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## Interviews

### My philosophy: Alan Sokal

Written by: [Julian Baggini](#) | Appears in: [Issue 41](#)

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#### Julian Baggini meets the man who dropped a bomb on postmodernism



Alan Sokal

“I hope your interest is not primarily in the whole stuff of about 10 years ago, because that’s so old hat.”

So speaks the physicist Alan Sokal, right at the start of our interview. The “stuff of 10 years ago” is the eponymous Sokal Affair, when he “dropped a bomb” on postmodern literary theory and social science by publishing a parody paper, “Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity” in the journal *Social Text*. The paper was, as Sokal sees it, little more than “an annotated bibliography of very sloppy science and philosophy of science”, but it opened up a massive debate about the misuses of science and the alleged absurdity of what Sokal calls the “sloppy relativism” infecting academia.

“It’s inevitable that my obituary will lead with that, no matter what I do, even in the unlikely event that I get a Nobel prize,” says Sokal. However, his dismissal of the affair as “old hat” is somewhat undermined by the publication of his new book, *Beyond the Hoax*, which includes an annotated version of the hoax paper, as well as updated versions of two chapters previously published in

*Intellectual Impostures*, the book he wrote with Jean Bricmont in the aftermath of the affair (which also republished the parody). Although it does indeed go beyond the hoax, it hardly leaves it behind.

Sokal is right, however, that we're not talking simply to go over old ground. We covered the hoax in some detail in a 1998 interview for this magazine. Our main interest, as we sipped tea in a café near his temporary office at University College London, was in the wider impact of philosophy on his life.

Sokal's first real brush with the subject came at university, when, as a physics major, he took a few philosophy courses he can barely remember. "There was one with Bernard Williams – I don't remember what the course was called, but I think it was in that course that I wrote a paper on the ontological proof of the existence of God, which of course is fallacious and people have written thousands of articles trying to explain exactly why it's fallacious. I did something with quantified modal logic - I can't even remember what I did."

Although that was it with formal philosophy until the *Social Text* affair, Sokal did have a "philosophically-oriented approach to physics," which contrasted with the "very pragmatic anti-philosophical point of view" of many of his colleagues, of which "the extreme version is 'shut up and calculate': physics is about predicting, experiment and that's all. I was always opposed to that point of view. It seems to me that physics is about trying to understand the world, and experiments are tools for checking whether your theories about the world are possibly right but they're not an end in themselves. So I always took an attitude towards physics where I was interested in the fundamental conceptual questions, closer to Einstein's approach than Feynman's.

"You can even see this shift in the history of physics a little bit, from the generation of Einstein and Bohr and Heisenberg, who spent a lot of time arguing about fundamental conceptual questions, primarily about quantum mechanics; to the generation after, of Feynman and his contemporaries, who said we can argue about conceptual things until hell freezes over, but there are so many new things to explore in elementary particles, in quantum chemistry, let's do that. That also coincided with a geographical shift from European dominance to American dominance.

"I don't criticise the newer generation. They were right that there were so many interesting things to learn and maybe the philosophical discussion had stalled. Nevertheless, it seems to me that the conceptual questions are also fundamental. For example, what does quantum mechanics actually mean? I've been using quantum mechanics for about 35 years, almost three-quarters of my life, and the more I study it the less I understand it. So I can understand why a whole generation of physicists threw their hands up in despair and said 'let's just calculate', but that's not to me a satisfactory final answer."

Many people certainly do have a sense that, if you do physics, you can't avoid philosophy. But different conclusions are drawn from this. Some dismiss the philosophers, saying it's the physicists who are the ones really doing the philosophy; while others complain that the problem with physicists is that they're doing philosophy, but they're not equipped to do it. How does Sokal see the distinction between his discipline and philosophy?

"I don't know how you draw the line between clarifying the conceptual foundations of a particular branch of physics and doing philosophy of that particular branch of physics. I'm not sure that there's really much difference. It can be done by physicists with or without formal training in philosophy, and it can be done by philosophers usually with formal training in physics. The philosophers of physics who I think are the best, the ones I respect the most, very frequently were at the very least physics undergraduates and in some cases got PhDs in physics before switching to philosophy, people like David Albert.

"So going back to your question, I think there's some truth to the stereotypes on both sides. Physicists, when they do philosophy, often do it badly. They're often confused about the conceptual foundations of their own physics, because sometimes you can compute and get the right results even if you don't understand conceptually very well what you're doing. That's a criticism that not only philosophers but also mathematicians make of physics. Because I'm half a mathematician I respect that criticism too. So it's absolutely true that physicists often make a botch of the conceptual foundations of physics, especially when it comes to quantum mechanics, because quantum mechanics is simply much harder than any other physics we know. Everybody makes a botch of it because we don't really know what's going on.

"I think there is also something in physicists' complaints about philosophers that often what they do is so sterile that it's of virtually no relevance to any working scientist, even at the level of conceptually clarifying important things in their fields."

Critics of philosophy of science, however, often base their hostility on an assumption of what it *should* be doing. To simplify somewhat, there are two different ways of seeing it. One is that it has nothing to do with the practice of science whatsoever, it's

just we ask ourselves what this thing called science is, simply because we want to understand it. The other is that it's there at least partly to help clarify the scientific method in order to get better science. Which view does Sokal take?

"I think both are true in different instances. There are some cases where the second is definitely true, that is to say when scientists are generally confused about something, conceptual clarification can be useful. Whether it comes from someone with a degree in philosophy, physics or biology doesn't matter.

"Conceptual clarification can be useful for pushing science ahead, even in the narrow instrumental sense: we may urgently need conceptual clarification if we are to make progress in quantum gravity. I don't know, first of all because I'm not a specialist in that field, and secondly because no-one can predict the future.

"Certainly Einstein spent a lot of time doing conceptual clarification in his own mind, leading him to general relativity and special relativity, and that played a crucial role. You can call that philosophy or you can call it deep thinking about physics. Quantum mechanics was born mostly without that kind of conceptual clarification, so it shows that you can get instrumental physics without clarifying the concepts – it can go both ways.

"But going back to the other side, that philosophy is just good for itself and is not necessarily intended to help working scientists, you know the famous quote from Feynman which says 'philosophy of science is about as useful for scientists as ornithology is for birds.' Most people would see that as denigration of philosophy of science, but I don't see it that way at all. Ornithology is not intended to be useful for birds. In principle ornithologists might, by studying the physics of how birds fly, come up with some suggestions to birds about how they could fly more efficiently, except that natural selection has probably beaten them to it anyway. In the same way, philosophy of science could come up with suggestions for working scientists, but that's not necessarily its major goal. I like that Feynman quote precisely because it's not, in my view, pejorative towards philosophers of science. It's saying that the philosophy of science is different. It clarifies what scientists do whether or not it helps scientists."

Sokal is very positive about philosophy's potential to help physics with its conceptual clarification in principle, but in practice, there is a long pause when I ask him if he can give any examples of when this has actually happened.

"Lucien Hardy? I think he's in a philosophy department." Actually, I later find out he isn't. He's at the Perimeter Institute of Theoretical Physics at Waterloo, Ontario. Sokal eventually concedes that "The major contributions have been made by physicists: Einstein, Podolsky, Rosen, Bohr, Boehm, Bell..."

I find this issue particularly interesting because, after the Social Text affair, most analytically-minded philosophers embraced Sokal as an ally. "The reaction from philosophers, at least in the English-speaking world, was generally supportive," he says. "Most philosophers in the English-speaking world don't go for relativism in general and certainly don't go for the extreme, sloppy versions of it that you get from post-modernist oriented literary critics. Philosophers have been critical of that sort of sloppy philosophy for a long time. There was the famous debate in the *New York Review of Books* between John Searle and Jacques Derrida. So most philosophers were genuinely supportive."

But I wonder if they should be. Just as his kind words about what philosophers of science could contribute to physics masks the fact that, actually, it's hard to pinpoint what exactly they have contributed, so the hoax and its aftermath in a sense diminishes philosophy by showing that you don't need to be an experienced professor with a detailed knowledge of the subject to wade in and settle some pretty big philosophical scores.

"I should make clear that I don't think my parody article settles anything," says Sokal. "It doesn't by itself prove much – that one journal was sloppy. So it wasn't the parody itself that proved it, it was the things that I and other people wrote afterward which I believe showed the sloppiness of the philosophy that a lot of postmodernist literary theory types were writing. But again, I wasn't the first person to make those criticisms. It was only after the fact that I went back into the literature and found philosophers had made many of these criticisms long before me. All I did in a certain sense was to find a better public relations method than they did.

"So in a certain sense any relatively smart person, whether they're a philosopher, a physicist or a literary critic themselves could have figured that out."

Isn't it also the case that when Sokal talks about general philosophy of science (as opposed to the specific philosophy of physics) he's also pretty deflationary about what he thinks it can achieve? For instance, doesn't he think both that philosophers have failed

to codify the scientific method and that they will probably continue to fail to do so; and that, in fact, what one can sensibly say about it is pretty general?

“There have been various different attempts [to codify the scientific method], none of which have been terribly successful. They’ve all pointed to some correct understanding of what science does, but no one has succeeded in coming up with a even plausible codification of what it is that scientists do, and philosophers of science are the first to admit it. So I guess you’re right that I’m sceptical that there can ever be a complete over-arching theory simply because science is about rationality; rationality is always adaptation to unforeseen circumstances – how can you possibly codify that?”

“But that doesn’t mean philosophy of science is useless, because all of these attempts that have failed as final codifications of scientific method nevertheless contributed something. For example I hope to write an article about Nick Maxwell’s approach. I think he’s put his finger on something very important too, which, again, is not the end of the story but adds something. So I don’t think philosophy of science is a failure.

“Maybe philosophers of science, especially in the early twentieth century, were too optimistic about what they could do. They saw what Russell and Whitehead had done for axiomatising mathematics – which wasn’t completely successful either, but that’s a different story. In some sense there was progress in understanding the foundations of mathematics, and I think they aspired to do the same thing for science in general. Maybe they underestimated how much more complicated empirical science is compared to pure mathematics.”

In his new book, Sokal continues to transgress the boundaries of academic disciplines by wading into the public God debate with a long chapter which is effectively a review of two very different books that have fuelled it, Sam Harris’s *The End of Faith*, and Michael Lerner’s *Spirit Matters*. In it, Sokal pitches his tent very firmly in the Hitchens, Harris and Dawkins camp. What does he make of the criticism that such strident atheism alienates more than it persuades?

“I’m not trying to be strategic. I’m not a politician. I’m a physicist, an academic, and, if you want, an amateur philosopher. I’m trying to say what I think is true as clearly and unemotionally as I can, and leave it to people to judge if my arguments are right or wrong. I don’t think my tone is strident.

“People sometimes unjustly accuse Harris and Dawkins at least of being strident when in fact all they’re doing is refusing our culture’s double standard for religion. The double standard is you can say more or less anything you want about Tories or Labour, about Republicans or Democrats; about capitalists or socialists; but you can’t say anything even remotely critical about a religion. Now why not? If you read Harris’s book or Dawkins’s book – certainly if you read what I’ve written – you don’t find anything half-way as harsh about religion as you read everyday in the paper about politics.”

When thinking about why Sokal gets involved with these debates, it’s important to remember his political motivations. Sokal is a man of the left who once spent a few summers teaching maths at the National University of Nicaragua during the Sandinistas’ rule. Underlying his work outside of physics is a strong conviction that it is a disaster for the left to abandon a commitment to reason. In his book, he cites one such example of someone who wanted to claim that science is not universal, but varies according to how the individual is situated in the world: “A German can look at and understand Nature only according to his racial character.”

“This of course is a quotation from Ernst Krieck, a notorious Nazi ideologue, who was rector of the University of Heidelberg in 1937-38. I was flabbergasted – well maybe not flabbergasted – when I came across it. This doesn’t show that postmodernists are Nazis or anything. What it shows is a kind of uncanny overlap of ideas between, on the one hand, left-wing postmodernists, and the other hand, extreme right wing nationalists, whether they’re German or Hindu nationalists.”

Whether he’s right or wrong, this is why the debate that Sokal started matters, and is why, intellectual impostor or not, philosophers too should pay attention to him.

[Julian Baggini](#) is editor of *tpm*

## Discussion

**10 comments for “My philosophy: Alan Sokal”**