Evolution and Religion in American Education: An Ethnography

by David E Long
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reviewed by Steve Watkins

As those who teach evolution in public schools or at secular universities are well aware, it is a sharply polarizing topic. David E Long conducted ethnographic research as to why such polarization occurs, and in his Evolution and Religion in American Education he addresses a set of underlying challenges for those who teach evolution. Much of Long’s research delves, in effect, into a question recently posed by Karl Giberson: “Why do tens of millions of Americans prefer to get their science from Ken Ham, founder of the creationist Answers in Genesis, who has no scientific expertise, rather than from his fellow evangelical Francis Collins, current Director of the National Institutes of Health?” Long’s book provides some important and troubling answers to such questions.

Long conducted his ethnographic research at a state university in the greater Cincinnati, Ohio, metropolitan area that includes Indiana and Kentucky. While he uses the pseudonym “Mason-Dixon State,” it is not hard to guess which actual state university Long researches. His ethnography includes interviews with students, college professors, and high school teachers. At issue is the cultural tension in both teaching and learning evolution in the American educational system. Focusing primarily on education in the science classroom, Long probes areas of resistance to evolution among students and teachers. What he discovers is a deep-seated anxiety toward evolution that causes a “shut-down” in the minds of many Christian students—especially those whom he identifies as “exclusivists,” whose belief system is in no way open to the possibility of evolution.

One aspect of Long’s research that is in short supply in the literature on the cultural warfare between creationism and evolution is his exploration of the existential anxiety which has been established in the minds of many students before they ever get to a university. For those teaching at universities drawing from rural and exurban contexts (not to exclude others), this book helps to explain such negative prejudice against evolution. Existential anxiety results from larger epistemological and ontological categories that have been reinforced through a dichotomous “logic” repeated at home, church, student religious organizations, and sometimes, in the science classroom itself. For example, Long describes a common dilemma: “Typical of students in this social category [exclusivist Christians], evolution posed problems for their faith’s authority in that it forced a decision between competing ontical claims” (p 57).

Long interviews science teachers at the secondary level as well as college professors. At the high school level, many science teachers feel pressure against teaching evolution—
sometimes this comes through anecdotal comments by administration or co-workers and at other times it derives from a sense of community resistance to the topic. In some cases, the teachers were creationists who shied away from teaching evolution. In other cases, teachers adopted a “teach all the theories” approach where the topic of evolution provoked a discussion that inevitably led to any number of positions being raised—including creationist positions. At the college level, a different set of dynamics emerged which adversely affected instruction in evolution. Many introductory courses in biology for non-science majors were taught by adjunct faculty who did not have any expertise in evolutionary biology. Numerous adjuncts had only introductory exposure to evolution themselves.

Long’s research sheds light on some important issues in the breakdown of teaching evolution. Most importantly is the deep-seated anxiety that many students experience when the word “evolution” is uttered. “Evolution,” for these students, is not the scientific account of the diversification of life; it is a pernicious and nefarious attempt to undermine the foundations of morality, religion, and society. Unfortunately, the cultural warriors have been successful in similarly redefining key terms that turn into “banners” that are used to demonize evolution: “theory,” “truth,” “macro versus micro-evolution,” “missing links,” and so on. Trained scientists cringe to hear terms like these misused in so ferocious a manner. Perhaps addressing such terminological issues is at least a starting point for science educators in dealing with the cultural warfare that circulates so many inaccuracies, and reinforces such deep anxieties, about evolutionary science.

Like any ethnographic study, this one is limited. Long investigated just one college in a conservative region, which also happens to be located less than a half-hour drive from the Creation Museum in northern Kentucky. But keeping these facts in context, the study is a positive contribution to the complexities involved in the teaching of evolution.

A challenge for lay readers of this book is Long’s use of continental philosophy, especially some of the ontological categories in Martin Heidegger’s Being and Time. More specifically, Long draws heavily from Hubert Dreyfus’s interpretation of and commentary on Heidegger. For readers without a basic familiarity with such ideas, I would suggest reading some introductory works on Martin Heidegger, Edmund Husserl, and phenomenology in tandem with Long’s book. While these areas may be too technical for readers who do not possess a fair amount of philosophical background, phenomenology is an area of crucial importance in untangling the tremendous confusion of many American students toward evolution. This aspect of Long’s work is one of its greatest strengths.

Another strength of this book is Long’s identification of a conceptual clash between competing epistemologies (systems of knowledge). Many students and teachers simply aren’t aware of Stephen Jay Gould’s call to view science and theology as “non-overlapping magisteria.” The result is an existential blindspot that simply should not exist—even for people of faith. Long’s book challenges educators on two fronts: to find ways to stress the separation of faith from science (Gould) and to work hard to clarify important key terms as mentioned above. As Long suggests, these tasks may be among our most difficult challenges.

**About the Author**

Steve Watkins is working on his PhD in Humanities at the University of Louisville. His area of research is fundamentalist cultures, especially of the young-earth creationist variety.
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