

BOOK REVIEW

DOUBT IS THEIR PRODUCT. DAVID MICHAELS. OXFORD UNIVERSITY PRESS 2008. NEW YORK. ISBN: HB 978-0-19-530067-3. PP372

This is a critical, timely and enormously important book that brings together a wealth of material on 'how industry's assault on science threatens your health' – the sub title of the publication.

It is written by a respected epidemiologist who worked in the US Government as Assistant Secretary of Energy for Environment, Safety and Health and who understands very well the politics as well as the mechanics and science of the debates he explores in the book. US researchers have a long and distinguished track record, sadly lacking in many European countries, of documenting the history of occupational and environmental ill-health and this volume provides the latest excellent addition.

The focus of the book is very much on the USA but chapters draw on a range of case studies that relate to events and research for instance in Japan, Germany, Norway and the UK. The issues identified – from asbestos to the effects of aspirin, from the attack on climate change science through to a range of occupational and environmental hazards including 'popcorn lung' to tobacco and vinyl chloride monomer - also serve to illuminate problems of international relevance which sometimes produced similar and sometimes very different responses in the USA and Europe. Michaels for instance tells of how the carcinogen, beryllium, is currently on a Norwegian list of proposed carcinogens and the beryllium industry is mounting an uncertainty campaign yet again to stop the proposal.

The book starts with an introduction on 'sound science'. This is a catch phrase now adopted by some manufacturers to engage in strategies that all too often have subverted, obfuscated and delayed the implementation of effective work and wider environmental health measures where hazards and substantial risks had already been identified and often accurately assessed. A succinct exposition on how industry manufactured doubt is provided with regard to the tobacco industry. This is followed by several analytical chapters containing careful analysis and detailed references, on US industry and governmental assessments of and interventions on the debates relating to various hazards.

Topics tackled include workplace cancer and the failures to act on asbestos and the bladder carcinogen, betanaphthylamine, (used in the dye industry and later in the rubber industry as an antioxidant) which was first reported by German researchers in the 1890s. The failure of DuPont to address effectively exposure to known bladder carcinogens as early as the 1930s is graphically described as is the lack of action in the USA and UK on benzidine, also a bladder carcinogen, when DuPont's medical director in Germany had recognised the

hazard it presented and a Swiss-owned UK plant in the 1950s reported many cases of bladder cancer in its benzidine-exposed workers.

Whilst much of the narrative rightly identifies and explains the failings of industry and government to tackle consumer and industrial carcinogens, some effective advances in public health and environmental controls are also described especially in the USA in the 1970s. Scientists and regulators in the Occupational Safety and Health Administration used the precautionary principle, at least for a time, to control carcinogens and to improve standards.

The case studies provided are used to develop a convincing analysis in later chapters of how industry and government operated with regard to contesting evidence of threats to public health. Michaels describes in some detail, but with a wide and revealing range of examples - including beryllium, chromium in water, and carbon black - the 'enronization of science' in one chapter. He explores the subject in the context of some classic industry product defence mechanisms. These involved and involve the use of the media, industry-funded research, industry-captured and indeed secretly industry-funded journals, flawed peer reviews, the use of consultants to deflect valid and substantial scientific messages, and industry-funded think tanks and front groups.

As Michaels observes 'the corporations and product defense industry they fund have done a superb job in marketing the "sound science" slogan and thereby undermining the use of scientific evidence in public policy' (p58). Particular attention is paid in one chapter to pull together the tricks of the trade that have been used in epidemiology to operate the 'sound science' defence and frustrate efforts to end or control better the exposure of workers to such carcinogens as benzene in the oil industry and vinyl chloride monomer. Other chapters look at how some pharmaceutical trials have played down negative effects of drugs and only report the drug's positive benefits and how regulators failed to withdraw dangerous drugs.

In the US context Michaels argues that there has been 'an institutionalization of uncertainty' and he specifically argues US regulatory agencies "are intimidated and outgunned - and quiescent and that the Bush administration infiltrated government from top to bottom and shaped government science policies to their desires". The description resonates with what has been happening in many other countries where there is de facto deregulation of much public and occupational health and safety activity. Some UK regulatory agencies appear either cowed or captured by vested interests so that they no longer act either as advocates or guardians of public health. Evidence for the assessment in the US is provided by how the US dealt with climate change science, evidence that the pesticide atrazine was an endocrine disruptor, studies on abortion and breast cancer links, and studies dealing with lead levels in children.

Michaels concludes his book by exploring US remedies to the problems he identifies. He believes that the courts will have a major role in protecting public health because: "unless the regulatory system is radically restructured and strengthened, it will never have both the carrots and sticks necessary to ensure responsible corporate behavior" (p233). Hence litigation for victims may be the only defence for those damaged by industry and government. However, for this to work, he considers there needs to be openness in the legal system, rights of workers to sue employers, better compensation schemes, reduced powers for the federal government to overturn good state laws.

If the US regulatory system had shared consistent philosophy across agencies and agencies quickly exposed to the public gaze the 'corporate deceptions' that they had to deal with, again matters could be improved in Michaels' view. This needed to be linked to such

things as ‘full disclosure of any and all sponsor involvement in scientific studies’, full disclosure by industry of their knowledge of their products’ toxicity, better testing of substances before workers and the public were exposed, an end to ‘rigged data analysis’, and greater corporate accountability. The means to achieve these ends would include commitments to principles such as ALARA (as low as reasonably achievable), integrating worker and environmental health more closely, and making the states public health protection labs. Michaels’ final observation goes back the precautionary principle and Bradford Hill. “Use the best science available: do not demand certainty when it does not and cannot exist” (p265).

So many of these solutions would be applicable globally when dealing with large transnational corporations that use the same materials and often the same or similar processes albeit sometimes ‘dumping’ out of date equipment and the most hazardous materials in developing countries. There may be differences in worker compensation systems and health, safety and environment laws – for instance the REACH legislation, however flawed, in Europe goes beyond current US approaches and US state toxics use reduction legislation does not exist in most of Europe.

The science may be familiar to some readers but the book’s incisive and authoritative analysis of several of the political and economic mechanisms used to divert or mute the scientific message may not be. Also, the book brings together a highly pertinent range of case studies for the first time in one volume. The analysis offered has international relevance and deserves to be read by politicians and civil servants across the world as well as by trade unions and NGOs and acted upon.

Review by Andrew Watterson. University of Stirling