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tor with respect to what was produced, sales, market share, cost structure, or technological sophistication—only that some firms survived market opening.

Schoonmaker makes a compelling case for bringing the insights of political economy and poststructuralism together to analyze globalization in general and the struggle over Brazilian informatics policy in particular. *High-Tech Trade Wars* lacks a broader political economy of modern Brazil, as well as a comparative and historical perspective. These would have allowed Schoonmaker to explore more fully the potential synergies of these two approaches.

HELEN SHAPIRO

Dr. Shapiro is associate professor in the Department of Sociology, University of California, Santa Cruz. She is the author of *Engines of Growth: The State and Transnational Auto Companies in Brazil* (1994).

Deceit and Denial: The Deadly Politics of Industrial Pollution.

By Gerald Markowitz and David Rosner. Berkeley: University of California Press, 2002. Pp. xx+408. $34.95.

Gerald Markowitz and David Rosner tell how several large corporations and trade associations have, over the course of the twentieth century, deceived the public by hiding information about the toxic effects of their products. The main cases they examine—nicely integrated—involve the manufacture and use of lead paint, leaded gasoline, and vinyl chloride monomer (a petrochemical used in making polyvinyl chloride plastic). The authors, who have previously written about and served as expert witnesses in liability cases related to these and other products, write authoritatively and persuasively, marshaling an impressive array of sources.

Deceit and Denial starts with the debate over leaded gasoline that took place in the 1920s, with General Motors and Dow pitted against reformers in the Public Health Service. In this case, physicians in the relatively new field of industrial hygiene understood the toxic nature of lead and warned the Surgeon General about the long-term dangers of releasing leaded exhaust into the air we breathe. But proponents of tetraethyl lead pointed to the economic benefits of using the additive and successfully argued that they should be able to market the product unless someone could show that exhaust posed a significant danger. Therefore, after funding research that failed to demonstrate any immediate danger, corporate leaders proceeded to market leaded gasoline.

Next, Markowitz and Rosner turn to the manufacturing and marketing of lead paint. For almost a half century, the industry's main trade association treated the issue of lead poisoning as if it were a public-relations issue that could be made to disappear through well-designed advertising cam-

paigns, and many of the advertisements are reproduced in the book. Finally, there is the petrochemical vinyl chloride monomer. Here, industry executives in Europe and the United States downplayed the health effects of the chemical on workers even though they had good evidence that typical exposure levels put workers in danger.

JANUARY
2004
VOL. 45

A strength of this book is that it raises numerous issues related to the manufacture and marketing of potentially toxic products. These issues include conflicts of interest associated with industry-funded toxicity research, the importance of public access to information, considerations of environmental justice, and the extent to which the precautionary principle should be used as a guiding ethic. All three cases raise questions about the ethics of industry-funded research.

In the case of leaded gasoline, Robert Kehoe, the industry-funded researcher who dominated studies of lead poisoning for several decades, framed the issue in an industry-friendly manner, suggesting that some lead in the bloodstream was normal. The lead industry also tried, less successfully, to corner the market on research related to the health effects of lead paint. The role of funded research in the vinyl chloride monomer case is more complex, with industry-employed researchers generating data that showed a problem existed. In this case, industry executives—with the help of scientists—attempted to keep the results secret so that they could manage reaction to the data. An example of an environmental justice issue raised in *Deceit and Denial* revolves around policies that "protected" pregnant women from exposure to workplace chemicals by banning women from the workplace rather than by lowering exposure levels to a safe level.

In regard to the precautionary principle, which suggests that products should be kept off the market until their potential dangers are clearly understood, the examples are mainly negative ones. The early debate over leaded gasoline, in which industry executives took the lack of knowledge about the health effects as a green light instead of a yellow light, nicely illustrates what can happen if this principle is ignored.

Markowitz and Rosner approach their subject as if they are uncovering a conspiracy rather than attempting to wrestle with historical change. In focusing primarily on how industry officials deceived the public, they fail to address the larger issue of an industrial society coming to grips with its ability to produce and distribute chemicals that are harmful to the public. Indeed, in some ways, the book is ahistorical. By framing *Deceit and Denial* as an expose, the authors suggest that expectations associated with protecting people and the environment from toxic chemicals were the same in the 1920s as they are today.

But this is not to say that the book has no value to historians interested in a changing industrial society. As the authors emphasize, governments have a significant role to play in protecting the public from the toxic effects of chemicals that firms manufacture and market, and their book demon-

strates what can happen in the absence of a strong governmental role. Furthermore, the book has potential as a text: it raises the questions that people should be asking and is likely to stimulate discussion about our society's ability to regulate toxic products.

HUGH S. GORMAN

Dr. Gorman is associate professor of environmental history and policy at Michigan Technological University. He is the author of *Redefining Efficiency: Pollution Concerns, Regulatory Mechanisms, and Technological Change in the U.S. Petroleum Industry* (2001).

Ethical Issues in Biotechnology.

Edited by Richard Sherlock and John D. Morrey. Lanham, Md.: Rowman and Littlefield, 2002. Pp. xiii+643. $85/$39.95.

For several years, Richard Sherlock and John Morrey have been offering a course at Utah State University on the ethics of biotechnology. Finding no book adequate to their needs in teaching this course, they decided to create one of their own. Wisely using readings and source material that had been successful in class, they determined to put together an anthology that would do two things: attempt to rectify the disconnect between interest and knowledge in the field of biotechnology, and do so in a way that honors the principles of balance and "teachability." They have met these objectives in exemplary fashion, and all of us who are involved in ethics and biotechnology should be immensely grateful for their efforts.

One of the strengths of this book is its crisp clarity of purpose. There is no extraneous material, and the structure is simple: an introduction presenting a brief overview of both the science of genetics and some basic ethical theories, followed by six parts, each of which is a priority topic in the field of biotechnology. Each part is introduced by a discussion of the basic science and ethics relevant to that section. Finally, there are suggested readings and cases for each topic area.

In the introduction, Sherlock and Morrey present a short but comprehensive explanation of the science of genetics. Without dumbing down a complex topic, their text is simple and straightforward, with effective illustrations. They have the unenviable job of making what could be difficult material easy to understand, and they succeed. There follows a short survey of the basis of ethics. While it lacks the illustrative power of the genetics section, it does lay out foundational elements of practical ethical decision making and provides a methodology for evaluating the book's ethical issues. This is a valuable component for anyone who wishes to introduce ethics into a discussion.

That discussion is what follows, and it ranges through a wide array of topics. Striving for balance and teachability, the editors have compiled thirty-four essays by noted scholars from across the disciplines. All are short,