

## The Sokal Hoax

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One of the famous studies in the psychology of religion involved a pair of researchers who joined a sect that had predicted the end of the world at a date not far in the future. When the big day came and went without incident, the researchers observed that many members left the sect – which says at least something for human rationality. But a hard core soldiered on. They were buoyed by the theory, advanced by some genius of invention in their midst, that the end of the world *had* taken place, but God had not yet chosen to reveal it.

Something the same happened, Australians will recall, in the Ern Malley affair. The philistines may have thought the experimental poets had been caught defenceless, but true believers rallied round the theory that the hoaxers, McAuley and Stewart, had created good modernist poetry despite their best intentions to produce drivel. Now we are seeing the same defence appearing in response to the Sokal hoax. Alan Sokal, a physicist at New York University, wrote a spoof article, ‘Transgressing the boundaries: towards a transformative hermeneutics of quantum gravity’ containing gobbets of postmodernist nonsense that parodied what “cultural theorists” have been writing about science. This is a sample:

In this way the infinite-dimensional invariance group erodes the distinction between observer and observed; the  $\pi$  of Euclid and the  $G$  of Newton, formerly thought to be constant and universal, are now perceived in their ineluctable historicity; and the putative observer becomes fatally de-centered, disconnected from any epistemic link to a space-time point that can no longer be defined by geometry alone.

He submitted it to *Social Text*, a leading American journal of cultural studies. The journal fell for it and printed it (no. 46/7, Spring/Summer, 1996), whereupon Sokal owned up, and a good laugh was had by all. Except, of course, the editor of *Social Text* and all of like mind.

It must be emphasised that anyone who knew even high school science, or had a basic feel for the relation between evidence and hypothesis, should have been able to see that the Sokal article was a spoof. In the first paragraph, it derides “the dogma imposed by the long post-Enlightenment hegemony over the Western intellectual outlook . . . that there exists an external world, whose properties are independent of any individual human being and indeed of humanity as a whole”. It goes on to assert that Lacan’s speculations in psychoanalysis have been confirmed by recent work in quantum field theory, that the axiom of equality in mathematical set theory is analogous to the homonymous concept in feminist politics, and concludes that “catastrophe theory, with its dialectical emphasis on smoothness/discontinuity and metamorphosis/unfolding, will indubitably play a major role in the future mathematics; but much theoretical work remains to be done before this approach can become a concrete tool of progressive political praxis”. No evidence is offered for these assertions.

The mode of thought Sokal is parodying, is, as even these few extracts from his article show, a wide-ranging one. It churns together pieces of political jargon, psychoanalysis, physics, and any intellectual *objets trouvés* to hand. But its central doctrine is that of the social construction of science, and of knowledge generally: the objects of knowledge do not have objective reality “out there”, but are social constructs.

Now, how is the proliferation of these ideas possible? How could there have arisen a group of academics in which Sokal’s nonsense passes for a serious academic article? How is it possible to be taken seriously when one is making assertions so bizarre that they are self-evidently false? David Stove used to say of “thinkers” who wrote like this that they were “beneath philosophical notice, and unlikely to benefit from it”. But there remains a question in, perhaps, mass psychology, as to what is really being thought out there in the cultural studies industry. From this point of view, the “answers” to Sokal are interesting, in giving some insight into the thought processes that underlie prose that in itself does not make sense. McKenzie Wark, of Macquarie University, wrote one of the most interesting answers, in *The Australian* of 5 June 1996. Wark is the author of *Virtual Ge-*

ography: *Living With Global Media Events*, a post-modernist work, but far from an extreme one (doubtless accounting for its lack of impact). He begins by claiming “Alan Sokal tried to prove something about science – but the joke’s on him. He has proved himself a post-modernist”. That’s coming out fighting, game as Ned Kelly – but one is inevitably reminded of Tom Wolfe’s useful phrase, “the shit-eating grin”. The actual content of Wark’s reply consists of two assertions. The first is that no-one since Berkeley has taken the genuine idealist position that external reality does not exist, so that Sokal is attacking a straw man. This rather neglects the fact that Sokal’s direct “no objective reality” assertion got past *Social Text’s* editors unqueried: if the cultural studies gurus find the assertion of idealism unexceptional, then Sokal’s point is proved. As to the fact of the matter, whether postmodernists assert idealism, more on that shortly. Wark’s second point is the most interesting, as it gets to the heart of the problem. He writes:

But one has to question whether the alternative view Sokal seems to want to propose makes all that much more sense [than idealism].

Is there a knowledge that we can have that is independent of any social construction whatsoever? Can one imagine a knowledge, for example, that exists without language or controlled observation? The answer is no.

All knowledge is socially constructed, in other words . . .

Science is made by people, commonly working in groups. It is social. It is put together according to certain principles. It is a construction.

These remarks are – just – susceptible of an unobjectionable interpretation. It is true that science, in the sense of scientific activity (as in “big science”) is an activity of groups of people (though even so one needs to remember that the individual propositions in a co-authored paper are the work of single minds, as it has not yet proved possible to wire brains in series). But if that is all Wark means, the question is why he thinks these considerations “answer” Sokal and vindicate the sociology of knowledge programme. The answer is contained in a letter replying to Wark from Keith Campbell, the Challis Professor of Philosophy at Sydney University. Campbell

points to the confusion between “science is a social construction” (which is true, at least provided “science” means “scientific activity” as opposed to “the findings of science”) and “the *objects* of science – atoms, numbers and so on – are social constructions” (which is false). Surely this is the correct diagnosis of the problem. The only *evidence* offered for social constructivist theories of science is that scientists are social beings, but the *conclusion* is the idealist one Sokal so accurately parodied, that the objects of science, like  $\pi$ , are social constructs.

Postmodernist attacks on science are not just the concern of live white males overseas. Consider this extract:

To formulate different conceptions of corporeality, it may be necessary to:

1. Explore non-Euclidean and non-Kantian notions of space. If Euclidean, three dimensional space organises hierarchised perspective according to the laws of point-for-point projection, then different ‘pre-oedipal’ or infantile non-perspectival spaces, for example, may provide the basis for alternatives to those developed in dominant representations of corporeality. This may entail research in post-Einsteinian concepts of space-time; or, in an altogether different vein, psychological or fantasmatic concepts of space, for example, the kind experienced by the infant before vision has been hierarchically privileged and coordinated the information provided by the other senses into an homogeneous totality. This is necessary if the representational grid which produces conventional patriarchal representations of the body is to be superseded. Exploring other conceptual schemas which rely on different initial premises and different forms of argument prove useful in showing at the least, that Euclidean/Cartesian conceptions are not the only possibilities.

Spoof or real? How can you tell?

The passage is from Elizabeth Grosz’s ‘Notes towards a corporeal feminism’, *Australian Feminist Studies* no. 5 (Summer, 1987). Associate Professor Grosz is a leading Australian feminist, Director

of the Monash Institute for Critical and Cultural Studies, winner of the Premier's Literary Award, etc. In *Feminist Knowledge: Critique and Construct* she goes further. She begins with a quote from Nietzsche, "A woman does not *want* the truth; what is truth to women?" She agrees.

Lloyd, Le Doeff, Irigaray, Daly and others have questioned philosophy's commitments to the following patriarchal beliefs.

1. The belief in a single, eternal, universal truth independent of the particularities of observers, history, or social conditions. In aiming towards a truth based on correspondence between a proposition and a part of reality, philosophy seeks a position outside of history, politics and power.
2. The belief in objective, that is, in observer-neutral, context-free knowledge. Objectivity is conceived as a form of substitutability or interchangeability of suitably trained observers. The same results should be achieved by different observers . . .
3. The belief in a stable, reliable, transhistorical subject of knowledge, that can formulate true statements and construct objective knowledge . . .

Rather, instead of aspiring to the status of truth, a feminist philosophy prefers to see itself as a form of *strategy* . . . To deny that a feminist philosophy aspires to truth is not to claim that it is content with being regarded as false; rather, the opposition between truth and falsity is largely irrelevant for a strategic model,

So much for Wark's "straw man" theory.

Sadly, Grosz is not an isolated case. The Victorian educationist Noel Gough, writing in the *Australian Science Teachers Journal*, June, 1993, takes philosophers to have established that there is no special or rational method to science. It follows that school laboratories are "mythic spaces" promoting the politically objectionable fantasy that chemicals and solutions are really there and have the properties science claims they do. He recommends that schools stop what they are doing at once and replace it with "the kinds of activities through which learners might come to understand science as

‘politics continued by other means’ ”. Speaking like this is no bar to getting to the top in academe, either. Randall Albury, Professor of Science and Technology Studies at the University of New South Wales, writes, in ‘Science teaching or science preaching?’, *Science Under Scrutiny*, ed. R.W. Home (1983):

The approach to science teaching which I am advocating here ... requires that we develop an instrumentalist presentation of knowledge rather than a naive realist presentation ... This view is radical because it applies to all knowledge – scientific and commonsense alike – and it is instrumentalist because it treats this knowledge not as a description of reality but as an intellectual tool or instrument used for specific purposes in specific forms of practice and produced for those purposes by means of specific forms of practice ... In all these cases the evaluation of knowledge must start not from the question, ‘Does it give a true picture of reality?’, but from questions such as ‘Within what practice(s), by what means, and for what purpose(s) is this knowledge used as a tool?’

And a Sydney University mathematics education “expert” recommends various changes in the way mathematics is taught on the basis that it is “now generally accepted by researchers” that “Coming to know is an adaptive process that organizes one’s experiential world; one does not discover an independent, pre-existing world outside the mind of the knower” (K. Crawford, in P. Ernest, ed, *Constructing Mathematical Knowledge*, 1994).

Most Australians are probably most familiar with these ideas through the figure of David Williamson’s Dr Grant Swain, lecturer in literary theory at “New West University” in *Dead White Males*. No doubt audiences suspected that he was something of an exaggeration. On the contrary, his belief that “there are no absolute ‘truths’, there is no fixed ‘human nature’ and what we think of as ‘reality’ is always and only a manufactured reality” is mild enough in comparison with what is actually out there.

Anyone who thinks that Swain *is* an exaggeration may like to read the article ‘Monstrous knowledge’, (*Australian Universities’ Review* 38 (2), 1995) by Bob Hodge, Foundation Professor of Humanities

at the University of Western Sydney, Hawkesbury, and co-author of *Language as Ideology, Myths of Oz, Children and Television: A Semiotic Approach*, etc. After running through the views of the usual revolutionary thinkers like Kuhn and Foucault, he gives a picture of the type of PhD which will dominate in the postmodern regime. The student will be anarchist and oppositional, be forever immersed in CD-ROMs and image packages, welcome discontinuities, and draw on “a long tradition of experimental avant-gardism, with its breaks with the modernist values of realism, transparency of text, linear logic . . .” He casually mentions that he has supervised or examined thirty-seven PhD theses in the last five years, so it seems that we are in for many decades of post-modernism yet.

Finally, though it has nothing to do specifically with science, it would be a shame not to mention the performance of Dr Julian Pefanis, senior lecturer in Visual Culture of the Twentieth Century at Sydney University. If nothing else, it indicates the thoughtworld in which attacks on science grow. Pefanis went to the trouble of translating *Revenge of the Crystal* by Baudrillard, one of the most grossly idealist of the French gurus, and editing Lyotard’s *The Postmodern Explained to Children*. His own prose style has become something of a legend. An admiring reader submitted a selection of it to the first Bad Writing Contest, run in 1994 by the PHIL-LIT electronic discussion forum on philosophy and literature. Against ferocious international competition across all disciplines, it took off second prize. This is the entry (from his article on Lyotard in *The Judgement of Paris: Recent French Theory in a Local Context*, 1992):

The libidinal Marx is a polymorphous creature, a hermaphrodite with the ‘huge head of a warlike and quarrelsome man of thought’ set atop the soft feminine contours of a ‘young Rhenish lover’. So it is a strange bi-sexed arrangement giving rise to a sort of ambivalence: the Old Man and the Young Woman, a monster in which femininity and virility exchange indiscernibly, ‘thus putting a stop to the reassuring difference of the sexes.’ Now the Young Woman Marx, who is called Alice (of Wonderland fame), is obfuscated by the perverse body of Capital because it simultaneously occasions in her a revulsion and a strange fascination. She is

the Epicurean Marx, the Marx of the doctoral thesis, the aesthetic Marx. She claims a great love for this man of thought who offers to act as the Great Prosecutor of the crimes of Capital. He is ‘assigned to the accusation of the perverts’ and entrusted with the invention of a suitable lover, the proletariat, for the little Alice.

If that excursion into Looking Glass Land couldn’t pull off first prize, we was robbed.

Since Australia has thus blotted its copybook as a home for sound realist philosophy, it is only fair to add that some of the best attacks on the whole sociology of knowledge and post-modernist plague have been written by Australians. Devitt and Sterelny’s *Language and Reality* is an excellent introduction to the philosophy of language, concentrating on the failure of many philosophies to consider the *reference* of words – how words indicate actual extra-linguistic things. In history, where doubts about the ability of historians to get at the truth have become near-orthodoxy in the profession, in a way that is unlikely to happen in science, Keith Windschuttle’s *The Killing of History* is one of the best defences of rationality. And in the sociology of science itself, Peter Slezak’s articles in *Science and Education* and *Social Studies of Science* expose clearly what the mistakes of the enemies of science are. Also essential reading is the American book, *Higher Superstition: the Academic Left and Its Quarrels with Science*, by Paul Gross and Norman Levitt. It is the large-scale expose of the attacks on science which inspired Sokal to realise his coup.

Does it all matter? Major cultural event, or storm in a teacup? Like the Demidenko farce, it is something of both. Scientists have never taken “cultural studies” seriously, and to them it simply confirms the suspicions they have always held about the wastelands on the other side of the Science/Arts fault line. But can they ignore the falling enrolments in science courses? On the other side of the divide, those who think the humanities and social sciences are essential to culture have some soul-searching to do. If people of the calibre of Grosz, Albury and Hodge are the ones rising successfully in the system, what is there to say to a bloodthirsty government that demands cuts to universities?