[JCSR 1.1 (2013) 133–136] Journal for the Cognitive Science of Religion (print) ISSN 2049-7555
doi:10.1558/jcsr.v1i1.133 Journal for the Cognitive Science of Religion (online) ISSN 2049-7563

Why Religion is Natural and Science Is Not, by Robert N. McCauley. Oxford University Press, 2011. 335pp. Hb. $29.95. ISBN-13: 9780199827268.

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Keywords
maturational naturalness

In 1994, Pascal Boyer published the book *The Naturalness of Religious Ideas* in which he argues that scholars of religion should pay more attention to the spontaneous, intuitive elements of religion, instead of focusing on written theologies and so-called cultural models. In 1998 and 2000 McCauley joined Boyer with two papers in which he develops the idea of the naturalness of religion further, contrasting religious cognition with cognition in science. He evaluates the cognitive basis of science and religion, not their metaphysical assumptions. In the background is Lewis Wolpert's idea of the unnatural nature of scientific knowledge and reasoning. Science requires conscious effort, time, and institutional support and is cognitively costly. Religion is intuitive in the sense that we adopt religious ideas spontaneously and without instruction, although such ideas may not be "theologically correct." Written theologies and people's actual religious beliefs are two different things as emphasized by Justin Barrett.

Now McCauley has dedicated a whole book for this issue. He replies to criticism and analyzes both the presuppositions and consequences of his argument. *Why Religion is Natural and Science Is Not* is a well-argued and sound work that makes a strong contribution to cognitive science, science studies, and the study of religion. That the nature of human cognition makes religion natural and science unnatural means that the human mind is better equipped to deal with religious representations, which are natural, than with scientific reasoning which is unnatural. This, however, is only a difference in degree (cf. Sperber's idea of intuitive and reflective beliefs).

The concept of 'naturalness' can, in principle, be used in several senses that are best conceptualized through contrastive counter-factuals: "Religion is natural {rather than X}." Here X could be supernatural, cultural, or unnatural, for example. McCauley mainly contrasts natural with unnatural. He writes:

> nearly everyone working in the cognitive sciences presumes that thought comes in at least two varieties. I will capture the relevant distinction by contrasting what I describe as "natural" cognition over against the sort of slower, conscious, controlled, effortful, reflective thought that I will call "unnatural" cognition (largely by default). (p. 4)

This kind of distinction has previously been made in the so-called dual-process theories in social psychology, neuropsychology, and cognitive science, as McCauley notes. He does not, however, discuss dp-theories at any length.

Instead, McCauley emphasizes that naturalness comes in two forms, "maturational" and "practiced," a distinction that he traces back to Vygotsky's way of distinguishing between the cultural and the natural lines of ontogenetic development. I have myself spoken of intrinsic and derived naturalness. McCauley focuses especially on maturational naturalness that "concerns humans having (similar) immediate, intuitive views that pop into mind in domains where they may have had little or no experience and no instruction" (p. 5). He notes that discussion in terms of maturational naturalness, rather than in terms of modularity, helps set aside the controversial issue of innate modules and to give more content to the widespread notion of 'intuitions.'

Maturationally natural ideas and capacities appear spontaneously and early in the developing child, whereas practiced naturalness is something achieved because of sustained instruction and practice. For example, learning to speak or walk is a maturationally natural capacity, whereas riding a bicycle or learning to write are something that need practicing.

McCauley writes (p. 25): "The actions to which maturational skills give birth are justifiably described as natural in a more fundamental sense than are those associated with cultural skills, and it is this maturational naturalness that defines the continuum of cognitive naturalness that I will employ in this book to characterize and compare science and religion." He argues (p. 29):

> With cognition and perception as with skilled actions, cultural materials can come to feel natural after repeated practice or intensive study, but the maturational naturalness (of action, cognition, and perception) is the more fundamental form, because maturational knowledge arises in human minds regardless of the peculiarities of cultures.

I take this to mean that it is not important in which specific culture one is born to, not that culture as such is unimportant.

A thorough discussion of the naturalness of religion appears in Chapter four. McCauley emphasizes that "the contrast between the cognitive naturalness of religion and the cognitive unnaturalness of science is *comparative*: maturationally natural cognitive systems influence religion far more than they influence science" (p. 147). We must, however, distinguish between religion and theology; cognitively speaking, theology is often closer to science than to religion.

One interesting issue is how we distinguish between practiced naturalness and non-naturalness. According to McCauley, "prolonged exercise at reflective activity in some field can yield a practiced naturalness on some intellec-

tual fronts" (p. 232). Experts thus develop new intuitions through practice. By the same token, parts of scientific reasoning can become natural. Conversely, theology can be partly non-natural, although there is an important distinction between it and science: theology tries to make sense of and bring logical order to everyday religion whereas science leads away from everyday intuitions (p. 228). Theology retains an intentional stance towards nature which is seen as purposeful creation. However, theology often is so complicated and counterintuitive that it is cognitively too costly to be part of everyday reasoning.

Thus, the analyses of science and religion "imply neither that everything cognitive about religion is rooted in maturationally natural cognitive systems (systematic theologies are not) nor that nothing cognitive about science is" (p. 101). Some aspects, even some central aspects, of scientific thought are ones that come fairly naturally to human minds. As religion is, after all, more closely linked with maturationally natural cognition, it is here to stay. Only science is fragile because of its greater unnaturalness. We should therefore not worry about the future of religion; it is science that is threatened by political decisions and commercial interests that seek ground in maturationally natural cognition.

Here I think McCauley overstates his case a bit. He writes: "Science poses no threat to the persistence of popular religion, because, with respect to both cognitive and social arrangements, science is costly, difficult, and rare whereas religion is cheap, easy, and inevitable" (p. 251). First, although religion is cognitively easy, it is not always cheap (I am referring to the costly signaling theories). Some people are even ready to die for their religion.

Second, at the level of the individual, religion is not inevitable. The number of nonreligious people is increasing in many countries, including the USA. Familiarizing oneself with science can and often does lead to changes in religiosity. McCauley should have emphasized more clearly that science does not lead to nonreligiosity *automatically and by necessity*, although it can do this in many cases. Nobel Laureates, for instance, are far less religious than people with only a Master's degree in science. People adopt beliefs (both religious and scientific) for various reasons and then use reflective thinking to support their beliefs post hoc. Thus, scientific reasoning can be used both to undermine religion and to support it through sophisticated reinterpretation.

Moreover, it is not necessary to be a competent scientist in order to use scientific findings and reasoning in criticizing religion; many people pick and choose whatever they find interesting and use scientific half-truths to support their views. There is thus a grey area between true science and non-science and in between science and religion. The question of the supposed inevitability of religion ultimately boils down to the question of what we mean by religion. Surely,

intuitions are inevitable even if their religious interpretations are not. The persistence of religion at the populational level does not mean that each and every individual is predestined to be "religious," unless "religious" refers to some very vague and ephemeral (counter)intuitions. Despite of this, McCauley's book is a superb introduction to the problems of intuition, reflection, science, and religion, opening up an entirely new way of looking at the debates concerning science and religion from a cognitive perspective.