

the psalmist) as a therapeutically important and theologically understandable response to suffering while simultaneously allowing us to join Warren's critique of "comforting" clichés about God's specific purposes for particular harms.

But these are concerns about tactics within the context of a shared goal to enrich and complexify Christian understandings of causation. At its best, Warren's work therapeutically nudges the reader toward a healthy skepticism of over-easy ascriptions of God's direct causal intervention in the world. And this amidst an ambitious, interdisciplinary conceptual toolkit that weaves accessibly through theology, philosophy, statistics, psychology, and the sciences more broadly.

Notes

¹Daniel Kahneman, *Thinking, Fast and Slow* (Toronto, ON: Doubleday Canada, 2011).

²Justin L. Barrett, *Born Believers: The Science of Children's Religious Belief* (New York: Free Press, 2012).

³Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable*, 2nd ed. (New York: Random House, 2010).

⁴John C. Polkinghorne, *Science and Providence: God's Interaction with the World*, 2nd ed. (West Conshohocken, PA: Templeton Foundation, 2005).

⁵David J. Bartholomew, *God, Chance and Purpose: Can God Have It Both Ways?* (Cambridge, UK: Cambridge University Press, 2008).

⁶Gregory A. Boyd, "The Open-Theism View," in *Divine Foreknowledge: Four Views*, ed. James K. Beilby and Paul R. Eddy (Downers Grove, IL: InterVarsity, 2001), 13–47.

⁷Thomas Jay Oord, *The Uncontrolling Love of God: An Open and Relational Account of Providence* (Downers Grove, IL: InterVarsity Academic, 2015).

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WHY SCIENCE AND FAITH NEED EACH OTHER: Eight Shared Values That Move Us beyond Fear by Elaine Howard Ecklund. Grand Rapids, MI: Brazos Press, 2020. 176 pages. Paperback; \$17.99. ISBN: 9781587434365.

Elaine Howard Ecklund is a professor of sociology, the Herbert Autrey Chair in Social Sciences at Rice University, and the founder of Rice's Religion and Public Life Program. She is well known for her studies of the intersection of science and spirituality, having published books on how scientists view religion (*Science vs. Religion*, Oxford University Press

2010, and *Secularity and Science*, Oxford University Press, 2019) and how religious people view science (*Religion vs. Science*, Oxford University Press 2017). In 2018 she delivered the Gifford Lectures at the University of Edinburgh on this topic. Her research takes advantage of a mixed methods approach, combining quantitative analysis of large-scale survey data and qualitative analyses of in-depth structured interviews. These scholarly studies have yielded interesting observations and paint a more complex and nuanced picture of this area than the caricature of irreconcilable conflict often suggested by the general media.

Why Science and Faith Need Each Other: Eight Shared Values That Move Us beyond Fear is Ecklund's first book in this area directed toward a lay audience. It is an engaging book that integrates her research and that of others, as well as personal anecdotes and stories, to illustrate her main points. It is designed not only for individual reading, but also for discussion in small groups, as each chapter finishes with suggested questions for further discussion. Although oriented toward a lay audience, it is carefully referenced for readers who are interested in delving into the primary sources. While not explicitly stated, the book appears directed, in particular, to evangelical Protestants who are more likely than other Christians to have difficulties integrating science and faith in their worldviews. This is consistent with much of the data cited in the book in which evangelical Protestants are often more likely than mainline Protestants and Catholics to hold skeptical views regarding certain aspects of science. It is also consistent with the funding support for this book—a Templeton Religion Trust grant for a project entitled Reaching Evangelical American Leaders to Change Hearts and Minds.

The main thesis of the book is that science and faith share eight common values; an awareness of these commonalities can provide a meeting point where people of faith and scientists can come to better understand each other and thereby decrease fear and suspicion toward each other. These values are curiosity, doubt, humility, creativity, healing, awe, shalom, and gratitude, with a chapter devoted to each of these values. The first four values relate to what Ecklund calls "process"—values which speak to how scientists carry out their work and how people of

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faith develop their spirituality. The latter four values relate to what Ecklund calls “redemption” – values which speak to the practical applications of the work of scientists and the practical responses emanating from the spirituality of people of faith, with both groups exercising these responses toward improving the common good.

I was certainly convinced that these values are shared by both people of faith and scientists as attested to by citations from her research and the literature. But I think that they are shared in different ways and to different degrees. Part of this reflects differences in their core features: science is above all a process, a method of looking at the world and viewing it through the lenses of observation and reason to generate, usually, some mechanistic understanding. So if we consider the value “doubt,” for the scientist, doubt is an essential part of the scientific method that involves constantly exploring alternative explanations for the observations. Without doubt, the scientist would achieve little progress. Faith is, above all, a process or method of looking at life and addressing questions of meaning and purpose. Although many persons of faith experience doubt at some point in their journey and processing such doubt can be a path to spiritual growth, it is not essential and certainly not a daily part of life for most believers. Conversely, “gratitude” is essential to the person of faith, forming a core part of the believer’s daily worship and often present even in times of suffering. Without gratitude, the person of faith achieves little spiritual progress. Scientists, including the Christian ones referred to by Ecklund, may express a sense of gratitude for the opportunity of discovery and for the potential benefits to humanity of the results of such discovery; however, it is not an essential value for the scientist and is unlikely to be expressed by most scientists in a prominent way on a daily basis.

Arguments can be made for similar differences in the expression and relative importance of some of the other values such as curiosity, creativity, and awe. Such probing can be fodder for interesting discussions by groups using the book. Although these discussions may suggest that the terrain of this common meeting place for scientists and people of faith may be rough and uneven, I believe that such discussion will lead to a better understanding of scientists and people of faith. Differences in the expression of

these values may lead to recognition of the distinct purposes and methods used by science and religion that underlie the irregular terrain. As quoted by Ecklund, distinctions between science and religion are famously described by the late paleontologist Stephen Jay Gould as “non-overlapping magisteria.” These non-overlapping magisteria govern distinct parts of life—“science in the empirical constitution of the universe and religion in the search for proper ethical values and spiritual meaning of our lives” (p. 154). Perhaps it is a recognition of the shared values of science and faith as well as their non-overlapping and complementary areas of endeavor that will have the best chances of resolving fear and suspicion between scientists and people of faith. Some conflict will persist as the magisteria are not completely non-overlapping. For example, as discussed in the chapter on healing, reproductive genetic technologies that incorporate gene editing have the potential to correct some human genetic disorders as well as to enhance certain human traits. The uses of such technologies involve both a scientific understanding of human development and a religious understanding of the nature of being human and the role of suffering in life. Such areas of overlap will likely be a source of contention for some time.

Ecklund has written a thoughtful book that addresses areas of interest shared by both scientists and people of faith and explores some of the issues that may continue to divide them. It will be a useful book for facilitating discussions about science in our faith communities—something which Ecklund correctly identifies as sorely lacking. However, I am not convinced that she has truly answered the question of “why science and faith need each other.” The word “need” implies that one is diminished by having only one, without the other. She cites scientists who feel that their faith has enriched their work. But is “enriching” all that faith can do, and is that a need or an optional enhancement? If it is indeed a need, then there should be evidence of benefit by those who possess both. Do scientists of faith produce more or fewer leading-edge discoveries than secular scientists? Are they more or less likely to be outstanding mentors, more or less likely to become academic leaders or leaders in industry, more or less likely to serve in professional societies? Similarly, are people of faith who have positive views of science and employ values such as curiosity, doubt,

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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SOCIOLOGY OF SCIENCE

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