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Science and Faith: Does Belief Soothe the Worried Mind?

Religious beliefs date back at least 100,000 years. That's the time when our Neanderthal cousins began burying their dead with weapons and tools -- presumably prepping them for the world beyond the grave. And such beliefs persist today, with the vast majority of modern humans in every corner of the globe espousing some kind of religious conviction.

But why? The antiquity and universality of belief suggest that it serves some fundamental psychological purpose, but what would that be? A small but growing number of psychological scientists have been exploring these questions, focusing on the idea that religious belief may be a natural consequence of the human mind at work. According to this view, belief emerged to satisfy a basic human need to comprehend and explain a complex and unpredictable world. By allowing us to impose some sense of purpose and order on the randomness, believing in God and the afterlife helps us cope with uncertainty -- and thus relieves anxiety.

At least that's the theory of Michael Inzlicht and Alexa Tullett of the University of Toronto Scarborough, who study the cognitive aspects of religion. Inzlicht and Tullett have been testing the notion that belief quiets anxiety by looking at the brain in action. The brain has a built-in monitor that is constantly on the lookout for mental mistakes, and when any such error occurs, this monitor sends off a neural distress signal. It's an important job, because it helps us detect and correct bad thinking, but too much vigilance leads to a chronic state of distress -- in short, a worried mind. The researchers wanted to see if religious thoughts might dampen this cortical alarm -- and improve mental health.

So they ran a couple experiments. In one, for example, they recruited a group of volunteers who were all strong believers in God, though they came from varied religious backgrounds. They primed religious thinking in only some of the volunteers by having them write about the meaning of their own religion. Others, the control subjects, wrote about their favorite season -- also a positive topic, but less meaningful. Then the volunteers attempted a very difficult cognitive task -- one deliberately

chosen to produce a lot of mental errors. They hooked all the volunteers up to an EEG to monitor their brains' neural activity while they monitored their mental performance.

A milder signal would mean that the religious thinking somehow muffled the natural alarm, in effect calming the brain. And that's just what they saw on the EEGs: As reported online last week in the journal *Psychological Science*, those prompted to reflect on God were noticeably less anxious than the control subjects.

The scientists reran the experiment in a slightly different way to compare believers and atheists. This time, they had all the volunteers -- believers and atheists alike -- complete a word task designed to unconsciously prime religious thinking. As before, the religious thinking (even though it was out of conscious awareness) had a palliative effect on the believers, dampening the distress signaling in the brain. But here's the interesting part: It had the exact opposite effect on the atheists, who actually showed a heightened distress signal. Even though the religious priming was unconscious, the atheists reacted defensively, as if the thoughts of religion were challenging their system of meaning.

This cortical alarm system fires off within a few hundredths of a second following a mistake. But might these findings have long-range mental health implications? If thinking about religion causes this instantaneous calming effect, might religious people live lives of greater equanimity? Might religious people be better able to cope with life's curve balls?

Yes and no, the scientists say. It certainly appears from these studies that strong beliefs have positive, calming effects, but formal or traditional religious beliefs are not privileged in this way. Indeed, affirming any cherished values -- including any higher power, or even atheism -- should allow believers to see their world as more stable, understandable and predictable.

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