

The New Ignorance

Paul R. Gross and Norman Levitt, Higher Superstition: The Academic Left and Its Quarrels with Science, The Johns Hopkins University Press, Baltimore, 1994

Reviewed by Paul Davies

The impact of science on human culture is so great that it is inevitable, and entirely proper, that the scientific process is criticised from time to time. Scientists are familiar with the jibe that social ills, such as pollution and the threat of war, stem from scientific advance. They have also learned to live with the displeasure of some religious groups who feel threatened by scientific knowledge. Recently, however, a new type of argument has been developed against science by a disparate collection of people loosely (and not especially aptly) dubbed 'the academic left'.

My own experience of this new-style science bashing is largely confined to the United Kingdom, where 'the academic left' has been called the 'New Ignorance Movement'. It consists of a motley collection of far right and far left politicians and commentators, journalists and feminist writers, a few philosophers, a large slice of the arts community, elements of the Green movement, New Age zealots of various allegiances, and the political correctness lobby.

Unlike previous crusades against science and the scientific method, the New Ignorance movement does not limit itself to pointing up the pernicious products of science or denouncing an alleged ethical lassitude among scientists. Instead, it seeks to glorify mystery (i.e., ignorance) by challenging the very basis of scientific rationale: science's claim to deal in truth. Thus, science is presented not simply as evil — a mad bad fad — but ultimately as a sham.

To bolster this allegation of fraud, appeal is made to the fashionable notion of cultural relativism. According to this philosophy, all accounts of the world are equally valid. Science has no special claim on 'truth' or 'reality', it is argued, because it is just another cultural construct to be placed alongside ancient wisdom, folklore, ecofeminism, religion, New Age thinking, and so on. Any claim to the contrary — that science is mankind's most reliable path to understanding the world about us — is dismissed as self-serving chauvinism: 'scientists would say that, wouldn't they'.

In support of the cultural hypothesis, it is pointed out that practising scientists are predominantly white middle-class heterosexual males. Therefore, the argument goes, scientific programs reek of a conspiracy against women, gays, the working class, Aboriginal people and other victim groups. Scientists have formed a privileged cabal, it is said, to further their own interests. These interests often work against those of the wider community, which is excluded by reason of its lack of scientific literacy. The much-vaunted success of science is judged by the scientists'

own criteria in a self-congratulatory manner, and the rest of society has to foot the bill for the whole shabby enterprise.

The New Ignorance movement adds a vicious twist to the age-old two-cultures schism chronicled a couple of generations ago by C. P. Snow. In Britain it has all the hallmarks of class warfare. The education system imbues literary and arts graduates with a deep sense of intellectual superiority. Apparently, they alone are qualified to comment on the great issues of existence. Scientists are regarded as nerds and dangerous tinkerers, and hardly qualify for the dignification of intellectuals at all. When Stephen Hawking's book *A Brief History of Time* topped the best-seller lists, the cries of 'foul' could be heard throughout academia. How dare a *scientist* pronounce on meaning-of-life issues!

The situation in the United States, although less public, is even more acrimonious because of the entrenched position of the political correctness movement within American universities. In *Higher Superstition*, a sorry catalogue of vilification is analysed in painstaking detail. The authors, a marine biologist and a mathematician, focus on attacks by feminists, ecologists and gays on scientific methodology. The passions roused by the organisation of AIDS research has inflamed an already heady mix of anti-science rhetoric emanating from these groups.

The difficulty in framing a reasoned response to this broad-fronted assault is that any defence of science is taken to be an attack on the worthiness of feminism, antiracism, Green politics or gay rights as such. I for one have no quarrel with these causes; nor, as far as I can tell, do Gross and Levitt. However, a rebuttal urgently needs to be prepared, lest we should descend into a new dark age of ideologically driven intellectual sloppiness in which an 'anything goes' attitude is encouraged in relation to knowledge and understanding of the physical universe. In fact, Gross and Levitt are easily able to knock holes in many of the academic left's arguments, which are often embarrassingly woolly or just plain daft. In addition, some of the attacks contain a large dose of doublethink. Can a feminist, for example, argue that there is a validly distinctive female approach to science while maintaining that there is no essential intellectual difference between men and women?

Some of the arguments used to undermine the status of science are founded on straightforward misconceptions. Much cited are chaos theory and Heisenberg's uncertainty principle of quantum mechanics. These aspects of physics imply limitations on the predictability of physical systems. However, the limitations are subject to well-understood mathematical principles, and are part of the fundamental workings of nature in the real objective world 'out there'. They can be rigorously tested by experiment. Unfortunately, these limitations have been taken by some to imply a deep-rooted failure of science *itself* to describe the world properly. In other words, the uncertainty which applies (with mathematical precision) to dynamical variables in the physical world is mistakenly taken to apply instead to the scientific method.

Mercifully, Australia has been spared the worst excesses of this muddle-headed nonsense. Unfortunately, however, anti-science sentiments are starting to creep into Australian intellectual life too. Worryingly, the revisions of the school science and

mathematical curricula show all the signs of falling under the influence of academic leftist thinking. Attempts to replace science with 'science studies' under the guise of injecting a welcome sense of social responsibility into the science syllabus threatens to seriously damage the teaching of physics, chemistry and biology, to the detriment not just of science but of the well-being of Australians generally. The reasoning seems to be: science is hard, therefore it is discriminatory, therefore we should abolish it and replace it with sociological studies of how science creates victims. Science *does* create victims, and we need to teach this, but not at the expense of science itself.

Gross and Levitt have certainly stuck their necks out by defending science robustly against such a formidable array of detractors. Their book is bound to provoke a backlash. However, it is a book that needed to be written. For some years practising scientists have heard the rising chorus of antiscience rant in silent bewilderment. The time has come to take a stand.

The pity is that science thrives on critical analysis, and it certainly should be put under the spotlight of mainstream sociological debate. Scientists are by no means blameless, and the scientific method of enquiry, arcane and subtle as it is, needs to be explained carefully so that it attains credibility as a world view, and is not seen merely as an esoteric set of magic principles. In my view, however, science enjoys a unique status as a pan-cultural activity, having the highest standards of rigour and objectivity, and unrivalled consensus. Its ability to unlock the secrets of nature, and its record of yielding knowledge about the world, set it apart from other modes of enquiry. No amount of huffing and puffing will change that.

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