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## BOOK REVIEW

### Post Hoax, Ergo Propter Hoax

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**BEYOND THE HOAX: Science, Philosophy and Culture.** Alan Sokal. xxii + 465 pp. Oxford University Press, 2008. \$34.95.

In 1996, physicist Alan Sokal played an elaborate trick on some unsuspecting humanists and social scientists—namely, the editors of the leftist journal *Social Text*—by submitting an essay filled with at least six kinds of nonsense. The editors didn't catch (or were willing to countenance) the nonsense and published the essay. In response, humanists and social scientists embarrassed (or outraged) by Sokal's hoax lashed out, sometimes in ways that made them look even worse than the editors; and Sokal found himself hailed by legions of fans and supporters who credited him with finally exposing the vacuity of (a) cultural studies, (b) literary theory, (c) postmodernism, (d) obscurantist jargon, (e) science studies, (f) people who write about disciplines they don't know much about, and (g) all of the above. Over the past 12 years, accordingly, I've met a number of colleagues who spit and curse at the very sound of Sokal's name—and a much larger number of colleagues, journalists and general readers who credit Sokal with having proved once and for all that everything humanists have done since 1970 has been bunk.

Since then, Sokal has teamed up with Jean Bricmont and taken aim at epistemological relativism in the philosophy of science. Sokal and Bricmont note, for example (in an essay reprinted—with revisions and updates—as chapter seven of Sokal's new book, *Beyond the Hoax*), that major figures in science studies are given to making such assertions as "the validity of theoretical propositions in the sciences is in no way affected by factual evidence" (Kenneth J. Gergen) and "there is no sense attached to the idea that some standards or beliefs are really rational as distinct from merely locally accepted as such" (Barry Barnes and David Bloor, founders of the "strong programme" or "Edinburgh school" in science studies). "All this," remark Sokal and Bricmont, "indicates the existence of a radically relativist academic Zeitgeist, which is weird."

It is weird, but then, standards of weirdness tend to vary from discipline to discipline. Sokal, coming from a field with significantly stricter protocols for interpretation than those of literature, never seemed comfortable dealing with people who like to hypothesize imaginary gardens with real toads in them or to meditate on cold pastorals that tease us out of thought. But now that Sokal has left the terrain of literary theory, he has indeed gone beyond the hoax and into realms where the distinction between justified and unjustified belief actually matters to the world: specifically, the history and philosophy of science (which is sometimes conducted by people who are rigorously indifferent to the question of whether a scientific theory is actually true) and religion (which is practiced by people who are rigorously indifferent to the claim that beliefs should be rationally justified).

*Beyond the Hoax* actually devotes its first hundred pages to the hoax, but perhaps this is just a matter of providing context, like a recap of last week's episode ("Previously, on *The Hoax* . . ."). Sokal admits a bit too often that he's "proud" of his *Social Text* article, and there's too much repetition among the essays that follow, such that one finds oneself reading Bertrand Russell's snarky line on the advantages of theft over honest toil twice in 30 pages. The book's center of gravity lies in Parts II and III, where Sokal discusses "cognitive relativism in the philosophy of science," offers a "defense of modest scientific realism," charts the symbiotic relation between postmodernism and pseudoscience, and questions the place of religion in contemporary culture.

Sokal's defense of scientific realism is, as he claims, modest, and its modesty is what makes it cogent and convincing. Sokal starts from the proposition that "science is a human endeavor, and like any other human endeavor it merits being subjected to rigorous social analysis," and he has good things to say about the "moderate" arguments of Kuhn's *Structure of Scientific Revolutions*. The crucial distinction for Sokal (as for most reasonable people) is the difference between the "context of discovery" and the "context of justification": Sokal is willing (as are most reasonable people) to acknowledge that a potentially infinite number of factors, scientific and nonscientific, can contribute to the discovery of natural laws. The context of discovery can include variables ranging from the details of laboratory life to the vicissitudes of research funding, from Newton's willingness to believe in alchemy to Einstein's reluctance to believe in an expanding universe. But the context of justification is quite another matter: The determination of the existence of x rays or of the precession of Mercury's perihelion does not and cannot depend on factors extraneous to the scientific evidence relevant to the determination.

In other words, it makes great good sense to be a historical relativist with regard to the context of discovery; after all, Isaac Newton himself believed in God, and even Sokal, who regards such a belief as delusional, acknowledges that people of different times and places have different means of coming to conclusions about how the universe works. But properly *scientific* belief is

distinguished from all other forms of belief precisely by its insistence—one might want to call it a metabelief—that justified true beliefs can be validated only by rigorous rational inquiry. Sokal attempts, here, to give philosophers of science their due with regard to the context of discovery, and to hold the line on the context of justification; he is, by his own admission, an autodidact in science studies, and though he is not quite as attentive to ambiguity as is Ian Hacking (see Hacking's discussion of dolomite in *The Social Construction of What?*), over the course of his posthoax career he has read widely and carefully, with a laudable mixture of intellectual curiosity and well-earned skepticism.

Along the way, Sokal pauses repeatedly to ask why so many people in the "postmodern" humanities and social sciences have been so hostile to the idea that the context of justification for scientific knowledge might in fact involve a form of epistemological realism. This is, as Sokal notes, an interesting sociological question, and I can offer only a few broad suggestions here.

When some people hear the term *Western science*, they think first of Hiroshima, Agent Orange and the Union Carbide plant in Bhopal—and not, say, of the discovery of neutrino oscillation. This mordant skepticism about the benefits of Western science is then underlined by a dogmatic conviction that the Enlightenment was little more than a stalking horse for imperialism. As for why postmodern intellectuals would champion "local knowledges" and the "heterogeneity of language games" against the universalist aspirations of the Enlightenment, my sense is that when academic leftists in the humanities speak glowingly about "local knowledges," they're thinking of all the warm and fuzzy feelings we lefties have about "the local"—from our local independent bookstore to our local independent food co-op. These are good things by every measure (local and universal), but they seem to have obscured the fact that many of the world's "local knowledges" are parochial, reactionary and/or theocratic. Likewise, the defense of the "heterogeneity of language games" has proceeded as if it is the moral equivalent of a defense of species diversity—when, in fact, it is morally neutral, agnostic with regard to the question of whether the language games of charlatans or fascists should be preserved alongside the language games of the indigenous peoples of the Americas.

No one has demonstrated the political polyvalence of postmodernism more convincingly than Indian biochemist Meera Nanda, whose 2004 book, *Prophets Facing Backward*, showed that opportunistic far-right Hindu nationalists have appealed precisely to postmodern and postcolonial critiques of Enlightenment universalism in order to promote "Vedic science" and a reactionary political agenda. Sokal follows Nanda's argument to the letter, and (mostly) to good effect. But here's where things get . . . well, *weird*, for lack of a better term.

Sokal seems to believe that an argument against relativism in the sciences requires a parallel argument against "postmodern" pragmatism in human affairs; accordingly, he devotes a few cursory pages of his book to a critique of neopragmatist philosopher Richard Rorty. Now, I was never convinced by Rorty's shrugging dismissal of the idea that the physical sciences produce "objective" knowledge—that is, knowledge whose validity is independent of any human observer. But I am convinced that theories of social justice are qualitatively different things than, say, neutrinos or Neptune. I'm therefore inclined to accept John Searle's distinction between the worlds of "brute fact" and "social fact," and to insist that in the world of social fact, things like "theories of social justice" are indeed socially constructed.

This position puts me at odds with people such as Sam Harris, whom Sokal discusses at length in his chapter on religion. Harris writes, in *The End of Faith*,

In philosophical terms, pragmatism can be directly opposed to *realism*. For the realist, our statements about the world will be "true" or "false" not merely in virtue of how they function amid the welter of our other beliefs, or with reference to any culture-bound criteria, but because reality simply *is* a certain way, independent of our thoughts. Realists believe that there are truths about the world that may exceed our capacity to know them; there are facts of the matter whether or not we can bring such facts into view. To be an ethical realist is to believe that in ethics, as in physics, there are truths waiting to be *discovered*—and thus we can be right or wrong in our beliefs about them.

"Postmodern" pragmatists such as Rorty and myself think this is a truly unfortunate way of thinking about truths in human affairs. We prefer to say, for example, that when Thomas Jefferson declared it to be self-evident that all men are created equal, he was *inventing* the idea, not discovering it—and that it couldn't possibly have been self-evident, since almost no one on the planet believed it at the time. It wasn't a preexisting, observer-independent entity like Neptune; it was a proposal for how to think about our fellow beings, and to this day many of our fellow beings continue to think otherwise. Sokal's discussion of Harris's book is scrupulously fair, and takes its distance from the most reductive aspects of Harris's attacks on religion; but Sokal might have taken some distance as well from Harris's "realist" conviction that philosophy is a kind of epistemological physics in which one discovers immutable "truths about the world" lying latent in the aether—not least because that's precisely the way moral and religious fundamentalists think about right and wrong.

This point is, or should be, central to Sokal's project, for Sokal himself argues (quite plausibly) that fundamentalism—and not abstruse literary theory—is the most important challenge to science and reason. That Sam Harris should share an absolutist theory of truth with religious fundamentalists may sound a little strange, but then, these are strange times, and one finds *soi-disant* "rational" arguments turning up all over the map. Case in point on the opposite side: Unwittingly bolstering Sokal's argument, one prominent science-studies scholar has recently weighed in on the side of people who believe in angels: Not long after enthusiastically blurbing Meera Nanda's book, saying

This is a first detailed examination of postmodernism's politically reactive posture. It should serve as a wake-up call for all conscientious leftists," sociologist of science Steve Fuller arrived in Dover, Pennsylvania, to testify in favor of the teaching of "intelligent design" in that school district's seventh-grade science curriculum. And he did so, tellingly, by deliberately confusing the context of discovery with the context of justification, arguing that intelligent design is worth pursuing partly because great scientists of the past—such as Newton—believed in God.

So we have a science-studies scholar criticizing postmodernism and stumping for creationism, religious fundamentalists calling on God to smite the infidels, and "ethical realists" arguing for a moral absolutism. Sokal is appropriately alarmed by the first two of these phenomena, but, unfortunately, his book's closing argument—which, again, echoes that of Harris—is that all human beliefs should be judged by the degree to which they are supported by verifiable empirical evidence. That rationalist dog just won't hunt; not only will this argument fail to convince the religious, it even fails to account for strange, counterintuitive utterances such as Thomas Jefferson's.

In place of Sokal's (and Harris's, and Richard Dawkins's) "secular dogmatism," then, perhaps we might consider a form of secular *pluralism*—a pragmatic pluralism that knows the world contains billions of people who believe things for which they have no good evidence, and that honestly comes to terms with the abiding dilemma of how to sustain secular pluralist societies that include people who are neither secular nor pluralist. Whatever his shortcomings with regard to science, Richard Rorty saw his life's work as an attempt to secularize philosophy, to wean it from the notion that it is an enterprise analogous to physics; and as Alan Sokal undertakes the necessary task of struggling against religious fundamentalists, he may want to reconsider the value of pragmatism in human affairs. Then, perhaps, we can all move decisively beyond the hoax.

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