

creativity in ways similar to that of scientists—are they more or less likely to be leaders or influencers in their community, more or less likely to be satisfied with their spiritual lives, more or less likely to be involved in outreach, evangelism, or social justice ministries? As sociologists with extensive experience in this area and in the required methods, Ecklund and her colleagues are uniquely equipped to answer these questions.

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THE SCIENTIFIC METHOD: An Evolution of Thinking from Darwin to Dewey by Henry M. Cowles. Cambridge, MA: Harvard University Press, 2020. 384 pages. Hardcover; \$35.00. ISBN: 9780674976191.

Despite its main title, this book is not an analysis of the scientific method as such, or its use by scientists, but rather it is a socio-cultural history of that method as an idea, as the subtitle indicates. Cowles begins the book with the eye-catching claim: “The scientific method does not exist. But ‘the scientific method’ does.” By this he means that the scientific method, as portrayed in (high school) science textbooks, does not exist as a universal method employed by scientists in their quest for new knowledge. Rather, what does exist is a history of ideas: a set of philosophical ideas that transformed into notions about the mind and cognition, which ultimately ended up as a set of steps in introductory chapters in textbooks presented as a universal method.

Cowles combines exhaustive research with interesting storytelling to weave a fascinating narrative about the history of the idea of method. The second chapter, “Hypothesis Unbound,” sets the stage for his narrative: although Thomas Carlyle, Charles Babbage, and John Herschel make cameo appearances here, Cowles’s main thread is the public philosophical disagreement between William Whewell and John Stuart Mill on what constituted thinking. This prepares the ground for Cowles’s main thread, which begins in earnest with the third chapter, “Nature’s Method.” Here he suggests that Charles Darwin’s goal of presenting evolution meant paying close attention to methods of thinking—and this began

the story of how a philosophical idea about method evolved into taking it as a natural form of cognition.

Chapter four, “Mental Evolution,” highlights Alexander Bain and Herbert Spencer’s thought, which takes the debates about method and evolution into the realm of social development, whereas chapter five, “A Living Science,” chronicles the rise of pragmatism in the United States—with Charles Pierce and William James—and its use of method as a way to think about logic, psychology, and practical problem-solving. Chapter six, “Animal Intelligence,” feels a bit like an interlude with its focus on the rise of behaviorism in psychology, featuring John Watson, Edward Thorndike, and B. F. Skinner. Cowles’s history ends with two chapters entitled “Laboratory School” and “A Method Only,” in which he narrates how John Dewey’s book *How We Think* became the basis for embedding this naturalized model of thinking into textbooks as “the scientific method.” The main threads of Cowles’s narrative move from discussions around what sort of methodology might unite science generally to the way that psychology sought to read “method” as a way of understanding intelligence and cognition.

As a book of cultural history, *The Scientific Method* is a fascinating, detailed account of how “method” threaded its way through political, cultural, social, and academic discussions. Cowles’s chapters are exhaustively researched, and are peppered with quotes and anecdotes. It is impressive scholarship, although perhaps dizzying at times, for it is sometimes difficult to keep track of the main theme in the myriad of detail that rushes at the reader. This also makes the book feel a bit unfocused—as a chapter develops its rich details of analysis and discovery, the main idea about accounting for “the scientific method” seems to get lost; at times, it is difficult to see the relevance of all the rich and interesting detail to the book’s main point.

Further, although the book claims, in its first chapter, to show that there is no such thing as “the scientific method,” it actually spends little to no time actually analyzing the legitimacy of “the method” itself or its possible use among scientists, either in the social or natural sciences. Do psychologists or sociologists use (something like) scientific methods? Do biologists, chemists, or physicists? Cowles’s book says little about this. Although Cowles’s introductory

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claim might lead a reader to think that they would find at least reference to philosophical analyses of the scientific method—such as Barry Gower’s historical and philosophical book, *Scientific Method* (Routledge, 1997)—Cowles’s book is not about the use of methods by actual scientists in the course of their research nor about a philosophical analysis of the philosophical debates and controversies around “the scientific method.” This might have required substantive discussion—perhaps with their own chapters—about figures such as Galileo Galilei, Francis Bacon, and Isaac Newton, as well as more recent figures such as Rudolf Carnap, Karl Popper, and Hans Reichenbach; discussions around induction and truth would have figured more prominently as well. Although, at the start of the book, a reader might feel that the book is meant to be a complete history of this idea, in the end, it has a more limited claim—that is, how “the scientific method” ended up as a set of steps of inquiry in (high school) science textbooks. Cowles’s book is an interesting history of this more limited claim, and those looking for a more conceptual or philosophical discussion around the merits of “the” scientific method, will have to look elsewhere.

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SECLARITY AND SCIENCE: What Scientists around the World Really Think about Religion by Elaine Howard Ecklund et al. New York: Oxford University Press, 2019. 352 pages. Hardcover; \$31.95. ISBN: 9780191926755.

I was raised in the 1980s and 1990s under conservative evangelicalism, which means my father’s bookshelf was full of creation/evolution texts, and we never missed Ken Ham when he came to town. The conflict narrative between science and religion was in full force then, and it remains with us today (if slightly diminished). Religious conservatives weren’t the only ones talking secularization, though. Scholars such as Peter Berger had observed decades earlier that science often acts as a carrier of secularization. Berger lived long enough, however, to see that secularization did not unfold as expected, and he modified his view near the close of the millennium to indicate that secularization is not a uniform process. Rather, we observe “multiple modernities” marked by various trajectories of secularization and religious growth.

Such is the essential backdrop for *Secularity and Science: What Scientists around the World Really Think about Religion*. Here, Rice University sociologist Elaine Howard Ecklund and her team ask a simple and compelling question: If science is linked to secularization—as the story so often goes—what do scientists actually think about religion? The answer comes via survey research on 20,000 physicists and biologists in France, Hong Kong, India, Italy, Taiwan, Turkey, the United Kingdom, and the United States, as well as 600 in-depth interviews. The result is an impressive and wide-ranging report not only on the status of religion and science in a global perspective, but also on several theoretical and practical considerations surrounding the secularization debate. As sociologists they take care to address hierarchical and institutional matters (i.e., academic rank, university status and prestige, levels of science infrastructure, etc.), and as scholars of religion they investigate how religious factors vary across national contexts (i.e., definitions of religion and spirituality, religious characteristics of populations, state-church relations, antagonism between scientists and the general public, the place of religion in the scientific workplace, etc.). Each country or region receives a focused chapter, briefly summarized below.

The *United States* (chap. 3, “The ‘Problem’ of the Public”) is characterized by a soft secularism in which 65% of scientists believe in God. US scientists aren’t particularly antagonistic to religion, but significant conflict between scientists and the public exists due to the large, politically active, conservative Christian population. This public issue plays a role in undermining the US scientific enterprise.

In the *United Kingdom* (chap. 4, “‘New Atheists’ and ‘Dangerous Muslims’”), 57% of scientists believe in God. The UK is characterized by a unique dynamic in which new atheist scientists speak at the popular level while at the same time half of the country’s scientists originate outside the UK, often bringing religious values with them. UK biologists expressed concern about a growing Muslim population and implications for some realms of scientific thought (e.g., evolution).

In *France* (chap. 5, “Assertive Secularism in Science”), 49% of scientists report belief in God. French secularism is based on *laïcité* (freedom from religion) and the