

LETTERS TO THE EDITOR

TO THE EDITOR:

It is highly ironic that in the midst of their discussion about the role of the history of science to help set the record straight, the multiple authors of the article “Does Science Education Need the History of Science?” (*Isis*, 2008, 99: 322–330) repeat some misinformation themselves. When they discuss my book *From Darwin to Hitler: Evolutionary Ethics, Eugenics, and Racism in Germany*, they rely heavily on the misinterpretation of my book proffered by Robert J. Richards. I cannot in the compass of a brief letter respond adequately to the misrepresentations of my position contained in Richards’s work and in this article, but I have already provided a full explanation of the most egregious errors at my Web site (<http://www.csustan.edu/history/faculty/weikart/response-richards.htm> and www.csustan.edu/history/faculty/weikart/response-to-critics.htm), so I must refer readers there.

I invite historians to read my work themselves to see if I stake out the absurd positions that Richards attributes to me.

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IN REPLY:

We would like to thank Professor Weikart for his response to our piece, noting that he offers no rebuttal to our statements and appears instead to be objecting to Robert Richards’s comment that “it can only be a tendentious and dogmatically driven assessment that would condemn Darwin for the crimes of the Nazis.” We note that Richards’s evaluation of *From Darwin to Hitler* is mirrored by other historians of science who have commented on the volume (see our original footnote 17 for a sample of these reviews). We stand by our assessment of Weikart’s volume and direct readers to these other reviews as well as to Richards’s magisterial biography of Ernst Haeckel (*The Tragic Sense of Life* [Chicago, 2008]), which further discusses Weikart’s scholarship.

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TO THE EDITOR:

While I am generally happy to be made an object lesson in what not to do in academic life, I sometimes wish that my betters really stood for something better. The authors of “Does Science Education Need the History of Science?” (*Isis*, 2008, 99:322–330) struggle to find an answer that escapes banality. This is partly due to their presumption that studying history of science might outright harm science education, and so to demonstrate that it could provide even a modest benefit would mark an improved position for the discipline. Beyond the critical skills students could acquire from any good humanities course, this modest benefit turns out to be catching the errors of groups like the Discovery Institute who use the history of science to promote Intelligent Design theory, itself allegedly part of a campaign by the religious right to undermine the American way of life.

This proposal is disappointing because it sets the ambitions for the potential role of history of science in science education so timorously low that *only* failed scientists would find it attractive. And even then the authors don’t take their own advice to avoid distortion of the facts with prior agendas. In particular, they follow the common pattern of characterizing my participation as an expert witness in *Kitzmiller v. Dover* in terms of other people’s reactions rather than my actual testimony. The point is relevant because my claim to expertise in the trial rested on a view I expressed under oath (and continue to believe): namely, that study of the history, philosophy, and/or sociology of science places one in a better position to judge what makes something a science than simply study in one of the sciences themselves. Why? Because what makes something “scientific” goes beyond simply trusting what scientists say; it involves examining the contexts in which judgments about what counts as science have been made.

I am struck by how no one who comments on the trial or the ongoing Science Wars addresses this point on its own terms—that is, as how the science studies disciplines might relate to science in educational or legal settings. For their part, the authors repeat the false claim that my testimony was intended to promote relativism and sabotage scientific authority. Even my critics in the December 2006 issue of *Social Studies of Science* realized I wasn’t doing anything of the sort, not least because some of them see themselves as relativists. (I have never seen myself that way.) The critics accused me of naively

thinking I could use the witness box to promote a strong activist science studies agenda, when in fact our fields have a weak public presence and a history of being treated as pawns by more powerful players. Had I been more of a relativist, presumably I would have taken heed of these features of the situation and refrained from offering my services. Whatever one makes of this criticism, it still leaves open the question of whether a more competent version of what I was trying to do is still worth doing to establish the relevance of the science studies disciplines to science.

In contrast, the authors' alternative vision of remedial science education activism would seem completely to undermine the intellectual autonomy of the history of science. Perhaps this is only a problem in the authors' presentation, which is fixated on the Intelligent Design controversy. Nevertheless, I was left wondering whether the authors' concern with ensuring that Darwin and Haeckel were dissociated from the nefarious uses that others subsequently made of their ideas extended to ensuring that Darwin and Haeckel were also dissociated from the more benevolent uses made of their ideas, as when Haeckel is portrayed as the father of the modern ecology movement or, for that matter, when Darwin is credited as the founder of modern evolutionary theory. To be sure, if the authors had something this evenhanded (or "symmetrical") in mind, the history of science's autonomy would be preserved. But the field would then probably be of little use or interest to scientists, since all the great scientists of the past would suddenly look like alien beings mired in the affairs of their day, as, say, Hobbes and Locke look when Quentin Skinner writes about them.

However, it would be a mistake to conclude that there are only two ways—mine or the authors'—in which the history of science might inform science education. The history of science already has a history of informing the practice of great, even revolutionary, science. But most of it took place before the history of science became an established profession. Perhaps the most famous example is the inspiration that Albert Einstein (and many others) drew from Ernst Mach's *Science of Mechanics*, which is basically a critical commentary on the conceptual problems surrounding the establishment and extension of classical mechanics. I doubt that the authors would stomach Mach's persistent antiestablishment stance to the physics community of his day, but others looking for an exemplar of the

relationship queried in the authors' paper could do much worse than start with him.

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IN REPLY:

After receiving numerous positive responses to our paper "Does Science Education Need the History of Science?" it was refreshing to receive Steve Fuller's characteristically zesty reply—even though only three sentences and two footnotes of our paper actually addressed his work (pp. 325, 328). Nevertheless, we thank Steve for his comments since it gives us the opportunity to clarify a few key points.

Our article doesn't claim that Professor Fuller acted as a relativist or attempted to sabotage scientific authority in his courtroom interventions over Intelligent Design. Rather, we point out both that this is how one faction in the Science Wars sought to represent its opponents (p. 325) and that this is also how the same faction chose to interpret Fuller's intervention in the *Kitzmiller v. Dover* trial. Similarly, we didn't invite historians of science naively to embrace only benign interpretations of science's effect on posterity. We argue only that they should not acquiesce in etiologically crude accounts of Darwin's legacy for twentieth-century morality.

Had we been invited to contribute to an *Isis* Focus section on the significance of antiestablishment critiques of science, we would—like Fuller—almost certainly have treated Ernst Mach's demands for conceptual clarification in physics as an exemplary case of extraparadigmatic practice. But we were not. And since few schoolchildren or undergraduates could ever hope to reach Mach's elite intellectual heights in interrogating science, we instead suggested some beneficial uses for the history of science that might be accessible to a broad and diverse range of students.

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