

Taking arms against the mercenaries

Alastair McIntosh thinks we need a Scott report for science

WHEN William Waldegrave was science minister, he presided over the publication, in 1993, of *Realising Our Potential*, the White Paper on science and technology. It was Britain's first science policy statement in 20 years. Pleased to have their value recognised, scientists lauded Waldegrave as their "thinking man" in the Cabinet. But with academics' freedom threatened by cuts and creeping commercialisation, few were in the mood to question the paper's ethics. Following the fiasco unmasked by the recent Scott report on the export of arms to Iraq we must now do so.

It has become clear that the White Paper was a business executive's charter and an arms dealer's dream. And it raises educational issues worthy of debate. Though it makes concessions to the pursuit of science for science's sake, its main thrust is to promote a new technological imperialism. Such imperialism is encouraged by the unprecedented market freedom secured in 1993 by the Uruguay Round of the General Agreement on Tariffs and Trade.

The White Paper states bluntly that its aim is "to achieve a key cultural change . . . between the scientific community, industry and government departments". It stresses the historical links between science, trade and national prosperity in Britain, stating that "the modern world was made possible by our great engineers". The principal goal of future science policy, according to this document, must be to strengthen those links. It sees the generation of national wealth as being the key to an improved quality of life, ignoring the fact that there is more to quality of life than material standard of living.

A whole chapter of the paper is devoted to the importance of science to the defence industry. Instead of producing spin-offs for civilian benefit, the paper urges military research to look for opportunities for "spin-in" from the civil to the defence sector, because, "as the Gulf conflict illustrated, technology can provide the decisive edge in military operations".

The paper ignores the view that science helps us to know ourselves better through nature. Gone is any acknowledgment that science can stimulate a sense of awe, creativity, service to others and respect for the environment. The driving force of this White Paper is profit—from what financier James Goldsmith calls an accelerating "hell's merry-go-round" of the global economy, where you either run faster or get trampled. That is the Moloch-like machine that science is now asked to worship.



Illustration: Ingram Pinn

One product of this functional, if not downright utilitarian, view of science is the concept of trade related intellectual property rights. Instead of colonising other people's countries to create wealth, we now colonise knowledge through global patents and copyrights. As a result, traditional processes and products are being knocked out of the marketplace.

In agriculture, for example, new patented seed varieties are replacing local ones. In Sri Lanka, only 27 of the country's 280 traditional rice varieties are still available. In the short term, these new seeds outperform the old ones, but they are designed for industrial agriculture, often to be used with fertilisers and pesticides that do little for the quality of the soil. Farmers who cannot compete with cash cropping on such a large scale are forced out of their rural livelihoods into urban destitution.

Is this what scientists want? And do we want our children's education to be reshaped by these values? The White Paper calmly states that the government has embarked on radical changes to the education and training system, including changes in the school curriculum. There will be more science festivals, for example, to encourage entrepreneurial scientific awareness among children. And the White Paper's impact is

reverberating well beyond the realms of science. One senior figure in the British Academy has said that the paper describes "a metaphor for how government wants higher education in general to proceed".

The world deserves better. To build a sustainable future our children need a science that respects their wonder as they look into a microscope or a telescope, instead of immediately seeking to exploit it. They deserve a holistic science which, as Plato first advocated, teaches them about the relationship between themselves and nature. They should understand science as a tool for tackling focused problems, but they also deserve a science that embraces ethical issues—one where cooperation takes precedence over competition. All else is utilitarian training, not education.

Industry must, of course, have access to the best scientific brains. But to protect both nature and human dignity, industry must be part of an economy that serves the community—not vice versa. Let us hope that future science White Papers temper this unbridled competition with an ethic of cooperation—an ethic that scientists can profess with pride. □

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