shariff, A. F., Henrich, J., & Kay, A. C. (2012). (See References). This article provides one telling example of a secondary effect that is at odds with the original adaptive function of Big Gods.
- Norenzayan, A., Shariff, A. F., Gervais, W. M., Willard, A., McNamara, R., Slingerland, E., & Henrich, J. (2016). (See References). This article outlines the cultural evolution theory of religion, which this article takes as its starting point.

Declaration of Conflicting Interests

The author declared no conflicts of interest with respect to the authorship or the publication of this article.

Note

1. In keeping with current scholarship (e.g., Norenzayan et al., 2016) and evidence cited above (Peoples & Marlowe, 2012; Roes & Raymond, 2003), I am assuming that increased cooperation was the original adaptive function of beliefs in Big Gods. It remains possible, though, that some of the effects I discuss here, in particular those that may be culturally adaptive, are not subsequent secondary effects but played a role in the original emergence of Big Gods.

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