

seemed to challenge God's providence and the natural order, but in the end, chance occurrences, which included miraculous divine interventions, were seen as being under God's sovereign control. While a more probabilistic view of events was beginning to come to the fore, the science of probability wasn't founded until the late 17th century.

The same was true of statistics. Taking a national census of the population for fiscal purposes was thought by some to be akin to King David's disobedient numbering of military-aged men, but by the 17th century the government increasingly used demographic statistics for taxation and policy purposes. Collecting data became more widespread in the 18th century, providing a statistical way of understanding and dealing with a range of social and economic issues.

Time, chance, and numerical data provided arenas in which the new field of Arabic numerals and arithmetic could show its worth. Otis doesn't move into areas of science or relate English developments to those on the continent but notes that mathematics was becoming more indispensable during this period. *By the Numbers* is constrained as indicated by its subtitle, both in time and place, but as such it is an important resource for understanding how Hindu-Arabic numeration and arithmetic became entrenched in one culture in the early modern era. It will be of interest to anyone wishing to explore this aspect of culture and elementary mathematics more deeply.

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PROTESTANT MODERNIST PAMPHLETS: Science and Religion in the Scopes Era by Edward B. Davis. Johns Hopkins University Press, 2024. xvi + 316 pages. Hardcover/Ebook; \$64.95. ISBN: 978142144982/ISBN: 9781421449838.

How did liberal Christian intellectuals and scientists understand the relationship between religion and science during the fundamentalist-modernist conflicts of the 1920s? Given the amount of scholarly ink spilled in consideration of the 1925 Scopes Trial, one might reasonably expect that question to have been satisfyingly answered long ago. However, as Edward (Ted) Davis, professor emeritus of the history of science at Messiah University, argues, we "still know very little" (p. 5) about the actual ideas of Christians who embraced evolution. Davis has done much to address that shortcoming in this thorough, incisive study of ten pamphlets on

religion and science published by the American Institute of Sacred Literature (AISL) during the 1920s and 1930s.

Though virtually unknown now, the pamphlet series was hugely significant at the time. Authors included some of the nation's most prominent scientists as well as eminent ministers and theologians. With significant funding from John D. Rockefeller Jr. and "hundreds of individuals, churches, and other organizations," all meticulously catalogued by Davis, "perhaps as many as one million copies" (p. 57) were published and sent to "tens of thousands of prominent Americans and a comparable number of ordinary folk, especially college students and church members" (p. 64).

The book begins with three original chapters by Davis, each of which addresses an important element of the history of these publications. The first chapter explores their origins in the emerging debate between fundamentalists and modernists about the nature of science. As exemplified by their most prominent public figure, William Jennings Bryan, the fundamentalists held to a Baconian definition that distinguished between established fact and theory. By the 1920s, this "allowed them to reject evolution without seeing themselves as rejecting science" (p. 15). In response, Davis notes, a cohort of religious scientists increasingly "sensed danger in letting Bryan be the only religious voice" speaking on evolution. This perception dovetailed with a concern that the popular conception of evolution as "irreligious" (p. 20) constituted "the most serious obstacle to teaching it" (p. 22). In the popular framing, people had to choose to maintain their Christian commitments or accept modern science. Modernists wanted to make it possible to do both.

Chapter 2 considers the production and reception of the pamphlets themselves. As liberal Christians concluded that they needed their own response to Bryan, they devised the series as a vehicle for addressing not only evolution but other issues of religion and science as well. It is here that Davis offers some of his most significant contributions. He notes that the decision to solicit contributions primarily from eminent scientists at elite institutions "reveals wonderfully the degree to which the modernists accepted the hegemony of science and its definition of knowledge" (p. 57). Davis also does an admirable job of reconstructing how the pamphlets were received; his efforts reveal important limits of their effectiveness. He notes that the "gap between" the "elite scientists" who wrote them and "the wide audience that the AISL hoped to reach" was "not always easy to cross, on both scientific and theological avenues" (p. 73).

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Therein lay what Davis suggests was the greatest failure of the project: there was simply “no consideration of what to do when the majority find the conclusions of an academic elite patently offensive” (p. 78).

Chapter 3 elaborates on precisely why the pamphlets were offensive to many American churchgoers. Unlike earlier generations of religious intellectuals who accepted some elements of evolutionary theory while maintaining their belief in traditional Christian doctrine, the modernists of the 1920s were determined to accommodate their faith to evolution, which, in their view, “had changed almost everything” (p. 89). They “all but discarded divine transcendence” and other historically critical elements of Christian belief; their views proved to be a step too far for many intended readers (p. 90).

Following these chapters, Davis provides annotated versions of the ten pamphlets, complete with intellectual and religious biographies of each author. Depending on their personal interests, individual readers will likely find some more interesting than others. Edwin Brant Frost’s “The Heavens Are Telling” and Michael Idvorsky Pupin’s “Creative Co-Ordination” are notable, however, for providing the most intriguing departures from the usual liberal religious discussions of science of the day.

In excavating these ten pamphlets, Davis has done a real service by looking beyond the Scopes trial to another significant site of public discussion of religion and science during the 1920s. As the primary intellectual opponent of the modernists, William Jennings Bryan certainly looms large here. Nevertheless, *Protestant Modernist Pamphlets* makes a crucial contribution by exploring the emergence of a liberal religious discussion of science before the Scopes Trial while also exploring how the concerns of these liberals grew beyond evolution. Davis further makes an important contribution by highlighting the imperfect alignment between the fundamentalist-modernist debates of the 1920s and the sides taken in contemporary culture war battles. Given how these events a century ago inform ongoing political debates, it is notable that it was the anti-evolutionist Bryan who worried about the “exploitation of workers” and “the destruction of democracy” (p. 12). By contrast, it was some of the pro-evolution Christians who were dabbling in “eugenics and euthenics seasoned with scientific racism” (p. 23).

At its heart, Davis’s volume seems to be a lament for a lost middle ground. He notes that even readers at the time perceived the “absence of intermediate posi-

tions” in the “pamphlet war” (p. 95). To the extent that a historical study has heroes, the ones of Davis’s work seem to be late-nineteenth-century intellectuals whose work was often dismissed by the 1920s. These were the “voices of comparable magnitude” to the authors of the pamphlets who in their day had “affirmed both evolution and the ecumenical creeds” (p. 83). They accepted science but did not cede as much authority to it as the modernists did.

Yet, one cannot help but wonder just how possible it would have been to maintain these intermediate positions. The examples Davis provides of pre-1900 intellectuals who accepted evolution while maintaining “orthodox Christian beliefs” actually accepted evolution in a very limited way, such as by excluding humans entirely from the process (p. 82). Perhaps the reason such people could not be found in the 1920s is that their balancing act proved virtually impossible in the twentieth century.

For his part, Davis seems to believe that finding such middle ground remains possible. In his final pages, he offers three recent exemplars of the perspective he finds lacking in the 1920s. This discussion is regrettably brief, however. Davis’s acknowledgment of his limitations—that he is “a historian, not a prophet” (and, by extension, not a pundit)—is admirable (p. 103). But in light of his own apparent commitments and given that, in our own moment, science is as polarizing as it was in the 1920s, readers might well wish that Davis had offered more lessons from history about the possibilities of reaching a consensus position rather than settling for the “stark choice” offered by these pamphlets (p. 103).

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MEDICINE AND HEALTH

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THE ETHICS OF PRECISION MEDICINE: The Problems of Prevention in Healthcare by Paul Scherz. University of Notre Dame Press, 2024. 194 pages. Hardcover; \$40.00. ISBN: 9780268209056.

Why do people have yearly checkups? Why do we have blood tests for risk factors such as cholesterol? Why are there cancer screening programs? These are examples of managing risk, and this is a realm of precision medicine. Rather than accept these developments at face value, Paul Scherz is concerned that, as the number of conditions is surveilled and treated, an increasing number of people find themselves caught between health and