

Book Reviews

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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SECULARITY 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

state actively excludes religion from public life. The result is that dialogue between religion and science is difficult to sustain, with *laïcité* disproportionately affecting Muslim women in science.

Eighty percent of scientists in *Italy* (chap. 6, “A Distinctively Catholic Religion and Science”) believe in God. Conflict between science and religion is a non-issue, largely due to the monolithic nature of cultural Catholicism (“Everyone’s Catholic. And nobody cares,” p. 7). Even non-Catholic scientists, many of whom identify as “spiritual but not religious,” tend to see religion and science as separate realms in what could be called “a version of religious modernity.” Scientists belonging to certain Catholic networks appear to have better access to jobs, funding, and other opportunities.

In *Turkey* (chap. 7, “The Politics of Secular Muslims”), 94% of scientists say they believe in God. Turkish scientists broadly believe in God but do not see themselves necessarily as personally religious. They observe little conflict between science and religion when Islam is considered broadly, but express concern about the ascendancy of a political form of Islam which threatens academic freedom. Many Turkish academics are leaving the country, and scientific infrastructure has suffered in recent years.

In *India* (chap. 8, “Science and Religion as Intimately Intertwined”), 90% of scientists report belief in God, and religious affiliation among scientists is higher than in the general public. India is a growing scientific superpower, and religion is so “in the air” that Indian scientists often make connections between religion and science without even noticing. A number of Indian scientists observe that the “conflict” between religion and science is a Western construction.

In *Hong Kong and Taiwan* (chap. 9, “A Science-Friendly Christianity and Folk Religion”), 90% (Taiwan) and 74% (Hong Kong) of scientists believe in God or gods. Like India, affiliation among scientists is higher than in the general population. Both of these regions’ education systems have been influenced by Christianity, and scientists in Hong Kong speak of meeting faculty and administrators in the sciences at Christian churches. Despite the influence of Christianity, the Western science and religion conflict narrative is not strong.

These summary points hardly do justice to the scope of the authors’ project, but they do highlight something that they themselves hold up as a central finding: namely, that *conflict between religion and science is an invention of the West*. The data indicate that a conflict perspective animates just one-third of scientists in the US, the UK, and France, with the remaining countries evincing much lower numbers. Rather, science and religion are most commonly viewed as different aspects of reality—independent of one another—a view embraced by both nonreligious and religious scientists. Regarding religious scientists, the authors report that from a global perspective there are many more than commonly assumed. Even scientists themselves consistently underestimate the proportion of their colleagues who are religious.

Overall, the book provides tremendous insight, thanks to rich quantitative and qualitative data, into how national and social contexts shape and interact with scientists’ views of religion. No other study of this magnitude exists, and that fact alone makes it a remarkable achievement worthy of examination. Its greatest strength lies in the treatment of each country and region, with effective data and storytelling illuminating the relation between science and religion in that location.

The primary weaknesses are the minimal synthesis of cross-national data and the limited discussion of how results fit within the larger secularization debate (which the authors use to frame the book). Secularization themes are treated on a country-by-country basis, but only seven pages of the concluding chapter attempt a synthesis, and the discussion is largely practical. Given the expertise of the authors involved, it feels like a missed opportunity for a more theoretically rich discussion. I would like to have seen, for example, discussion on whether the independence model (as opposed to the conflict model) is itself linked to secularization. The majority of the world’s scientists may be at least nominally religious, but without explicit philosophical and theological work to engage science, isn’t it probable that the independence model might just as easily contribute to secularization as oppose it? In other words, whose secularity are we talking about? Strong atheists may view independence as accommodating religion; the highly devout may interpret it as another facet of secularity.

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That said, the book is an empirical rather than a theoretical work, and an excellent one at that. The data are rich enough for readers well versed in the secularization debate to incorporate them into their own hypotheses. The primary message, supported by a wealth of rigorous data, indicates that global scientists are more religious than we often realize, and that narratives around science and religion in the US are not the only ones requiring our attention.

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TECHNOLOGY

MASTERS OR SLAVES? AI and the Future of Humanity by Jeremy Peckham. London, UK: InterVarsity Press, 2021. 256 pages. Paperback; \$31.99. ISBN: 9781789742398.

Will humans maintain their status as masters of their own creation or will they inevitably become slaves to these creations? Jeremy Peckham's book is another Christian analysis of the progress in artificial intelligence (AI) and a warning to the world of the dangers AI poses for the individual and for society at large. Peckham believes that the unregulated research and development of AI coupled with the *laissez-faire* usage of AI systems will result in humanity's degradation.

In the first chapter, Peckham captures the reader's attention by presenting a short fictional account of the Jefferson family starting their day in a world saturated with computer technology. This introductory story highlights the new technological reality in which we need to seriously explore AI's influence on humanity. In chapters two and three, Peckham presents a quick historical overview of computer and AI development. Chapter two begins with how computers and AI started as simplistic number-crunching machines that went from "winters" of technological disappointment to rapid progress with massive global impact. With this rapid evolution of AI, a necessary change is needed to determine whether AI can be considered morally neutral.

To address the growing danger and influence AI has on humanity, Peckham builds his argument in chapter four on the foundation that there is something special and unique about humanity. Humans are not only flesh and blood creatures but also bearers of

God's given *imago Dei* ("image of God"). This *imago Dei* is what separates humans from other nonliving and living things. In addition, as part of the *imago Dei*, Peckham affirms that humans have true freedom of choice. While Peckham does not provide a comprehensive examination of various philosophical stances regarding free will, he suggests that the ability of human beings to make choices freely is crucial to understanding how they are created in God's image. Beginning with the foundation of human's *imago Dei*, Peckham develops a Christian critique of AI by examining technology's effect upon this most important aspect of humanity.

Following his chapter on humanity's *imago Dei*, Peckham's main argument is further developed in chapters five to ten where he identifies six key areas of technology which threaten or have the possibility of threatening the *imago Dei*. In chapter five, Peckham is concerned that the continued reliance on AI to make decisions based on the premise that AI is unbiased is dangerous. Trusting AI technology in this manner further distances our relationship with other humans and elevates AI "reasoning" to human-like levels. In chapter six, human relationships with chatbots and digital assistants are the focus. Here, Peckham fears that the increasingly human (and often female) personification of digital assistants will lead to a distortion of emotional attachment and even to the illusion that we owe these artifacts ethical treatment. In chapter seven, Peckham considers whether the increased convenience and perceived general safety offered by state-controlled AI is worth the cost of restricting individual freedoms. For Peckham, the cost of individual freedom is too high a price to pay for the convenience which the state or the "Big Tech" companies now wield with substantial power and influence over the individual.

Chapter eight highlights the moral dilemma of whether an autonomous machine (such as a self-driving car) should be held morally responsible for its actions. Peckham believes that moral responsibility must ultimately remain with a human rather than placed on a machine. In chapter nine, Peckham addresses the growing concern that continued AI progress will result in fewer jobs available or in jobs that require higher technological proficiency. To address this growing concern, Peckham briefly explores the possibility of a UBI (universal basic