



BOOKS: PUBLIC HEALTH

Risks and Profits

Charles E. Rosenberg

The title says it all; *Deceit and Denial* does not promise neutrality. History demonstrates that profit-driven corporate managers cannot be trusted with our lives and health, Gerald Markowitz and David Rosner claim. It is not only production workers that chemical manufactur-

ers often place at risk, but also all those men and women whose health might be undermined by toxic substances in the environment. The authors are prominent historians of public health and their thesis is forcefully articulated and massively documented. They contend that

without preemptive governmental regulation strengthened by a concerned, alert, and politically involved community we are all at the mercy of decisions reflecting little more than short-term profit maximization. They are muckrakers, but extraordinarily well-informed practitioners of that traditional American art. And they have found a good deal of muck to uncover.

The book is structured around two extended case studies that together span the 20th century. The first focuses on lead (in particular, the white lead used in interior as well as exterior paints), the second, on vinyl chloride. The story of lead covers the first half of the century, that on plastic, the second. The authors weave a narrative of continuity and change, change from a focus on occupational health with a limited number of stakeholders and constrained role of government to a far more complex world in which government and political parties, lobbyists, media, and unions as well as scientists and clinicians all play significant roles in shaping regulatory policy. A key continuity is industry's control of information. Lead and vinyl chloride, Markowitz and Rosner argue, are not atypical instances, in which renegade industries have failed to be candid about known hazards. "Lying and obfuscation were rampant in the tobacco, automobile, asbestos, and

nuclear power industries as well." Much of the book's pivotal data became available only as a result of civil lawsuits against lead and plastic manufacturers. The authors have had access to many thousands of company and trade association documents that were discovered by plaintiffs' lawyers who had contacted them in their capacity as potential expert witnesses.

The story Markowitz and Rosner tell is highly circumstantial. In the 1920s, lead producers mounted a multidimensional defense of the use of tetraethyl lead as an additive in gasoline. Organized around the Lead Industries Association, producers fought off criticism that emerged after a

Rosner shift their focus to plastics manufacture in the last 40 years, when lead pigment paint had been largely banished from the market (along with tetraethyl lead). They describe a vastly altered regulatory environment. The Donora smog (which killed 20 residents of a small Pennsylvania factory town in 1948), Rachel Carson and Ralph Nader, diethylstilbestrol (DES) and thalidomide, Love Canal and, finally, Bhopal had cumulatively made the public and media aware of environmental contaminants. "Better living through chemistry" had evolved, in some circles, from upbeat slogan to ironic commentary. In addition, argue Markowitz and Rosner, the anti-authoritarianism of the 1960s created the conditions for what might be called an environmental popular front. Mainstream conservation groups (the Sierra Club, for example) joined with unexpected allies such as labor unions and civil rights advocates to support tough government regulation. Thus, it is not surprising that the

Deceit and Denial
The Deadly Politics
of Industrial Pollution
by Gerald Markowitz
and David Rosner

University of California
Press, Berkeley, and Mil-
bank Memorial Fund,
New York, 2002. 428 pp.
\$34.95, £24.95. ISBN 0-
520-21749-7.

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Billboard on pollution. During the 1984–1989 lockout at the BASF plant in Geismar, Louisiana, the Oil, Chemical, and Atomic Workers International Union joined with environmentalists to indict BASF. They used billboards, advertisements, and demonstrations to popularize the link between the chemical industry and environmentally induced cancers along the lower Mississippi River.

number of dramatic deaths among production workers. Their tactics included funding a cadre of reliable researchers who produced reassuring results—the most important of which allayed, for a half century, fears of ubiquitous environmental effects from lead additives in millions of automobiles. Even more dramatically, the authors devote a grimly detailed chapter to the marketing of white lead in paint; the substance continued to be advertised to paint contractors and consumers for many years after it had become clear that it is particularly dangerous to children. (Infants and toddlers who chewed on crib bars and toys could be described as pathological, just as work-related ailments could be blamed on worker carelessness or bad habits.)

Although lawsuits against lead paint manufacturers (or their successors) still wend their way through the courts, in the second half of the book Markowitz and

shrewd but hardly anti-business Richard Nixon signed the Coal Mine Safety and Health Act (1969) as well as 1970 bills creating the Occupational Safety and Health Administration and National Institute for Occupational Safety and Health. Although enforcement remains subject to the vagaries of politics, regulation has become a political reality—to be supported or opposed depending on one's interests and attitudes.

It was in this new regulatory and political arena that, in the early 1970s, the Manufacturing Chemists' Association faced the dilemma of how to deal with industry-commissioned research findings indicating that vinyl chloride monomer could induce tumors in animals. These findings and the clinical discovery of a cluster of rare angiosarcomas in vinyl chloride workers confronted the Association with what was minimally a public relations disaster. In an era of aggressive lawyers and heightened

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sensitivity toward risk, the potential downside was enormous. And, as the authors contend, it is not surprising that the information was only slowly and grudgingly made public. The book makes a forceful case against voluntary compliance as a realistic regulatory tool; it is policy made plausible only by fears of civil liability.

The authors effectively dismiss voluntary compliance as an element in any viable solution, but it is not clear that they provide a blueprint for solving the human and policy dilemmas they describe so well. Is there any way to refine some objective and thus policy-defining truth from the process of its negotiation, dissemination, and social articulation? What is permissible or calculated risk? The problem is not only how one calculates such risk, but—the authors imply—who does the calculating. They charge, for example, that under Reagan “the chief criterion in standard setting was now industry’s concern about the costs of regulations rather than ascertaining the lowest feasible level that would protect workers from toxic substances.” But what does “feasible” mean? Is it not another way of specifying the costs of regulation? And does it not raise the specter of insoluble and incommensurate value conflicts: What is the worth of one life? Or a life shortened by a number of pain-filled years?

Or, as *Deceit and Denial* underlines, what of subclinical effects that might include emotional changes and lowered cognitive ability? How are such shadow effects to be monitored, judged, legitimated, meliorated? And how does one balance such injury to particular individuals against the effects of curtailing growth and inhibiting technological change? I do not have an answer, and neither, I suspect, do Markowitz and Rosner—or the economists, epidemiologists, and publicists who offer ad hoc if seemingly authoritative solutions. Writing equations balancing one risk against another is easy, at least as compared with reaching political consensus in the confrontational real world of institutional power and elusive perception.

All of which implies this book’s strongest contribution, one implicit in but going beyond the events it describes in such revealing detail. This is the authors’ emphasis on process and the way in which decision-making is contingent, the end-product of negotiations always in progress, with the actors changing over time. It is not only the actors who change, but the sets: Washington and state capitol committee rooms, management suites and union halls, newsrooms and television stations, cyberspace, law firms specializing in liability, and trade association conference rooms are all sites at which portions of this contested negotiation have taken and are tak-

ing place. And, as *Deceit and Denial* so powerfully demonstrates through its very existence, even academic departments and university presses contribute to what one must call a collective policy discourse. The world Markowitz and Rosner describe is more like rugby than econometrics.

BOOKS: MOLECULAR BIOLOGY

Gender and Science in the DNA Story

Anne Fausto-Sterling

The 1968 publication of James Watson’s two-part thriller, *The Double Helix*, in *The Atlantic Monthly* left both the scientific and literary worlds atwitter. I still have my tattered copies, bought on my salary as a genetics graduate student. But neither then nor later did I twitter. Instead, I raged and wondered—as I sometimes, although far less frequently, still do some 34 years later—whether I or any woman would ever be welcome in the world of science. What I did not know at the time, but have since learned from reading Brenda Maddox’s able, balanced, and well-researched biography *Rosalind Franklin*, was that Watson’s account was a scandal even before publication. In fact, it seems that the Harvard Board of Overseers refused to publish it in book form because of its self-aggrandizement and scurrilous portraits of all of the principals in the story.

Franklin, however, was the only woman in on the discovery of DNA’s double helix, and, having died of ovarian cancer a decade before Watson’s account was published, she was no longer around to defend herself. Worse yet—as I suspected even as a scientific youngster, and as Maddox persuasively confirms—the ugly, distorted picture of a shrill, frumpy, unimaginative scientist was a construction essential to Watson’s depiction of himself as a prototype of the scientist hero. It was not carelessness that led Watson to attack Franklin, even ignoring his own friendly scientific interactions with her in the years after the elucidation of DNA structure. Rather, the narrative structure demanded that he distort her in order to remake himself as the hero of modern science.

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Maddox’s book restores some of what Watson robbed from us. We now have answers to a range of questions about science, politics, women, and ethics. Questions such as: (i) What was it like to be both a woman and a Jew devoted to science in England in the 1940s? An answer by way of some examples: When Franklin entered the women’s arm of Cambridge University, women were not accepted as “members of the university” and not entitled to earn a degree, but only something called a “degree titular.” When she, already an accomplished scientist, later joined the staff at King’s College, she learned that women were not allowed to lunch in the senior common room. (ii) Did Watson steal Franklin’s data (the crucial diffraction photograph of DNA)? The answer: “Not exactly.” Maddox offers a careful assessment of this question and lets Watson off the hook, sort of. (iii) Did Maurice Wilkins share Franklin’s data without her knowledge or permission and, after her death, fail to give her proper

**Rosalind Franklin
Dark Lady of DNA**
by Brenda Maddox

HarperCollins, London and New York, 2002. 400 pp. £20. ISBN 0-00-257149-8. \$29.95, C\$44.95. ISBN 0-06-018407-8.

Revealing image. Franklin’s photograph 51 of the B form of DNA told Watson that the molecule was a double helix.

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On holiday. Franklin enjoyed several vacations in the Alps during the years she worked in Paris.

credit? The answer: “Yes.” Maddox’s consideration of this issue leads me to think that the book should be used as a case study for graduate training in research ethics. (iv) What was Rosalind Franklin really like? Answer: She was lively, vivacious, defensive, energetic, an outdoors enthusiast, private and scared of intimacy, determined, fierce, and in love with science. In short, she was as complicated as any man, but her professional life was forever a struggle because of her sex.

Who then, is the real hero of science—a woman with cancer, crawling in pain up