

Alan Sokal

Beyond the Hoax: Science, Philosophy and Culture.

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Alan Sokal is a professor of theoretical physics at New York University and, since early 2006, also Professor of Mathematics at University College London. His highly mathematical work, which ranges from phase transitions in statistical mechanics to quantum field theory, is well regarded in the physics community. Outside that community, however, Sokal is probably best known for an article, 'Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity', that he had published in a 1996 special issue of *Social Text*, a postmodernist-influenced cultural-studies journal, devoted to the 'Science Wars'. What he did was to construct a hilariously funny parody of postmodern theorizing about science, which was accepted by the editors of *Social Text* as a serious piece of scholarship. Three weeks after it was published, Sokal revealed the hoax and, in his words, 'all hell broke loose' (150).

The resulting academic row burst onto the pages of *The New York Times*, *Le Monde*, and other newspapers and journals worldwide. Reactions to Sokal's hoaxical parody ran the gamut (see his personal home page for a generous sampling). Some readers were outraged; others were delighted. Still others, in an effort to mediate the acrimonious dispute, expressed concern that what Sokal had done would only exacerbate the 'science wars' and widen the rift between the 'two cultures' that C. P. Snow had described thirty five years earlier.

I confess to being among those who were delighted. One reason (though not the only one, as I shall explain later) is that it was fun to see Sokal evidently trying to keep a straight face as he quoted misguided or meaningless statements by luminaries such as Jacques Lacan, Julia Kristeva, Luce Irigaray, Bruno Latour, Jean Baudrillard, Gilles Deleuze, Felix Guattari, and Paul Virillo, and soberly explained them as containing profound insights. So, for example, we are told that, 'as Lacan suspected, there is an intimate connection between the external structure of the physical world and its inner psychological representation *via* knot theory: this hypothesis has recently been confirmed by [string theorist Ed] Witten's derivation of knot invariants (in particular the Jones polynomial) from three-dimensional Chern-Simons quantum field theory' (37, 39). What? Sokal's comment in *Beyond the Hoax*: 'I am very proud of this sentence, which makes utter nonsense sound plausible' (36).

Many who were outraged thought that Sokal had flagrantly violated the academic code of ethics in dishonestly submitting his parody as if it were a sincere essay. This is a

serious charge to which I can here only offer a brief reply. *Social Text* is an academic journal, but the editors did not send Sokal's essay out to physicists for review. If they had, the nonsense in it would have been uncovered immediately. So why didn't they? Because it supported their epistemological agenda in language they liked. Sokal's declared aim was to argue that the emerging theory of quantum gravity decisively shows that physics does not describe an objectively real world, but only offers 'narratives', social constructions that are 'ineluctably relative and historical' (19). The project of 'deconstructing' science was nothing new; it was the great postmodern project of the 1980s and early 1990s. What likely thrilled the editors of *Social Text*, however, was that a leading professional physicist had apparently defected, conceding that cognitive relativists and social constructivists were right in criticizing the failures of Enlightenment rationality (269). What a coup to be able to include his 'transgression' in an issue on the 'science wars'! So they by-passed the review process and accepted Sokal's essay, little realizing that its author was not serious and that his essay was a finely crafted 'mélange of truths, half-truths, quarter-truths, falsehoods, non sequiturs, and syntactically correct sentences that have no meaning whatsoever' (93). Often purveyors of nonsense themselves, the editors did not recognize it when they were deliberately dealt a large scoop. So to the charge that Sokal was dishonest, my response is that ridicule is often a good weapon, that in this case it was done with a good cause (I develop this point in a moment when I consider Sokal's motives for writing), and that any embarrassment the editors experienced they brought on themselves. Stanley Aronowitz, a co-founder of *Social Text*, sourly called Sokal 'ill-read and half-educated'. Sokal agreed but gleefully quoted a critic of Aronowitz: 'How does it feel being duped by the half-educated?' (149n1).

The language of the last lines is characteristic of the more passionate *ad hominem* responses to Sokal's hoax. But implicit in Aronowitz's remark is another reason that some readers were angered: they thought that Sokal had selected passages out of context and then proceeded to interpret them unfairly. Sokal was sensitive to that charge in his confessional statements (e.g., 154) and subsequently sought to show that it was unfounded. In 1997, he and Belgian physicist Jean Bricmont published *Impostures intellectuelles* (Paris, Odile Jacob), which included a lot of material that Sokal had not been able to incorporate in his essay. Translated into English in 1998 as *Intellectual Impostures: Postmodern Philosophers' Abuse of Science* (London, Profile), and published in the United States the same year as *Fashionable Nonsense* (New York, Picador), Sokal and Bricmont reveal a wide-ranging knowledge of the writings of the postmodern luminaries mentioned earlier, and they convincingly show that what they say about science and mathematics is even sillier in context than it is out of context (153).

Now, a decade later, we have *Beyond the Hoax*, a book divided into three parts. Part 1, consisting of six chapters, rehearses Sokal's criticism of academic postmodernists, 'a comparatively lightweight target', in his view (xviii). Chapter 1 again reprints the parody article—it was also reprinted in *Fashionable Nonsense*—but this time with a

series of detailed (and heretofore unpublished) annotations that explain the jokes and misunderstandings, and quote from some of the cited references to provide their usually incoherent contexts. Chapters 2 and 3 explain the political importance of the issues at stake in the debates over truth and objectivity. Chapters 4 and 5 return to academia, and focus on the flaws of extreme social constructivism in the social and cultural studies of science.

Part 2 of the book, containing Chapters 6 and 7, addresses in more detail the philosophical issues concerning truth and objectivity that were raised in Part 1. Chapter 6 is an updated version of the philosophical intermezzo from *Fashionable Nonsense*; it provides a clearly written, sensible, and accessible introduction to contemporary debates in the philosophy of science. Chapter 7 then defends a ‘modest’ scientific realism. These chapters were co-authored with Bricmont.

Part 3 (Chapters 8, 9, 10) treats what Sokal thinks are weightier social and political issues from the perspective provided by the discussions in Part 2. Chapter 8 analyzes the relation between pseudoscience and postmodernism, and investigates how extreme skepticism can abet extreme credulity, using a series of detailed case studies: pseudoscientific therapies in nursing and ‘alternative medicine’; Hindu nationalist pseudoscience in India; and radical environmentalism. Chapter 9 takes on what Sokal thinks is the largest and most powerful pseudoscience of all: organized religion. He deplores the damage that is allegedly done by our culture’s deference to ‘faith-based’ policy decisions. Finally, Chapter 10 draws some of these concerns together, and discusses the relationship between epistemology and ethics as they interact in the public sphere.

There is much to comment on in *Beyond the Hoax*, but in a brief review I must confine myself to just a few remarks. Some readers will find annoying the format of the annotated hoax; but while it can be a bit taxing zig-zagging between text, footnotes, and annotations, I found it enjoyable and rewarding. Among other things, the explanations reveal how difficult it was for a passionate advocate of clear, critical thought to write profound-sounding but meaningless prose. Sokal tells readers in one place that, ‘save for rare bursts of inspiration, I just didn’t have the knack’ (94). As a result, some of the funniest annotations describe the lengths he went to in order to make the essay appear ‘authentic’.

Is Sokal’s motive in writing, then, merely to pop the balloons of pompous and pretentious authors who abuse science and mathematics. No, although many reviews of his work, both positive and negative, take that to be his principal aim, and Sokal evidently does enjoy popping balloons. Is he concerned to defend science from postmodernists, cognitive relativists, and social constructivists? Well, yes and no. Instead of paraphrasing his position, however, let me quote a concise statement of it:

‘My aim [in writing is not what you might think. It] isn’t to defend science from the barbarian hordes of lit crit or sociology. I know very well that the main threats to science nowadays ... [do not come] from a handful of postmodern academics. Rather, my goal is to defend what one might call a scientific *worldview*—defined broadly as a respect for evidence and logic, and for the incessant confrontation of theories with the real world; in short, for reasoned argument over wishful thinking, superstition and demagoguery. And my motives for trying to defend these old-fashioned ideas are basically *political*. I identify politically ... with the Left, understood broadly as the political current that denounces the injustices and inequalities of capitalist society and that seeks more egalitarian and democratic social and economic arrangements. And I’m worried about trends in the American Left—particularly in academia—that at a minimum divert us from the task of formulating a progressive social critique, by leading smart and committed people into trendy but ultimately empty intellectual fashions, and that can in fact undermine the prospects for such a critique, by promoting subjectivist and relativist philosophies It seems to me that truth, reason and objectivity are values worth defending no matter what one’s political views; but for those of us on the Left, they are crucial—without them, our critique loses all its force’ (106-107; also xv, 94-96).

Exactly right! These are the deeper reasons why I was delighted with Sokal’s original parody and by *Fashionable Nonsense*, and why I agree with much of *Beyond the Hoax*. Deconstruction and cognitive relativism do not provide a secure intellectual basis for opposing inequality and oppression (94n3) or for promoting universal rights to adequate housing and healthcare (195). Nor do they provide any secure basis in science for seeking realistic solutions to, for example, the problems of deforestation and global warming. If, as postmodernists claim, science is nothing more than a ‘narration’, a ‘myth’ or one ‘social construction’ among others (269), then they undercut the left-leaning values and objectives that they share in common with Sokal, while opening up great opportunities for the Right to distort or simply ignore inconvenient scientific findings. This is what makes Sokal’s critique so powerful and why he can say (if perhaps a bit disingenuously) that the editors of *Social Text* are *not* his enemies (163). As he and Bricmont put it in the Preface to *Fashionable Nonsense*: ‘Our book is not against political radicalism, it is against intellectual confusion. Our aim is not to criticize the left, but to help defend it from a trendy segment of itself’ (xv n13). If parody can promote that cause, I support it.

I am thus in broad agreement with Sokal’s intellectual and political goals and for the same reasons (xix). Matters stand otherwise, though, when Sokal discusses religion, which he does at length in Chapter 9, which I think is the most unsatisfactory chapter in the book. Sokal is an atheist, and proud of it, because he thinks it’s the only intellectually respectable position (421-2). He concedes that religious people can often be good people who do good things, but cognitively they are ‘deluded’ (426-7). Sokal quotes approvingly

the well-known statement of the Victorian mathematician-philosopher William Clifford that ‘it is wrong, always, everywhere, and for any one, to believe anything upon insufficient evidence,’ adding the rhetorical question: ‘And what more obvious transgression of this dictum than religion?’ (450-51).

There is a lot to take issue with here. And with a lot of Sokal’s other views on religion in general and on Catholicism in particular. Religions are intellectually (and usually socially) pernicious, since religious belief, of whatever sort, stifles critical thought and encourages dogmatism, which in turn leads to fanaticism (e.g., 397). Moreover, Sokal is serious in claiming that all religions are pseudosciences, even though many (probably most) of them do not satisfy his criteria for being a pseudoscience (346-50). Indeed, he goes so far as to call Pope John Paul II the ‘leader of a major pseudoscientific cult’ (271) and seriously defends that view (346-7). In so doing, Sokal doesn’t think he’s being ‘offensive’ or ‘unnecessarily aggressive’; he’s just being ‘honest’ (346). Presumably, he thinks he is also just being honest in asserting, flat out, that the Catholic doctrine of transubstantiation is ‘clearly ridiculous’ (423), even when he claims, without a shred of evidence, that few Catholics believe it anyway (375n6).

To sum up: Sokal usually has an admirable passion for clarity of thought, and is commendably opposed to those who would pass off nonsense as profundity, whether they be commentators on science, spokesmen for special interests, or the governments of nations. But his unwillingness (or inability) to expand his frame of reference to non-science-based reasons for belief sometimes tends to undermine his credibility as a defender of liberal ideals and his efficacy as a scourge of genuine nonsense.

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