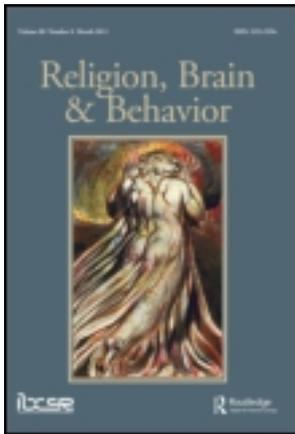


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### The scientific study of atheism

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## EDITORIAL

### The scientific study of atheism

This issue of *Religion, Brain & Behavior* focuses on the scientific study of atheism. With a pair of target articles from Catherine Caldwell-Harris and Dominic Johnson, a large collection of expert commentaries on those articles, and two responses from the authors, this is one of the richest discussions of the scientific study of atheism in print. Johnson reviews the various ways of conceiving of atheism in evolutionary terms, while Caldwell-Harris analyzes the evidence for atheism as a matter of individual differences. These two essays represent fundamentally contrasting strategies for making sense of atheism and it is likely that future scientific study will have to navigate between the two perspectives.

Atheism is becoming a topic of fascination for researchers in the scientific study of religion because the naturalness of religion makes atheism unexpected. If human beings spontaneously produce beliefs in supernatural entities and naturally embrace behaviors that take such entities for granted, then the existence of people such as atheists who reject supernatural entities truly is a puzzle. One explanation is that people just differ in regard to their tendency to postulate supernatural entities for making sense of their lives – this is the “individual differences” explanation that Caldwell-Harris explores. Yet it is conceivable that atheism may also have significant functions in the long span of human evolution – the many ways in which these functions can be conceived collectively are the “evolutionary” explanations that Johnson reviews.

The perplexities surrounding the scientific study of atheism begin with the viability of the basic terminology. “Atheism” combines the Greek word *theos*, which means “god,” with the negative particle in Greek (*a-*). Thus, atheism literally means “no-god” and connotes the metaphysical belief that there are no divine beings. First used by ancient philosophers to describe an attitude to the gods of Greek mythology, in the west it has come to mean especially the refusal to accept the existence of the god of the Abrahamic religions, Judaism, Christianity, and Islam. There was an ancient form of atheism in South Asia known as the Cārvāka school. Like atheistic philosophers in ancient Greece, the ancient Cārvākas rejected the gods of popular mythologies. But that view eventually became extinct and has had no role in the development of Indian philosophy except as an object lesson in the non-viability of rejecting belief in gods.

The usage of “atheism” to express rejection of the existence of gods strikes most people as straightforward. But its use in the scientific study of religion is actually conceptually quite tangled, from three points of view.

First, the cognitive mechanisms giving rise to religious behaviors produce beliefs in many more kinds of supernatural entities than just those rejected in atheism. After all, supernatural entities include ghosts, jinn, ancestors, bodhisattvas, angels, demons, life forces, entelechies, and anything else that involves intentional awareness or agency with no matter-energy substrate. Using the word “atheism” to describe the

rejection of all of these types of disembodied, intentional entities is semantically awkward, at best, and profoundly confusing when the word is understood to refer more narrowly to the rejection of the gods of theistic religions. It follows that researchers should be particularly careful to indicate precisely what they mean by “atheism.” In particular, if they mean to refer to anti-supernaturalism, then they should think twice about whether to use “atheism” at all.

Second, to the extent that atheism connotes the rejection of religion, there are other problems. The wide variety of non-theistic religions means that it is easy to find large-scale systems of religious belief that are plainly atheistic in the particular sense of non-theistic. When atheism is used to express opposition to religion more generally, its usage has an oppressively parochial cast, and begs for greater sophistication in knowledge of world religions. For example, there are Buddhist religious cultures where theism is not a useful category for describing any beliefs or practices and yet supernatural beliefs are very intense and socially important. Contesting supernaturalist religious beliefs in such contexts really cannot meaningfully be done under the banner of atheism.

Third, there is a wide variety of anti-supernaturalist forms of religious belief, sometimes collected under the category of religious naturalism. Religious naturalists are just as determined as atheists to reject the existence of disembodied intentionality and agency in all forms. This shared rejection of supernaturalism, and thus the shared rejection of divine beings, is why the varieties of religious naturalism are rightly called “atheistic” when theism is conceived narrowly as the affirmation of a personal divine being. But the Dao in East Asia, Nirguna Brahman in South Asia, and the Ground of Being in West Asia – all examples of the metaphysical ultimates that inspire religious naturalism – are deeply connected to religious traditions, are profoundly opposed to personal divine entities, and yet also have a claim to the term “God” – albeit a claim that is often vigorously contested within the religious traditions themselves. Presumably scientific researchers studying atheism intend to focus on those who reject supernatural beliefs, but if theists of the religious naturalist type also reject all supernatural entities, then “theism” and “atheism” are not ideal categories for indicating the object of study.

From all three points of view, we have important reasons to hope that scientists will learn to indicate with more precision the semantic scope of words such as “atheism” that guide their research. We believe that the non-belief referred to when scientific researchers deploy the word “atheism” is actually non-belief in supernatural entities (again, supernatural in the sense of disembodied intentionality, awareness, and agency), and that this includes everything from deceased ancestors to deities. By itself, this does not rule out forms of religion that reject every form of disembodied intentionality. It would be possible to rule out further forms of religious belief but there is little motivation from within the evolutionary and cognitive sciences of religion to push beyond the study of atheism in the specific sense of the rejection of disembodied intentional entities. Whether the term “atheism” can be massaged to the point that it means precisely “anti-supernaturalism” remains unclear. But the theories of evolved cognition driving the scientific study of atheism make the relevance of any other meaning difficult to explain. The discussion in this issue suggests some likely directions of future development in the scientific study of atheism – beyond the need just discussed to attain greater accuracy in the definition of key research terms.

First, the varied theories of atheism proposed in the target articles and commentaries require formal mathematical models to clarify their substantive differences. Such models will facilitate comparative testing of the many competing theories.

Second, since individual differences related to personality and cognitive style are known to explain *some* of the variance in *some* dimensions of religiosity, an important emerging question is *how much* variance is explained by individual differences and in relation to *what* dimensions of religiosity. The more we learn about the role of individual differences, the clearer becomes the explanatory weight that must be placed on other explanations for atheism.

Third, the question of the cultural universality of atheism takes quite different shapes depending on the way the term is defined. If anti-supernaturalism is meant, then the prospects for demonstrating cultural universality appear to be quite strong; by contrast, if the rejection of divine beings is meant, then the prospects for cultural universality seem slender, given the prevalence of non-theistic religions. Clarifying the extent of cultural universality and the respects in which it applies helps to apportion explanatory weight to the conditioning effects of cultural contexts versus the operation of evolutionarily stabilized cognitive capacities.

The consequences of a better estimation of the relevance of evolutionary processes, cultural contexts, and individual differences for explaining atheism – in whatever way the term is made precise – include at least the following two. On the one hand, knowing more about atheism gives more control to the social engineers of the world who would custom design cultures and transform entire civilizational trajectories. Of course, such knowledge also empowers those who would resist such extravagant engineering efforts. On the other hand, more precise knowledge about the factors contributing to atheism brings into clearer focus one of the most profound problems in the scientific study of religion. That problem is the naturalness of religion, in the sense of the automaticity with which religious beliefs and behaviors are spontaneously yet reliably reproduced within our species across cultures and eras. It is especially because of these two implications that the scientific study of atheism holds such fascination at this point in time.

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