

Faith or Fear?

January 30, 2015



Across religious traditions, bad behavior gets punished. Islam teaches that the future holds a day of reckoning when all humans will be judged for their deeds; those who don't measure up will be sent to hell. Some Christians believe in a similar judgment day, which corresponds with Jesus Christ's long-awaited return to Earth. For Hindus, Buddhists, and Sikhs, negative actions may cause consequences in future lives.

In the United States alone, 7 in 10 people believe in hell, according to a 2007 Gallup poll. Today's psychological scientists seek to explain the evolutionary origins of this pattern with the only clues available: a limited understanding of history and the behavioral characteristics of modern humans.

But working with colleagues from anthropology, sociology, and other disciplines, they've uncovered evidence that belief in punitive deities has a buffering effect on dishonest and immoral conduct — at both the individual and societal levels.

This work raises a question about religion's role in human character: How much are mores and manners driven by fear of divine retribution versus unconditional piety? Researchers are exploring how images of the supernatural that vary across cultures, religions, and even sects influence motivation, decision making, behavior, and community.

An Extra Buffer

In a 2006 *Evolutionary Psychology* paper, Dominic Johnson (University of Oxford, United Kingdom) and Jesse Bering (University of Otago, New Zealand) argued that natural selection may have favored a widespread human belief in supernatural punishment among our ancestors. The team noted that two important features set humans apart from other organisms. First, humans instinctively use "theory of mind" (a belief in mental states outside of oneself) to explain others' behavior; second, human language allows us to communicate complex ideas quickly.

Insight into others' behavior, combined with an ability to *tell* about that behavior, put early humans in a unique position to keep each other's selfishness in check. As Johnson and Bering wrote, "Chimpanzees can be selfish in front of other chimpanzees without their behavior being reported to absent others." Not so for humans: "People could hear, discover, infer, remember, report, hypothesize, plan, and act on others' behavior — even long after the event" (p. 225).

Johnson and Bering thought that, as language-rich communities developed among humans, individuals who believed in both human punishment *and* divine punishment behaved in a way that gave them an extra layer of protection against their selfish impulses — protection above and beyond what was experienced by individuals whose bad behavior was deterred by community punishment alone.

In an environment where people who lied, cheated, or stole for their own gain already were likely to pay dearly at the hands of their communities, belief in divine punishment provided an extra buffer against selfish missteps. Importantly, according to Johnson and Bering's analysis, god-fearing beliefs provided a better social strategy than Machiavellian-style conniving because even if prehistoric "Machiavellians" were exposed only rarely, the cost of such exposure — in the form of community punishment — was prohibitively high. Fear of divine punishment, on the other hand, might prevent such individuals from misbehaving in the first place, increasing their chances of reproductive success.

Forgiving Deities

Of course, the complexities of religion extend far beyond threats of punishment, and throughout history religious people have seen their gods not only as punishing but also as loving. Could these comforting characteristics of our gods also inspire good behavior? Azim Shariff of the University of Oregon and APS Fellow Ara Norenzayan of the University of British Columbia, Canada, have studied this question in a modern context.

In one of their experiments, 61 ethnically and religiously diverse undergraduate students — including many who identified as agnostic or atheist — completed a test designed to measure their religiosity. They also filled out a Views of God scale, which gauged their concepts of a god as "positive" (i.e., forgiving, loving, gentle, peaceful, etc.) or "negative" (i.e., vengeful, harsh, angry, punishing, etc.). Participants who identified as atheist were asked to simply describe how much the positive and negative traits applied to *their culture's* conception of a god or gods.

Next, the participants were asked to perform 20 addition problems without scratch paper. Before the test, an experimenter explained that there was a "glitch" in the computer program being used to administer the test and that the participants needed to press the space bar immediately after each question appeared in order to avoid seeing the answers. Cheating behavior was measured according to whether participants followed these instructions.

The results, published in 2011 in *The International Journal for the Psychology of Religion*, indicated that although religious people were no more or less likely than nonbelievers to cheat on the addition task, participants who applied more punitive *attributes* to a god — regardless of their religious beliefs — cheated less than those who attributed positive traits to supernatural agents.

The outcome was confirmed by a second experiment, in which measures of religious affiliation,

religiosity, and attitudes about god were embedded in a longer survey administered before the cheating test. “How much you believe in God,” concluded Shariff and Norenzayan, may matter “less than what kind of God you believe in” (p. 92).

Although the two experiments in question focused on the behavior of individuals, the authors outlined potential societal development benefits of belief in punishing gods. “As societies expand in size, relations become more anonymous; anonymity, in turn, makes it harder to monitor and punish cheating and uncooperative behaviors,” wrote Shariff and Norenzayan, citing previous work by APS Fellow Robin Dunbar (2003), Joseph Henrich (2006), and Frans L. Roes and Michel Raymond (2003). “In the absence of successful monitoring, societies collapse” (p. 93). Belief in punishing deities may have protective implications not only for individuals but also for entire societies.

Not everyone shares this view. In a 2013 *Trends in Cognitive Sciences* article, Nicolas Baumard and Pascal Boyer* point out that many societies of the past — including Egyptian, Greek, Roman, Aztec, Inca, and Mayan societies — institutionalized gods who demanded sacrifices and obedience but showed little interest in how well humans treated one another. The success of these civilizations led Baumard and Boyer to question Norenzayan’s theory that fear of divine punishment has been a driving force in the large-scale growth of societies. Instead, they argued that moral behavior emerged through natural selection as the result of evolutionary pressure that motivated cooperation among humans. According to Baumard and Boyer, the idea of institutionalized religious punishment was built upon these evolved moral intuitions, not vice versa.

A Predictor More Powerful Than GDP

Regardless of how religion and justice came to be linked in the human psyche, psychological scientists continue to gather evidence of the connection. A 2012 study by Shariff and his collaborator Mijke Rhemtulla (University of Amsterdam, the Netherlands) relied upon data from the World Values Surveys and European Values Surveys, which included information on anywhere from 362 to 9,016 participants from each of 67 countries. The respondents in those surveys represented Christianity, Islam, Hinduism, Shintoism, and traditions that combined major religions with indigenous belief systems. Participants were orally asked whether they believed in heaven, hell, and/or a god. They were also asked how often they attended religious services.

Taking belief in hell as evidence of belief in a punishing god and belief in heaven as evidence of belief in a benevolent god, Shariff and Rhemtulla compared data from the values surveys with national crime rates from the United Nations Office on Drugs and Crime.

“Controlling for the effect of belief in heaven, a 1 [standard deviation] increase in belief in hell resulted in an almost 2 [standard deviation] decrease in national crime rate,” Shariff and Rhemtulla reported. “Conversely, controlling for the effect of hell, a 1 [standard deviation] increase in belief in heaven resulted in an almost 2 [standard deviation] *increase* in national crime rate.”

The team reported that this same pattern also held for 8 of the 10 individual crimes assessed, which included assault, homicide, rape, and theft. In fact, belief in heaven and hell was a better predictor of national crime rates than GDP per capita, predominant national religious affiliation, national incarceration rates, or prevalence of specific personality traits.

Striking a Balance

Paradoxically, separate research published last year by Shariff with Lara B. Aknin of Simon Fraser University, Canada, suggests a connection between a belief in hell and “lower happiness and life satisfaction at the national and individual level.” Belief in heaven, on the other hand, was associated with greater happiness and life satisfaction according to the same report.

The fact that people continue to believe in hell even though doing so puts them at risk for negative emotional consequences suggests that the evolution of divine-punishment beliefs may be part of a delicate balance among the well-being of individuals, the well-being of groups, and continuous, large-scale social shifts. Although groups “benefit from the ethical behavior of the group’s members,” Shariff and Aknin wrote, the individual “shoulders the emotional costs of a society that follows norms out of fear.”

When historical circumstances provide effective, secular rule enforcement, individuals may get a break as the community relies less on divine punishment than on human punishment to encourage positive behavior. As belief in the wrath of a higher power wanes, religions may focus on the benevolent facets of their respective god in order to win converts. Of course, Shariff and Aknin acknowledged that further research is needed to confirm these hypotheses about the social and psychological role of religion.

A Broader View

Even though surveys, laboratory studies of college students, and analyses of broad national datasets have proven informative, such work may not take into account the nuances and diversity of world religions, which range from “major” traditions with millions of adherents to local customs little known by outsiders. As psychological scientists work to identify specific social and evolutionary functions of “punishing gods,” research has become broader and more inclusive.

A recent study led by Rita Anne McNamara and her University of British Columbia colleagues Norenzayan and Henrich focused on the inhabitants of Yasawa Island, Fiji, who commonly believe in both the Christian “Bible God” and “less powerful deified ancestors” known as *Kalou-vu*.

For McNamara and her colleagues, the belief systems in Yasawa presented “an opportunity to examine how distinct kinds of supernatural agents might lead to different behavioral consequences” (p. 3).

The scientists used a random allocation game (RAG) in their study. Participants were given a pile of coins to distribute between two pairs of participants (first, themselves and an outsider from another island and second, a person from their extended kin group and a different outsider from another island). The rules of the game were as follows:

1. Mentally pick one of the two cups.
2. Roll the [two-colored] die.
3. If the die comes up black, place a coin in the cup originally selected in Step 1. Alternatively, if the die

comes up white, place a coin in the other cup.

4. Repeat until all the coins have been placed in either cup (p. 5).

When participants mentally picked one of the two cups, the choice was completely private; they did not share it with experimenters. Therefore, researchers could not determine exactly when a participant was violating these rules. But comparing the actual experiment results with the statistically probable results of the RAG allowed the researchers to determine when it was likely that participants were violating the rules.

Before playing the RAG, participants had been questioned about how punitive/benevolent they believed both Bible God and *Kalou-vu* to be; after playing the game, they were asked to rate their levels of material insecurity (e.g., abundance or lack of food as well as upcoming expenses). McNamara and her colleagues used this information to analyze how beliefs in different types of punishing gods might predict favoritism under different circumstances.

Belief in a punitive Bible God who emphasizes equality and fairness was associated with lower levels of local recipient favoritism (and more “egalitarian, rule-following” behavior) for only those participants who were *not* experiencing high levels of material insecurity. Belief in punitive *Kalou-vu*, who are associated with the preservation of tradition and community, also predicted less local favoritism and more rule-following behavior for participants experiencing low and moderate levels of insecurity. However, a belief in punitive *Kalou-vu* actually predicted more favoritism and less rule-following for people experiencing high levels of material insecurity.

Among the inhabitants of Yasawa, belief in punitive gods promotes unconditional prosocial behavior (that extends beyond local affairs) only under specific circumstances. The authors hope that future research will contribute to an increasingly complex understanding of the divine punishment concept’s place in the human experience.

“Understanding the mind of God,” the authors wrote, “requires more than simply knowing if God will punish; contents of beliefs, specifically what and whom God cares about, also matter” (p. 17).

The fear of god may compel us to help strangers as circumstances permit and help neighbors as circumstances demand. Or, it may help us think twice before we throw a punch, hurl a nasty insult, or take more than is rightfully ours. As we learn more about our beliefs in supernatural punishment, one thing seems clear: Even if we don’t believe in the wrath of the gods, it is an integral part of where we come from and who we have become.

**Pascal Boyer will speak as part of the symposium “Religion Past and Present: Evolutionary Origins and Contemporary Functions of Spirituality” at the inaugural International Convention of Psychological Science, March 12–14, 2015, in Amsterdam, the Netherlands.*

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