

## Book review

### **Beyond the Hoax: Science, Philosophy and Culture**

By Alan Sokal. Oxford University Press, Oxford, 2008, £20/\$34.95 (hardback), 466 pages. ISBN 9780199239207.

It may be a melodramatic way to start a review but this writer strongly believes that unless more nurse philosophers and theorists begin to read books like this, and take them seriously, the discipline risks being discredited and driven into a ghetto populated by Martha Rogers, Jean Watson, pixies, crystal ball gazers, and a scattering of cuddly bunnies. There are few philosophers and scientists outside the profession of nursing who bother to comment on what passes for intellectual writing within it. In this book Sokal includes an extended discussion of pseudoscience and post-modernist philosophy in nursing and it is a discussion well worth reading.

The book contains much more and most of it is, or ought to be, of interest to nurses and nurse philosophers. Part I, 'The *Social Text* Affair', begins with an annotated version of his now famous parody article 'Transgressing the boundaries: towards a transformative hermeneutics of quantum gravity', which was published in the prestigious cultural studies journal *Social Text*, to their great embarrassment. Do not be put off if the title suggests that you need a degree in physics to understand it: all you need is a sense of humour and a mind open enough to grasp its implications. The annotations help you to get the more esoteric jokes, and the articles following draw out its implications for fashionable sociological studies of science and aspects of post-modern philosophy. It is an excellent introduction to one of the most exciting, amusing, yet sobering episodes in recent intellectual affairs.

Part II, 'Science and Philosophy', contains two important essays, co-authored with Jean Bricmont. The first, 'Cognitive relativism in the philosophy of science', has a special relevance to those nurse philosophers who routinely adopt a relativist position regarding knowledge and truth, and invoke philosophers and sociologists of science by way of justification. Sokal makes a succinct and readable examination of the underdetermination argument based on the 'Duhem-Quine Thesis', Kuhn's incommensurability of paradigms, and Feyerabend's 'anything goes', showing that they cannot be used to justify the relativism that has become so fashionable. He goes on to criticize the 'strong programme' in the sociology of science that has been used in the same way. Just in case you think this is a mere academic spat, the chapter ends with some examples of the practical consequences of relativist thinking in criminal investigations, education, and third world politics. There are many longer and more detailed critiques of these ideas but here you will find a clear and sound attempt to show just what they do and do not establish. The second essay is 'Defense of a modest scientific realism'. It touches on several of the same issues as the first essay – relativism about truth and underdetermination of theories – and presents a version of realism, which has practicality, tentativeness, and modesty that match those aspects of science.

Part III, 'Science and Culture', has three essays on broader topics including religion, politics, and ethics. They are all worth careful study but the one of most direct relevance to nurses is Chapter 8 'Pseudoscience and postmodernism: antagonists or fellow-travelers?' After a lengthy discussion of issues within nursing, including the Thompson versus Glazer exchanges concerning therapeutic touch in *Nursing Philosophy*, this essay also covers developments in Hinduism (including 'Vedic science') and less extreme examples

from environmentalism and among historians. The essay begins by defining what Sokal means by 'science', 'pseudoscience', and 'postmodernism'. It then sets out to investigate the relationship between them.

The puzzle is that, at first sight, there should be a *conflict* between pseudoscience and post-modernism yet they are often found together – much nursing philosophy provides examples. The conflict arises because pseudoscience generally accepts that science is special and successful. This is because pseudoscience wishes to parasitize on the status and good name of science. As examples, therapeutic touch enthusiasts offer 'explanations' of their procedures in terms of 'energy fields', 'modulations', and 'transformers'; Martha E. Rogers calls her quackery the 'Science of Unitary Human Beings' and employs terms borrowed from relativity and quantum theory to secure its status, even offering impressive-looking mathematical equations; and homeopathy is propped up by scientific-sounding laws such as 'The Law of Potentization' and 'The Law of Similars'. In contrast, post-modernists tend towards a permissive relativism in which scientific knowledge is just one kind of truth among many. Science has no particular status: it is merely one way of telling stories about the world. How is it that the two conflicting views so often go together?

Sokal shows that pseudoscience generally turns to post-modern relativism as a last resort. When proper science shows the empirical claims and theories of pseudoscience to be spurious they, like the fox in Aesop's fable, say that they did not want scientific endorsement anyway, because, as the post-modernists have shown, it has no special value. This may contradict their earlier posturing but it does not matter: who cares about contradictions in Cloud Cuckoo Land? Post-modern philosophers are less likely to endorse pseudoscience although, as Sokal discusses, some do if it supports their position. The puzzle in this case is why there is any reluctance: if 'Western Science' is just one set of tales among many, why not protect yourself against cholera by rubbing two gurus together?

As he discusses in the preface, Sokal is vulnerable to criticism because he is a physicist, not a philoso-

pher, and most of the book is essentially philosophy of science. It has to be said that on many of the topics there are more technical and philosophically sophisticated disquisitions elsewhere, and in one case, the treatment of Hindu nationalist pseudoscience, he is, as he says, deliberately summarizing and popularizing, the more extensive work of Meera Nanda (2003). Nonetheless, Sokal's succinct and readable philosophical discussions are, in this reviewer's opinion, of an admirable standard, and they are replete with references to the works of others. There are instances where there is simply not enough space to establish some claims – as in his dismissal of most 'alternative medicine' – but critics might like to read Singh & Ernst's *Trick or Treatment: Alternative Medicine on Trial* (Singh & Ernst 2008), which vindicates his position brilliantly. In any case, the point of both proper science and philosophy is to invite critical inspection.

If the tone of this review seems, at times, to be intemperate, I offer an excuse. We are exceptionally fortunate to live at a time when Enlightenment values of rationality and tolerance, together with modern science, help to make it possible for a huge proportion of human beings to live long, healthy, and fulfilling lives. Yet for reasons that only sociology and psychology may be able to explain, many intellectuals, including nurse philosophers, reject rationality and science, and many nurses and even nurse philosophers appear willing to embrace practices and theories that are little removed from mediaeval magic. They favour alternative medicines and the modern equivalent of the laying on of hands: practices that, when we had to rely upon them, gave us a world wracked with disease and, for the lucky, a life expectancy of less than 30 years.

Of course there are problems with both Enlightenment values and modern science, but to dismiss them is to do a great disservice to human kind. If modern medicine is inclined to be too mechanistic and impersonal then nurses are in a prime position to make sure that the sick and needy – all of them, not just the wealthy – have humane, gentle, and restorative care. For nurses to react to the problems of modern society by retreating into superstition, implausible relativism, and pseudoscience is to

betray their patients and their profession. That so many do so is a tragedy.

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## References

- Nanda M. (2003) *Prophets Facing Backwards: Postmodern Critiques of Science and Hindu Nationalism in India*. Rutgers University Press, New Brunswick, NJ.
- Singh S. & Ernst E. (2008) *Trick or Treatment: Alternative Medicine on Trial*. Bantam Press, London.