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If interested, please send cover letter, resume and the names of three references to:

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cited authors have to say in their own fields. Such scholars will want evidence that B&S have made a serious effort to learn their rather arcane language, before accepting B&S's claim that it fails disastrously when applied to physics or mathematics. No such evidence is to be found in *Fashionable Nonsense*. You don't have to be a fan of Irigaray, Jacques Lacan, or Bruno Latour to find B&S's level of argumentation ineffective.

Of course, if you believe with Katz that the whole postmodernist thing is just a scam, or with Sussmann that only cranks and crackpots take postmodernists seriously, or with B&S that postmodernists are cynically engaged in "displays of false erudition," then there is no point in trying to make a more effective case, because there is nobody on the other side worth persuading or capable of being persuaded. I don't believe that, and even those who do might give a little thought to those in the middle who are wondering whether anybody in either camp knows how to put together an argument.

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Canada Lacks Science Equipment, Funding

According to your May issue (page 60), the decision to build the Canadian Light Source (CLS) will cause Canada to "lose the dubious distinction of being the only Group of Seven (G-7) country without its own synchrotron light facility." Canada still holds another such dubious distinction, that of being the only G-7 country without a fusion research program. It's also poor in several other classes of scientific equipment, its scientists are paid less than those of any other G-7 country, and its annual science budget is only about one-quarter of that of the UK or France, despite having a comparable per capita income and half the population of either of them. And contrary to the situation in other nations, but as exemplified by the case of the private funding for the CLS, the bizarre new policy of the Canadian government is to pay only a fraction of the cost of facilities, thereby forcing the country's scientists to try to put together complicated financing schemes involving provincial and local authorities and private business.

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More on Approaches To Teaching Physics

In their article "Teaching Physics: Figuring Out What Works" (PHYSICS TODAY, January, page 24), Edward Redish and Richard Steinberg rediscover two principles well established at least a decade ago that physicists seem to have ignored. The first, as demonstrated in a 1989 videotape made by Matthew Schneps, is that presuppositions are tenacious and subvert learning science.¹ The second, as demonstrated in a 1959 book written by M. L. J. Abercrombie, is that what Redish and Steinberg call "interactive engagement classes" undermine presuppositions.² Abercrombie also told us something that Redish and Steinberg do not: *how* the second principle attacks the first principle.

References

1. M. Schneps, *A Private Universe*, Pyramid Film and Video, Santa Monica, Calif. (1989).
2. M. L. J. Abercrombie, *The Anatomy of Judgement*, Penguin, Harmondsworth, England (1959). For a synopsis of Abercrombie's findings, see K. A. Bruffee, *Collaborative Learning, Higher Education, Interdependence, and the Authority of Knowledge*, 2nd ed., Johns Hopkins U. P., Baltimore (1999), p. 144.

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REDISH AND STEINBERG REPLY: We certainly agree that many of the principles that underlie our philosophy have roots deep in history, from Socrates to John Dewey. Unfortunately, these ideas have had little impact on college physics instruction. Even if one knows the principles stated by Kenneth Bruffee, one may still be hard pressed to create interactive engagement activities that successfully deal with student "presuppositions." (For example, contrast the positive Workshop Physics results presented in our PHYSICS TODAY article with the disappointing Studio Physics results reported by Karen Cummings and coworkers.¹)

Reference

1. K. Cummings *et al.*, Phys. Ed. Res. Suppl. 1 to Am. J. Phys. **67**, S38 (1999).
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