



Review of "Higher Superstition: The Academic Left and Its Quarrels with Science" by Paul R. Gross and Norman Levitt (Johns Hopkins, 1994)

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Most scientists probably do not pay much attention to what their colleagues in the humanities and social sciences are up to. Many would like to, no doubt, but there just isn't time. Biologist Paul Gross and mathematician Norman Levitt, the authors of "Higher Superstition", worry about that — but not for the obvious reasons. Instead, they are concerned about a vast conspiracy — a large segment of that community, which they term "The Academic Left," that is deliberately or inadvertently hostile to science. Included therein are "cultural constructivists" — sociologists and historians of science who analyze science as socially constructing knowledge rather than studying "the real world", postmodern and feminist critics, AIDS activists, environmentalists, animal rights advocates and others. Scientists must be made aware of their agenda, argue Gross and Levitt, because it poses a potential threat to the scientific enterprise.

We venture to predict that any scientist who has dabbled in these fields will feel some empathy with their position. Gross and Levitt cite a number of examples of fuzzy reasoning based on outrageous premises, accounts of scientific practice that bear no resemblance whatsoever to the practitioner's views, and suspicion of scientific culture and its power, occasionally extending to downright hostility. They could easily have accumulated many more. However, by lumping all their perceived adversaries into a monolithic bloc (and assigning them a politically charged label), they make it virtually impossible to consider the merits of any individual cases. Instead, all attention is focused on the larger questions: Is there really a broad-based antiscience movement? Does it pose any serious threat? How should scientists relate to those colleagues who are

interested but not expert in what they do? Unfortunately, under such scrutiny Gross and Levitt fare just about as badly with respect to logic and motivation as many of their targets.

For example, in the chapter attacking postmodern cultural criticism ("The Realm of Idle Phrases"), Gross and Levitt zero in on three writers. The first of these, Andrew Ross, has written a book ("Strange Weather") which the authors represent as clearly hostile to science — it advocates giving New Age culture and various pseudosciences equal standing with science, and begins with the quote: "This book is dedicated to all of the science teachers I never had. It could only have been written without them." No argument there. The other two, Steven Best and Katherine Hayles, have both written extensively on recent interest in chaos theory and what they perceive as parallel developments in literature and society. Where is the hostility there? At first, Gross and Levitt concede there may not be any — but the work merits condemnation nonetheless, because the authors don't, in their view, have sufficient understanding of the mathematics to write anything but nonsense: "One might argue that Hayles's analysis...has at least the virtue of regarding science as, on the whole, liberatory and politically progressive, But this approbation comes at the cost of such a distended misreading of science...that it is hardly distinguishable from hostility."

There seems to be more than a little flavor of "guilt by association" here: Best and Hayles are made to share Ross's overt hostility by juxtaposition. That's just the beginning, though: Gross and Levitt note that Hayles has received much recognition for her work, including the presidency of the Society for Literature and Science (an organization to which we both belong, and whose title the book gets wrong) — so everyone must be hostile! "We conclude that hostility to science is, after all, an inextricable element of these postmodern philosophical excursions."

We view most of these trends very differently from Gross and Levitt. Humanists and social scientists find themselves living in a world that is inescapably permeated by science. Is it any surprise that many of them feel impelled to try to incorporate that fact into their professional lives? Gross and Levitt obviously consider such activities a waste of time (actually, there are a number of indications that they consider all non-scientific academic activity a waste of time), and dangerously subversive. "We are saying, in effect, that a scholar devoted to a project of this kind must be, inter alia, a scientist of professional competence, or nearly so." Even attempts to make science more accessible to the outsider, such as Gleick's fine book on chaos, are damned with faint praise. What is left for those, academics and laymen alike, who have interests but no professional competence in science? Nothing, it would seem, but to sit at the feet of the real scientists, and await the Word from on high. In a moment of (surely unintended) irony, Gross and Levitt criticize the view of some historians that "modern science has been from the first the province of a tightly organized, well-insulated coterie, jealous of its prerogatives and hostile towards outsiders who intrude without the proper authority." It would be difficult to find better validation for that view than this book!

What of Gross and Levitt's ultimate goals? Their main hope, they say, is to convert those they consider "friends" who have strayed. Their notion of incentives for conversion must derive from Torquemada; such a non-discriminating and frequently mean-spirited attack as this seems much more likely to increase the hostility level. As for scientists, they urge greater involvement "outside the official boundaries of science departments" in spite of the resistance they anticipate. We also urge such involvement, but predict that any scientist willing to try is more likely to be met with open arms than resistance. Lastly, is there really a long-range threat to science? If there is, which we doubt, it comes only from a small subset of the group under attack here, and responsible criticism should be focused appropriately. Gross and Levitt would do well to recall that the traditional metaphoric literary weapon is the rapier; what we have in "Higher Superstition" is more like a neutron bomb.