

Why Do We Have Religion Anyway?

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The vast majority of the world's 7 billion people practice some kind of religion, ranging from massive worldwide churches to obscure spiritual traditions and local sects. Nobody really knows how many religions there are on the planet, but whatever the number, there are at least that many theories about why we have religion at all. One idea is that, as humans evolved from small hunter-gatherer tribes into large agrarian cultures, our ancestors needed to encourage cooperation and tolerance among relative strangers. Religion then—along with the belief in a moralizing God—was a cultural adaptation to these challenges.

But that's just one idea. There are many others—or make up your own. But they are all just theories. None has been empirically tested. A team of psychological scientists at Queen's University, Ontario, is now offering a novel idea about the origin of religion, and what's more they're delivering some preliminary scientific evidence to support their reasoning. Researcher Kevin Rounding and his colleagues are arguing that the primary purpose of religious belief is to enhance the basic cognitive process of self-control, which in turn promotes any number of valuable social behaviors.

They tested this theory in four fairly simple experiments, using classic measures of self-control. In the first study, for example, they used a word game to prime some volunteers' (but not others') subconscious thoughts of religion. Then they asked all the volunteers (using a ruse) to drink an unsavory mix of OJ and vinegar, one ounce at a time. They were told they could stop any time, and to take as much time as they liked, and that they would be paid a small amount for each ounce of the brew that they drank.

The amount they drank was a proxy for self-discipline. The more OJ and vinegar they forced down, the greater their self-control. And as predicted, those with religion on their mind endured longer at the unpleasant task. Since society and religion ask us to tolerate many things we don't particularly like for the common good, the scientists interpret this finding as evidence of a particular kind of self-control.

Another way to think of self-control, perhaps the most familiar, is delayed gratification—resisting immediate temptation to wait for a greater reward later on. In another experiment, the scientists again primed some of the volunteers with hidden religious words, but in this case they were told (falsely) that the experiment was concluded and that they would be paid. They were told, further, that they could either return the next day and be paid \$5, or come back in a week and get \$6. This is a widely used laboratory paradigm for measuring the exertion of discipline in the face of temptation, and indeed, almost twice as many of those with religion opted for more money later.

Self-control is costly, consuming a lot of mental resources. Recent research has demonstrated that our cognitive power—in the form of glucose, the brain's fuel—is limited. The mind and brain can become fatigued, just like a muscle, and when depleted, normal self-control is impaired. The third experiment built on an understanding of this process, often called “ego depletion.” The scientists wanted to see if

cognitively depleted people are “refueled” with reminders of religion, so they had only half of the volunteers perform a mentally draining task while listening to loud music. Then they primed half of these depleted volunteers, and half the controls, with religious words.

So at this point, there were four groups: Depleted; depleted but religiously primed; undepleted controls; and religiously primed controls. All of these volunteers then attempted a set of geometrical puzzles, which, unknown to them, were impossible to solve. The impossible task was included to test their persistence against great difficulty—another measure of self-control.

The results were unambiguous. Among those who were mentally depleted, the ones with religion on their minds persisted longer at the impossible task—suggesting that the religious priming restored their cognitive powers—and their patience in the process. They performed basically the same as those who were never tired out in the first place. The scientists take this as strong evidence for the replenishing effect of religion on self-discipline.

The fourth and final experiment was the only one with ambiguous results. The first three studies had shown direct causal evidence of religion on self-control—and downstream effects on enduring discomfort, delaying rewards, and exerting patience. But is it possible that the religious priming might have activated something else—moral intuition, or death-related concerns? In order to rule out these possibilities, the scientists used a completely secular self-control task, one with no moral overlay: the so-called Stroop task. This is the task where one must rapidly identify the ink that words are printed in, rather than read the words. It’s very difficult, requiring mental exertion and self-control.

The scientists primed some with religious words as usual, but others were primed with moral words—virtue, righteous—and still others with words related to mortality—deadly, grave, and so forth. Then all the volunteers attempted the Stroop task on a computer, which measured accuracy and reaction time. The results, as reported in a forthcoming issue of the journal *Psychological Science*, showed that religiously primed volunteers had much more self-control than did controls or those primed to think about mortality. But those with religion on their minds were statistically no different than those with morality on their minds. This was an unexpected finding, and it suggests that activating an implicit moral sensibility may have some of the same effects as religion.

It’s not entirely clear what cognitive mechanism is at work in religion’s influence on self-control. One possibility is that religion makes people mindful of an ever watchful God, and thus encourages more self-monitoring. Or religious priming may activate concerns of supernatural punishment. A more secular explanation is that religious priming makes people more concerned about their reputation in the community, leading to more careful self-monitoring. Notably, almost a third of the volunteers in these studies were self-defined atheists or agnostics, suggesting that these robust effects have little or nothing to do with the suggestibility of the most devout.

Wray Herbert’s book, *On Second Thought*, was recently published in paperback. Excerpts from his two blogs—“We’re Only Human” and “Full Frontal Psychology”—appear regularly in *Scientific American* and in *The Huffington Post*.