

**Intellectual Impostures:
Postmodern Philosophers' Abuse of Science**

Alan Sokal + Jean Bricmont

Profile Books 1998

A book review by [Danny Yee](http://dannyreviews.com/) © 1999 <http://dannyreviews.com/>

Intellectual Impostures — *Fashionable Nonsense* in the United States — is a follow-up to a parody by Sokal of postmodern handling of science, published unwittingly by the journal *Social Text*. (The appendices include that parody, a commentary on it, and a follow-up article published in *Dissent*.) The bulk of it is a detailed analysis of some of the misuses and abuses of science and scientific terminology committed by prominent French philosophers: Jacques Lacan, Julia Kristeva, Luce Irigaray, Bruno Latour, Jean Baudrillard, Gilles Deleuze and Félix Guattari, and Paul Virilio. Sokal and Bricmont focus on mathematics and physics, on mathematical logic, complex numbers, topology, set theory, fluid mechanics, relativity, and other such fields.

For those who understand these topics well enough, the quotations they have collected will produce howls of laughter all by themselves. And though Sokal and Bricmont do become a bit repetitive, there is certainly a pleasure in seeing pretentious ignorance dissected. But one has to wonder at the practical utility of this. Will anyone scientifically uneducated enough to have swallowed such nonsense in the first place be able to follow Sokal and Bricmont's analysis? On a passage of Kristeva, for example, they write:

she seems to confuse the *set* $\{0,1\}$, which is composed of the two elements 0 and 1, with the *interval* $[0,1]$, which contains all the real numbers between 0 and 1. The latter set, unlike the former, is an *infinite* set, which, moreover, has the power of the continuum.

Which I fear isn't going to be very enlightening to those who don't understand the concept of a set or know what a real number is, let alone what "power of the continuum" means. Similarly for skeletal explanations of what a frame of reference is, what existential and universal quantifiers

are, or what the Big Bang theory actually states. Sokal and Bricmont do provide pointers to works of popular science, however, which may be more effective.

Sokal and Bricmont's systematic demolition is still totally convincing, at least to someone like me with a background in physics and mathematics. And even critics of *Intellectual Impostures* seem unprepared to defend the specific passages attacked, rather weakening general counter-accusations of a failure to understand the context or the use of metaphor and analogy. So we are forced to accept that respected philosophers have been writing at length on subjects which they simply do not understand, with results ranging from ordinary confusion to outright gibberish. That must certainly be at least a little disturbing, but what are its broader implications?

Sokal and Bricmont disclaim either the desire or the capability to evaluate the merits of these thinkers' work more generally, but they at least hint that a broader critique follows from their criticisms, and the debates over *Intellectual Impostures* seem to have revolved around this. An analogy, suggested by Sokal and Bricmont themselves, is that Newton's extensive dabblings in mysticism and alchemy do not discredit his science. If the "scientific" passages analysed are only peripheral to the works they are extracted from, then their debunking may be of only minor interest. (Though one might still have concerns about the lack of honesty and intellectual rigour they display.)

But Sokal and Bricmont have restricted themselves to those philosophers they feel demonstrate systematic abuse, and for some of them they provide extensive lists of passages additional to those analysed. They also present secondary sources — articles or books by others which perform exegesis or analysis of the very passages being analysed and which often reach new heights of confusion. And while I haven't researched the topic in the same depth, I have noticed that similar abuses by some of these writers and their disciples extend to other natural sciences, notably biology and computer science. The problems highlighted by *Intellectual Impostures* may or may not be critical, but they are certainly more than peripheral.

In a similar vein to this material are chapters on common confusions about two particular topics: [chaos theory](#) and related topics; and set theory and [Gödel's theorem](#). These are a little more general, but Sokal and Bricmont still restrict themselves to pointing out specific errors, which in these areas is really so easy as to be pointless. A general analysis of the failure of scientific popularisation of these topics would be more useful.

Chapter four of *Intellectual Impostures* is a defence of science against epistemic relativism. Sokal and Bricmont sketch briefly the ideas of Popper, Kuhn, Feyerabend, Latour, and the "strong programme" in sociology, delivering a broadside against the extremes of epistemic relativism. As a defense of at least a basic realism or instrumentalism, this is hard to argue with, but the delivery is rather unsophisticated and somewhat indiscriminate in aim, failing to distinguish naive and sloppy relativism from serious thinking about real and complex philosophical issues. (Admittedly, this is in part due to the failure of others to separate these things.) There is certainly a lot more to epistemology than this chapter will suggest to the naive reader.

Some of the potentially most interesting material has been consigned to the epilogue. This offers some positive suggestions for engagement between "the two cultures", a glance at the historical and sociological background to the current divide, and a sketch of its political connections. This is all very general, unfortunately, and also rather shallow. I would like to have seen it more prominently placed and given fuller treatment, but I think Sokal and Bricmont would need to team up with someone from "the other camp" — a historian or sociologist of science, perhaps — to do any sort of decent job of this.

Those who really deserve the full brunt of its onslaught will probably just ignore *Intellectual Impostures*, or respond with further obfuscatory evasions. And many people who might have learnt from it will be put off by its approach. For me, *Intellectual Impostures* was light entertainment: given the huge amount of exciting and accessible work being done in philosophy and in the history and sociology of science by people who *do* have a reasonably solid understanding of the relevant science, I had [already decided](#) not to commit more time to obscure and difficult writers

who consistently get things wrong in all those areas where I am competent to judge them.

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