

The March of Unreason: Science, Democracy, and the New Fundamentalism

By Dick Taverne

Reviewed by Alexandre Lewalle, King's College, London, UK

The foundations of democratic western civilisation are under threat, argues Dick Taverne. Since the Enlightenment, material and social progress in our society has relied to a large extent on the achievements of science and on the freedom of scientists to question and experiment, free from dogma and ideologies; it is also this freedom to think and to challenge that has allowed democracy to flourish. Yet, some increasingly influential groups are only too happy to discard the scientific method and evidence-based arguments to further their own goals. Animal-rights activists force universities to shut down laboratories that do crucial research. Self-righteous 'eco-warriors' indiscriminately boycott genetically modified (GM) crops. Alternative medicine becomes established alongside scientific medicine. Many people not only do not know about scientific evidence, but also do not want to know or are even proud not to know. What causes this distrust of science and scientists? How serious are its consequences?

The March of Unreason is Taverne's war cry against what he calls 'anti-science', the systematic and deliberate avoidance of evidence-based knowledge in dealing with science-related issues in society. As a politician, he understands government policy making first-hand. He considers in turn the rise of pseudo-medicines, the

opposition to GM crops, the fashion for organic products and the critiques of globalisation, lays bare the unscientific arguments (and sometimes even factual untruths) used by the more vociferous activists, non-governmental organisations and media, and denounces their growing influence.

Their basic concerns may well be legitimate and their intentions laudable, but these 'new fundamentalists' are uncompromising and dogmatic. They demonise scientists as profit-oriented and materialistic, feeding their arguments on the fears and ignorance of the public. Driven by self-righteous moral heroism, their belief is that "nature always knows best". Need we be so alarmed by some people's choice to use anodyne homeopathic remedies, even if their benefits are clinically unproven? Probably not, but the rejection of proper medicine is a slippery slope that leads to aberrations such as the denial by South African president Thabo Mbeki of the sexual transmissibility of HIV/AIDS. The refusal by some parents to give their child the measles/mumps/rubella vaccine, in the face of evidence of harm, has produced a health risk for society as a whole. Likewise, the adamant opponents of GM farming and globalisation sometimes fail to appreciate all the adverse consequences of their campaigns.

You might wonder, however, whether Taverne himself is guilty of 'unreason'. His statements are bold and his tone is passionate, and he occasionally lacks the restraint necessary to preach beyond the converted. His attempt at a philosophical argument is surely too brief to be entirely convincing and his summary dismissal of the Enlightenment philosopher Jean-Jacques Rousseau as "the enemy of reason who proved to be the inspiration of the reign of terror" begs for moderation. The book deals not so much with the technical correctness of scientific knowledge as with the interface between science and ethics, and in this realm reason alone cannot provide a recipe for truth. Unavoidably, the book invites controversy and many of Taverne's assertions read like debatable personal opinions rather than objective truths derived from reason.

All in all, *The March of Unreason* is a stimulating and accessible read, comfortably within the reach of secondary-school students. The issues it raises should be the concerns of any well-rounded citizen. Its central thesis – that science is not only a body of technical knowledge but, perhaps more importantly, a method of inquiry – certainly has the power to inspire. Irritation caused by the forthrightness and subjectivity of Taverne's opinions results only from the reader being

Science Magic: in the Kitchen and Science Magic: in the Bathroom

By Richard Robinson

Reviewed by Mark Robertson, UK

challenged to define his or her own stance on the issues discussed. But this is probably the very kind of engagement that Taverne is at pains to encourage.

Details

Publisher: Oxford University Press

Publication year: 2005

ISBN: 9780192804853



The *Science Magic* books are part of a series of home-based practical science books that take as their unusual theme the use of items typically found in particular rooms of the house. These titles both seem to be aimed primarily at parents who wish to discover science with their children but can be used by teachers to gain ideas for classwork or even to set as practical homework. They are probably best suited to the later years of primary school or the earlier years of secondary school.

As the title suggests, *Science Magic: in the Kitchen* introduces experiments that use either everyday kitchen utensils or food. The experiments range from standard bicarbonate/vinegar neutralisations, to heating plastic bottles to observe the effects of air pressure, to observing the decomposition of organic waste. The book provides good coverage of the three main sciences taught in most schools.

Science Magic: in the Bathroom moves the focus of the experiments to the bathroom with many of the experiments involving water. In this book, it seems that physics is the main source of inspiration with experiments investigating surface tension, refraction and sound.

Many of the experiments described are well known but there are some that, although not original in their

basic idea, have interesting approaches that may interest the more advanced students with a keen interest in science. As such, both books are good value for money (£3.99 each) and would be a worthwhile addition to a class/science-club library.

Details

Science Magic: in the Bathroom

Publisher: Oxford University Press

Publication year: 2003

ISBN: 9780199111534

Science Magic: in the Kitchen

Publisher: Oxford University Press

Publication year: 2003

ISBN: 9780199111541

