

my disappointment in not finding in this work the grand synthesis I had hoped for.

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James L. Hayward, *The Creation/Evolution Controversy: An Annotated Bibliography* (Lanham, Md.: Scarecrow Press, 1998), xii + 253 pp., \$37.50.

Kary D. Smout, *The Creation/Evolution Controversy: A Battle for Cultural Power* (Westport, Conn.: Praeger, 1998), xii + 209 pp., \$55.

Spurred on by *McLean v. Arkansas*, the early 1980s saw a deluge of books written by scientists refuting the major claims of creationists. Noticeably, this outpouring has slackened somewhat, and it appears that the opportunity has arisen to take stock of the "creation/evolution controversy." In these two works, two authors with disparate backgrounds (a biologist and rhetorician) offer overviews of this debate. Interestingly, despite their similar titles, both authors conceptualize the debate in different terms. To the biologist Hayward, it is an argument between theists and "non-theists," whereas to the rhetorician Smout, it is part of an ongoing battle between advocates of rhetoric (of which he is one) and advocates of reason (a group in which he clusters scientists and creationists).

Hayward's work is a relatively straightforward bibliography of 447 works related to the issue at hand. While some of the works examined (e.g. Galileo, Copernicus, Bacon, and Malthus) are not really antecedents of the "controversy" as it is seen today, the work forms a solid overview of both sides, nicely highlighting the importance of the Seventh Day Adventist church within the American anti-evolution movement. As such, it is a useful introduction to the literature, and would be well suited for recommendation to students as a good starting place for research, particularly if combined with Tom McIver's masterful *Anti-Evolution*.

Smout's book is, unfortunately, less informative. As the author admits, he has set out to provide "a convincing poststructuralist analysis of the language used in a major clash in American society" (p. x). By his own admission, this analysis could have been about any of a number of controversies (Smout mentions the Vietnam War, Watergate, abortion, affirmative action, and censorship of art), which he sees as "terminology battles" or "linguistic competition[s]" (p. xi) about "the validity of liberal political philosophy and its reliance on the knowledge of experts to create a just and rational society through law" (pp. 9-10).

Terminological battles are seen as power struggles between interpretive communities – battles between worldviews attempting to attain the power to define terms for the culture at large. In this case, the competition is between positivists (both evolutionists and creationists), who imagine that disputes would disappear if terms were more tightly defined, and rhetoricians, who realize that meanings and definitions are temporally and culturally situated, being accepted due to successful acts of persuasion. Both evolutionists and creationists, claims Smout, detest rhetoric and accuse the opposition of rhetorical rhyme above reasoned argument. It is this that Smout objects to – he pleads for the return of good old fashioned rhetoric which was, after all, good enough for the Greeks.

The book presents an analysis of three episodes in the “controversy”: the 1860 Huxley/Wilberforce debate, the 1925 Scopes Trial, and the 1981 Arkansas trial. What is notable about the analyses is that the author spends little time on the writings of the scientists involved; instead he concentrates on the public perceptions and statements by non-scientists, such as Darrow and Bryan. His treatment of the Arkansas trial is a case in point. Twenty-eight pages are spent on examining the *post*-trial writings of Nelkin, Marsden, Ruse, Gilkey and Gould, yet no space is devoted to examining the actual evidence presented at the trial or the numerous statements by scientists around the time of the trial. A more significant rhetorical analysis would focus on the post-trial writings of scientists and the subsequent responses by creationists such as Duane Gish.

Couched as it is in the theories of de Saussure, Derrida, and Fish, Smout’s argument is against “expert knowledge,” which he sees as mere acts of persuasion. In this view, language is a tool for persuasion rather than information transfer. This results in a certain epistemological relativism, which lurks below the still waters of his work. One would never know that what is at issue is our attempts to understand reality in a scientific manner, a point born out by the admission that this book could have been written about any other American controversy. This leads Smout to see both creationists and evolutionists as rationalists (and thus anti-rhetoric), and results in the bizarre claim that both sides see “rhetoric and religion as its archenemies” (p. 125). Whatever about rhetoric, I fervently doubt the members of the Institute for Creation Research see religion as their enemy unless, of course, it is the “religion” of humanism. By the author’s own admission, the work is a plea for a return to the appreciation of rhetoric. Scientific and historical issues are brushed aside, and a reader who is familiar with the history of (anti-)evolutionary thinking is likely to be dissatisfied.

Smout’s own rhetorical goals aside, can a historian or philosopher of biology benefit from this book? Sadly, no. The obvious preference for rhetoric

over rationality is not likely to endear the author to practicing scientists, lapsed positivists that we may be. Smout's history is readily available in more informed versions (e.g., Ronald Numbers's *The Creationists* or Edward Larson's *Summer for the Gods*). More importantly, the history as presented is flawed in a number of places. Five claims will suffice: (i) Marx wanted to dedicate *Das Kapital* to Darwin; (ii) the "controversy" began with the publication of *Origin*; (iii) Eldredge and Gould introduced punctuated equilibrium in a co-authored book; (iv) the lawyer Wendell Bird is a "creationist leader"; and (v) the Institute for Creation Research publishes *Creation Science Research Quarterly*. All of these observations, as anyone familiar with the history of Darwinism and anti-evolutionism knows, are false.

The future of "creationism" appears to lie in the Intelligent Design movement, spearheaded by the likes of Phillip Johnson and William Dembski. It is here that we are more likely to see Smout's wished-for triumph of rhetoric over rationality, and here too that any modern examination of opposition to Darwinian biology must turn.

John M. Lynch

Bernard Lightman, ed., *Victorian Science in Context* (Chicago: University of Chicago Press, 1997), viii + 489 pp., illus., \$70, \$22.50 paper.

The cover illustration of *Victorian Science in Context* was brilliantly chosen. It shows a cross-section of James Wyld's Model of the World, a hulking hollow globe sixty feet in external diameter with a raised relief map cast along the concave of the globe's interior. The spectator could stand at the center of the world, taking in the entire expanse of the planet with minimal movement. W. H. Smyth, the president of the Royal Geographical Society, enthused that the attraction was a worthy emblem of "the spirit of the age." (*Illustrated London News* 18 [7 June 1851]: 512.)

Victorian Science in Context illustrates how different is the spirit of our age. Rather than a grand commanding view of Victorian science, this dexterous collection edited by Bernard Lightman presents a series of connected vignettes. In its focus on the local and contingent rather than the universal, contextualism has eschewed attempts to capture the world in a master panorama. The analytical heart of the book addresses how a contextualist perspective should approach the mottled nature of our knowledge of Victorian science. Lightman reports that had this collection been published even five years earlier, he would have felt compelled to furnish a detailed theoretical justification for contextualism. The approach has proven