

Did fear of divine punishment encourage early human cooperation?

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February 16, 2016

[\(\*The Christian Science Monitor\*\)](#) Unlike many animals, humans are part of complex social groups that extend beyond familial ties. But we didn't start out that way.

Scientists, historians, and philosophers have long puzzled over how we came to have such large, complex societies. Some researchers have suggested that religion played a role in connecting people.

In fact, belief systems involving an all-knowing, moralistic, punitive god may provide particular motivation for cooperation among people who wouldn't necessarily have reason to trust each other, according to new research published recently in the journal *Nature*.

The idea is that people will behave in a more prosocial manner if they feel like they're being watched, and that is compounded if there is a fear of punishment. So people might behave less selfishly if they believe a deity that rewards good behavior and punishes bad is always watching, even if that so-called good behavior seems to go against their self-interest.

This is not a new idea, said Peter Richerson, a cultural evolution researcher who was not associated with the study. "There's an impressive amount of evidence from several different lines that moralizing high gods have an effect on people's behavior."

So a team of researchers set out to test the idea.

Researchers presented 591 test subjects in different small societies around the world with an economic game.

Players had two cups, a stack of coins and a six-sided die with three sides one color and three another. One cup was for themselves and the other was for another person with the same beliefs—someone far away, whom they were unlikely to ever

meet.

To play, participants were instructed to think about which cup they wanted to put a coin in. Then they tossed the die. One color indicated that they put the coin in the cup they chose, while the other meant it went in the opposite cup.

Once the game was explained, the researchers left the players alone in a room.

In theory, there was a 50-50 chance of the coin ending up in a given cup. But, as nobody was watching the participants, they could slip the coin into their own cup with nobody being the wiser.

"So they can bend the rules effectively for their own gain," said Benjamin Grant Purzycki, the study's lead author.

The scientists also ran a second round of the game with one cup representing someone from a geographically distant location who shared the same religion and the other being an anonymous local person who also shared the same religion.

At the end of the game, the money actually went to the player, one of their local community members, or a distant stranger of the same religion. So you'd expect someone to cheat and slide more money into the cup that was for themselves or a local community member because it would somehow benefit them.

While some participants did cheat, it turns out that the players who believed in an all-knowing, punishing deity, came closest to reaching that 50-50 result, with an equal number of coins going in the stranger's cup as the familiar one.

So how could this silly little game explain the expansion of human societies?

Someone who is more likely to act generously to a distant stranger may also be more likely to engage with them on a different level, Purzycki said. "What our results suggest is that if they share the same kinds of beliefs about these types of deities, that might actually expedite or facilitate more effective and reliable trade networks or intergroup cooperation" or other such social networks.

Richerson cautioned against assuming that it's only the fear of punishment driving prosocial behavior.

"It may be that moralizing high gods are associated with stronger institutions rather than being scared of going to hell," he said. Perhaps "social systems that have those gods also have stronger institutions that cause people to behave better."

The question of how human groups went from small, kinship-based groups to the sprawling societies we have today has puzzled researchers. At the time, humans were competing over scarce resources.

"How can you trust someone who isn't in your small group?" said Kelly Clark, a researcher at the Kaufman Interfaith Institute at Grand Valley State University in Grand Rapids, Michigan, who was not involved in the study. "So trying to understand and explain human cooperation has been a really big problem evolutionarily."

It appears that a religious bond may serve a similar purpose as a blood bond.

Yet Richerson noted that all the factors at play in the study are not clear.

"Religion is certainly having an effect, but just exactly how it works," Richerson said, "is still up in the air."