

Why creationists should learn about evolution

A. Laats and H. Siegel: *Teaching evolution in a creation nation*. Chicago: University of Chicago Press, 2016, viii+128, Cloth: \$60.00, Paperback \$20.00

Graham Oppy, ^{1,*}

Email graham.oppy@monash.edu

¹ Department of Philosophy, Monash University, Melbourne, Australia

Adam Laats is a historian with specialisations in American educational history, twentieth-century American history, twentieth-century American religious history, the history of conservatism, and history education. He is the author of *Fundamentalism and Education in the Scopes Era: God, Darwin, and the Roots of America's Culture Wars* (2010, Palgrave Macmillan) and *The Other School Reformers: Conservative Activism in American Education* (2015, Harvard University Press); he also has a terrific blog: *I love you but you are going to Hell: awkward conversations about school and society* (<https://iloveyoubutyouregoingtohell.org/>).

AQ1

Harvey Siegel is a philosopher with specialisations in philosophy of science, epistemology, and philosophy of education. He is the author of *Relativism Refuted: A Critique of Contemporary Epistemological Relativism* (1987, Reidel), *Educating Reason: Rationality, Critical Thinking and Education* (1988, Routledge), *Rationality Redeemed?: Further Dialogues on an Educational Ideal* (1997, Routledge), and editor of *The Oxford Handbook of Education* (2009, OUP).

Teaching Education in a Creation Nation is a short book that showcases the considerable strengths of its authors. The first four chapters—‘Higher Education and New Culture of Science’, ‘Evolution Education in a Jazz Age’, ‘The Dog that didn't Bark’, and ‘A New Minority’—trace the history of evolution education in the USA, from the 1920s to the present, against the wider background of changes in higher education and elite intellectual culture that emerged in the second half of the nineteenth century. The remaining four chapters—‘Evolution, Creation, Science,

Religion and Public Education’, ‘Beyond “Creation Science”: The Scientific Status of Intelligent Design’, ‘Science Education: Aims and Constraints; Belief versus Understanding’, and ‘A Question of Culture’—provide normative answers to key questions about the scientific status of ‘creation science’ and ‘intelligent design’, the aims and goals of science education, and the consequences that flow from viewing disputes about evolution education as cultural rather than scientific conflict. These eight chapters are book-ended by an introduction—‘The Evolution of an Education Controversy’—and a conclusion—‘Evolution as Education’.

The history of the teaching of evolution in American public schools that Laats and Siegel present is fascinating. Overall, the main theme is that the fortunes of ‘evolution supporters’ and ‘evolution opponents’ have reversed over time. In the 1920s, the minority of evolution supporters had to fight hard ‘to get a foot in the door’. Between the 1930s and the early 1960s, there was a cessation of public hostilities, but only because both sides took themselves to have emerged triumphant from the struggles of the 1920s. And, from the early 1960s onwards, the minority of evolution opponents had to fight hard ‘to keep the door from closing behind them on the way out’.

As Laats and Siegel observe, evolution supporters and evolution opponents have often used the word ‘science’ in different ways. Many evolution opponents have understood ‘science’ to be the organising and sorting of facts according to proven authority that includes Christian scripture. In contrast, evolution supporters have typically understood ‘the best current science’ to include only those hypotheses that have not been falsified by the tests to which they have been subjected, that have issued in a huge range of confirmed predictions, and that have generated useful explanations across a wide range of domains. Given the way that many evolution opponents have understood ‘science’, it is clear that science can involve religion; in particular, it is clear that ‘creation science’ always did involve religion, and it is also plain that, insofar as ‘intelligent design’ has any precise content, it also involves religion. However, given the way that evolution supporters have understood ‘science’, it is equally clear that among ‘evolution science’, ‘creation science’, and ‘intelligent design’, only evolution science is best current science.

Given that Laats and Siegel maintain that only evolution science is best current science, it is unsurprising that they recommend that only evolution science be taught as science in American public schools: it is simply part of scientific literacy that one has an accurate understanding of evolutionary science. However, Laats and Siegel insist that it is no part of the goal of science education that students believe

what they are taught; in particular, it is no part of the goal of evolution education that students come to believe that current evolutionary theory is true. In their view, for students who are resistant to belief in evolutionary theory, it is sufficient that they ‘understand the theory and [have knowledge of] its associated evidence, facts, phenomena, processes, history and methodology’ (74). While it is true that, in general, where understanding is achieved, belief will follow, in cases where there is a barrier to belief—religious, psychological, or otherwise—the teacher has successfully carried out his or her job precisely to the extent that she has managed to bring the student to understanding of the theory and knowledge of the associated evidence, facts, phenomena, processes, history, and methodology.

According to Laats and Siegel, it is unproductive to view the dispute between evolution supporters and evolution opponents as a dispute about science. Rather, the dispute between evolution supporters and evolution opponents should be seen as one part of the US legacy of religious dissent and cultural pluralism in public schools. If creationists and proponents of intelligent design are viewed as cultural dissenters with the same kinds of rights and responsibilities as other minority groups, then it is possible to think about how to create public school communities that are broad enough to include these dissenters on equal terms. While teachers have an obligation to teach evolutionary science to students, they also have an obligation to honour student autonomy, and to acknowledge the legitimacy of the deep interests of students in cultural identity, continuity, and community.

Laats and Siegel conclude with an acknowledgement that their policy prescriptions are not likely to be favourably regarded by hardliners on either side. There are many evolution opponents who deny that only evolution science is best current science, even when it is understood that ‘best current science’ includes just those hypotheses that have not been falsified by the tests to which they have been subjected, that have issued in a huge range of confirmed predictions, and that have generated useful explanations across a wide range of domains. While it is not seriously contestable that ‘creation science’ and ‘intelligent design’ have produced no new knowledge that deserves a place in high school biology, not much less than 50 % of the US population says otherwise. And for many evolution supporters, the fact that such a large proportion of the US population says otherwise is itself a sticking point: it is scandalous that such a large part of the population has such ill-informed beliefs; it should be part of the aim of high school biology education to remedy this situation.

While I am typically attracted to irenic proposals, and while I think that it is productive to view the dispute between evolution supporters and evolution opponents as a cultural dispute, I am not sure that it is quite right to treat evolution opponents as *minority* cultural dissenters. Certainly, evolution opponents are minorities—if they figure at all—in scientific academies and secular universities. But, at the level at which decisions are taken about textbooks for public schools, it is still quite often the case that evolution supporters are in the minority in the relevant communities. It is hard to sell the idea that there is acknowledgement of the deep interests of students in cultural identity, continuity, and community when the case for teaching evolutionary science in public schools rests on arguments that fail to persuade the majority community of evolution opponents.

It is interesting to set the observation, by Laats and Siegel, that ‘there is no reason for complacency, but taking the long view, evolution education is winning’ (94) against the further observation, also by Laats and Siegel, that ‘Gallup polls between the 1980s and the present consistently have found that almost 50 % of American adults agreed with the notion that God created human beings pretty much in their present form at one time within the last 10,000 years or so’ (3). Just as I would like to be more confident that there is an effective way to sell the teaching of evolutionary science in public schools to evolution opponents, I would like to be more confident that it really is the case that evolution education is winning.

Even those who are not fully persuaded by the policy prescriptions that Laats and Siegel provide will profit from reading this historically and philosophical informed book. The topic is very important; the treatment is careful, accurate, innovative, and fair. Two thumbs up from me.