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Is rationality the enemy of religion?

A provocative study linking religious disbelief to analytical thinking requires some careful analysis itself, says **Philip Ball**.

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Psychologists Will Gervais and Ara Norenzayan aren't trying to make mischief, but their latest work on the psychology of religious belief is sure to fan the flames of debate.

Their study, published in this week's issue of *Science*¹, offers evidence that when people engage in analytical thinking, they are less likely to express strong religious beliefs. In other words, the more you're inclined to think a problem through rather than to rely on gut instinct, the less likely you are to capitulate to belief in supernatural agencies.

The authors, who are based at the University of British Columbia in Vancouver, Canada, are clear that they aren't pronouncing on the value of religious belief, nor suggesting that such beliefs are inherently irrational (let alone that they're untrue). 'We're just saying', they seem to insist.

But such honest disclaimers won't prevent some atheists from asserting that the study shows that religion is the result of bad reasoning, if not downright stupidity, for which the only cure is a hefty dose of analytical sobriety. (My experience is that it seems to be extreme views of any sort, whether religious or the opposite, that are the real enemy of analytical thinking.)

What this valuable and stimulating study reveals, however, is the difficulty of subjecting religious belief to scientific scrutiny. It is important that we make the effort to do so — not least to understand how and why religion may promote ignorance, bigotry and conflict. The problem is that it is nearly impossible to devise any investigation of 'religious belief' per se, because it takes so many forms and rarely consists of a coherent and consistent set of principles, even in a particular individual. It is like trying to study what makes people 'artistic' or 'nice'.

Primed and ready

That is why the objections and caveats to this study are so obvious, albeit no less pertinent. The researchers' general approach was to test volunteers — in some cases, Canadian undergraduates, in others, as the paper explains, a "nationwide (though nonrepresentative) sample of American adults recruited online". Both sets of volunteers constitute only a limited sample, as Gervais and Norenzayan acknowledge.

During the tests, volunteers were either engaged in a task that surreptitiously elicited analytical thinking, or were given a control task. They were then asked if they concurred with a series of statements about religion, such as "I believe in God" or "I don't really spend much time thinking about my religious beliefs".

These 'priming' tests were of varying degrees of subtlety. One involved looking at Rodin's famous sculpture *The Thinker*, or for the control group, a visually similar but conceptually dissimilar image of a classical Greek athlete. Another involved a word-sorting test, in which the



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A belief or disbelief in religious figures is underpinned by complex cognitive processes that researchers are only beginning to investigate.

words might or might not be associated with analytical thinking ('reason', 'ponder' and so on). It is well established that such priming can elicit specific modes of thought; for example, improving performance in analytical tests².

One of the attractions of this approach is that it can say something about causation. One isn't simply examining whether atheists have a greater tendency to think analytically, but trying to detect whether fostering analytical thought increases disbelief. Apparently it does, and to that extent, it supports the view that scientific training might reduce religiosity.

But what kind of religiosity? The authors state that they "focused primarily on belief in and commitment to religiously endorsed supernatural agents" — they examined beliefs in God, the devil and angels. That, of course, already assumes a Judaeo-Christian context, but there are plenty of devout believers who have no need of angels or the devil, and some who perhaps have no need of a belief in God in a traditional or Christian sense (Max Planck was one such example).

This hints at the key problem, which is (or ought to be) as much a quandary for religion itself as for scientific studies of it. Almost all of the questions in Gervais and Norenzayan's study related to religion as a literalist folk tradition — an aspect of lifestyle. This is how it manifests in most cultures, but that barely touches on religion as articulated by its leading intellectuals: for Christianity, say, philosophers such as Thomas Aquinas, David Hume, Immanuel Kant and George Berkeley. The idea that the beliefs of those individuals would have vanished had they been more analytical is, if nothing else, amusing. Gervais and Norenzayan's findings should help to combat religion as an indolent obstacle to better explanations of the natural world. But it can't really engage with the rich tradition of religious thought.

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References

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2. Alter, A. L., Oppenheimer, D. M., Epley, N., Eyre, R. N. *J. Exp. Psychol.* **136**, 569–576 (2007).