

# God or science? A belief in one weakens positive feelings for the other

December 15 2008

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Illinois psychology professor Jesse Preston led a study that found that attitudes towards God and science can change and yet remain in opposition to one another. Photo by L. Brian Stauffer, U. of I. News Bureau

A person's unconscious attitudes toward science and God may be fundamentally opposed, researchers report, depending on how religion and science are used to answer "ultimate" questions such as how the universe began or the origin of life.

What's more, those views can be manipulated, the researchers found. After using science or God to explain such important questions, most people display a preference for one and a neutral or even negative

attitude toward the other. This effect appears to be independent of a person's religious background or views, says University of Illinois psychology professor Jesse Preston, who led the research.

The study appears in the *Journal of Experimental Social Psychology*.

Preston and her colleague, Nicholas Epley, of the University of Chicago, wanted to explore how information about science influences a belief in God, and how religious teaching can also cause people to doubt certain scientific theories.

"As far as I know, no one has looked experimentally at an opposition between belief in science and religion," Preston said.

"It seemed to me that both science and religion as systems were very good at explaining a lot, accounting for a lot of the information that we have in our environment," she said. "But if they are both ultimate explanations, at some point they have to conflict with each another because they can't possibly both explain everything."

The researchers conducted two experiments designed to manipulate how well science or God can be used as explanations. In the first, 129 volunteers read short summaries of the Big Bang theory and the "Primordial Soup Hypothesis," a scientific theory of the origin of life.

Half then read a statement that said that the theories were strong and supported by the data. The other half read that the theories "raised more questions than they answered."

In the second experiment, which involved 27 undergraduate students, half of the study subjects had to "list six things that you think God can explain." The others were asked to "list six things that you think can explain or influence God."

All the subjects were then required to quickly categorize various words as positive or negative on a computer.

"What they didn't realize was that they were being subliminally primed immediately before each word," Preston said. "So right before the word 'awful' came up on the screen, for example, there was a 15-millisecond flash of either 'God' or 'science' or a control word."

A 15-millisecond visual cue is too brief to register in the conscious mind, but the brief word flash did have an effect. Those who had read statements emphasizing the explanatory power of science prior to the test were able to categorize positive words appearing just after the word, "science," more quickly than those who had read statements critical of the scientific theories.

Those who were asked to use God as an ultimate explanation for various phenomena displayed a more positive association with God and a much more negative association with science than those directed to list other things that can explain God, the researchers found.

Similarly, those who read the statement suggesting that the scientific theories were weak were extremely slow to identify negative words that appeared after they were primed with the word "God," Preston said.

"It was like they didn't want to say no to God," she said.

"What is really intriguing is that the larger effect happens on the opposite belief," she said. "When God isn't being used to explain much, people have a positive attitude toward science. But when God is being used to account for many events – especially the things that they list, which are life, the universe, free will, these big questions – then somehow science loses its value."

"On the other hand, people may have a generally positive view of science until it fails to explain the important questions. Then belief in God may be boosted to fill in the gap," she said.

The most obvious implication of the research is that "to be compatible, science and religion need to stick to their own territories, their own explanatory space," Preston said. "However, religion and science have never been able to do that, so to me this suggests that the debate is going to go on. It's never going to be settled."

Source: University of Illinois at Urbana-Champaign

Citation: God or science? A belief in one weakens positive feelings for the other (2008, December 15) retrieved 27 April 2024 from <https://medicalxpress.com/news/2008-12-god-science-belief-weakens-positive.html>

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