California/Milbank Books on Health and the Public

1. *The Corporate Practice of Medicine: Competition and Innovation in Health Care,* by James C. Robinson
2. *Experiencing Politics: A Legislator's Stories of Government and Health,* by John E. McDonough
3. *Public Health Law: Power, Duty, Restraint,* by Lawrence O. Gostin
4. *Public Health Law and Ethics: A Reader,* edited by Lawrence O. Gostin
5. *Big Doctoring: Primary Care in America,* by Fitzhugh Mullan
6. *Deceit and Denial: The Deadly Politics of Industrial Pollution,* by Gerald Markowitz and David Rosner
7. *Death Is That Man Taking Names,* by Robert A. Burt

Gerald Markowitz and David Rosner, *Deceit and Denial: The Deadly Politics of Industrial Pollution* (University of California Press, 2002):Introduction, 1-11; Chapters 5-10, Conclusion, 139-306.

DECEIT AND DENIAL

The Deadly Politics of Industrial Pollution

GERALD MARKOWITZ AND DAVID ROSNER

University of California Press
BERKELEY LOS ANGELES LONDON

The Milbank Memorial Fund
NEW YORK

The Milbank Memorial Fund is an endowed national foundation that engages in nonpartisan analysis, study, research, and communication on significant issues in health policy. In the Fund's own publications, in reports or books it publishes with other organizations, and in articles it commissions for publication by other organizations, the Fund endeavors to maintain the highest standards for accuracy and fairness. Statements by individual authors, however, do not necessarily reflect opinions or factual determinations of the Fund.

University of California Press
Berkeley and Los Angeles, California

University of California Press, Ltd.
London, England

© 2002 by the Regents of the University of California

Library of Congress Cataloging-in-Publication Data

Markowitz, Gerald E.
Deceit and denial : the deadly politics of industrial pollution / David Rosner.
p. cm.
Includes bibliographical references and index.
ISBN 0-520-21749-7 (alk. paper).
1. Environmental health. 2. Environmental health—Social aspects. 3. Factory and trade waste—Environmental aspects. 4. Pollution—Health aspects. I. Rosner, David, 1947– II. Title.

RA566 .M265 2002
615.9'02—dc21 2001058515

Manufactured in the United States of America
10 09 08 07 06 05 04 03 02
10 9 8 7 6 5 4 3 2 1
The paper used in this publication meets the minimum requirements of ANSI/NISO Z39.48-1992(R 1997) (*Permanence of Paper*).∞

For Andrea and Kathy

Witherspoon have made working at John Jay a pleasure. As the book neared completion, Ed Cohen added his fine editorial skill and Leon Unruh copy-edited the manuscript with care.

It is no exaggeration to say that this book could not have been written without the extraordinary editorial skills and perceptive reading of Kathlyn Conway. She read draft after draft and forced us to sharpen our argument. We are extremely grateful for the enormous amount of time, effort, and love that she put into this book.

Finally, we want to thank our families: Andrea, Billy, Toby, Elena, Steve, Isa, Anton, and Mason and Kathy, Zach, and Molly. You are great joys to us!

INTRODUCTION

Industry's Child

In the depths of the Depression, with millions of workers unemploye Annie Lou Emmers, a mother of eleven children, wrote to President Franl lin Delano Roosevelt because of his "interest and sympathy for cripples Mrs. Emmers's husband, Frank, was an employee of a pesticide subsidiar of the DuPont Company in Gary, Indiana, and had been lead poisoned o the job and laid off by the company. While Mrs. Emmers accepted this te rible fate for her husband, she could not abide the fact that one of her chi dren, Mary Jane, had been born with extensive physical disabilities an severe mental retardation. Mrs. Emmers suspected that her husband ha inadvertently brought the lead into their house on his clothing and th the child's development had been affected in utero. Her little girl, no three years old, was unable to raise her head, feed herself, or speak.

Mrs. Emmers called her daughter "industry's child" and was willing t take her before the public if it would help shock industry and the govern ment into taking action to prevent lead poisoning. Was there anything th government could do to help her support her family or to get the industr to clean up its plant, she asked. "I've heard of similar babies—in the pot tery works at Crooksville, Ohio—in the lead mines' 'smelters,' of Colorad and Wyoming—in the large fruit orchards where arsenate of lead is use in powerful spraying machines, and among garage workers, handling tetra ethyl, and I recently heard of another one in the chemical industry. Hov many more are there unheard of? How many babies are crippled eacl year—by lead?"[1]

Frustrated New Deal administrators told Mrs. Emmers there wa absolutely nothing the federal, state, or local government could do excep write on her behalf to a local voluntary agency to ask them to help he Charity, not the regulatory power of the state, was all they could offer.

Since Mrs. Emmers's appeal to President Roosevelt, the arena in which questions regarding industrial pollution and responsibility are considered has broadened. No longer is lead poisoning the problem of one family with no recourse but to write a letter to the president and no outcome but a polite reply saying nothing could be done. Today lead poisoning is the subject of intense concern in state legislatures considering regulation, in a variety of lawsuits brought by individual plaintiffs, in municipalities concerned with recovering costs for housing rehabilitation, in Medicaid reimbursement for damaged children, and in special educational costs for lead-poisoned children. Other substances like tobacco, asbestos, silica, and gasoline additives are also the subject of legislative and legal battles. In many instances those with grievances are getting much more of a response than Mrs. Emmers did—in the form of ordinances, lead poisoning prevention programs, educational programs, and successful lawsuits sometimes resulting in restitution to the tune of millions of dollars from industry.

The question so humbly expressed by Mrs. Emmers—Was there anything government could do to help her support her family or to get the industry to clean up?—has been magnified a hundredfold, with consumer groups, political activists, law firms, and even governments addressing these issues. As was evidenced in the November 1999 protests against the World Trade Organization in Seattle, the demonstrations in Geneva at the G-8 summit in July 2001, and the protests at the New York World Economic Forum in February 2002, the campaign to protect consumers and ordinary citizens is waged not by individuals but by a coalition of groups—unions, environmental activists, and consumer organizations—that had previously worked separately and sometimes at cross-purposes. This campaign is no longer even focused on a particular industry but on international economic and social policy.

Such protests raise important and difficult questions. How can the physical environment be protected from the actions of huge multinational corporations whose activities have, until recently, gone virtually unchallenged and unregulated? How can people separated by language, politics, nationality, and culture come together to challenge corporations whose power transcends national boundaries? How can the poor and disenfranchised have their voices heard when they express outrage at the unequal share of the burden of industrial pollution their countries and communities have had to bear?

Although these large questions of corporate responsibility sound rather new, in fact they are the result of a century-long conflict over the costs of industrial progress and the responsibilities of industry to the general population. How much should government regulate private companies to ensure that they act responsibly and in accord with the broader public interest? How can government and industry create incentives for responsible corporate behavior? Industry has long responded to calls for corporate responsibility by arguing that voluntary compliance was sufficient to ensure that it acted responsibly. But there have always been those inside and outside of government who believed that voluntary compliance on the part of industry is not sufficient to safeguard the public's health for the reason that industry's financial interests often prevent it from doing what would be socially responsible.

As early as 1905, federal action was taken to protect the consumer and the environment from the irresponsible actions of industry. That year Theodore Roosevelt and other conservationists established the principle of federal protection of national forests. In 1906 Congress passed the Pure Food and Drug Act that extended its authority to inspect and test for adulterated consumer products. In 1970 the federal government established the Environmental Protection Agency and the Occupational Safety and Health Administration to protect the environment and the workforce. Unfortunately, these measures have not always been adequate. At times, the federal government, under pressure from industry lobbyists and legal challenges, has exercised its regulatory powers selectively or without sufficient resolve.

It is a tenet of democracy that citizens should have full access to information so they can make informed decisions about policies that affect their lives. In the case of industrial toxins, such information has been regularly denied to workers and the general public. As a result, factory workers have been assailed by noxious fumes and dangerous chemicals even while beseeching industry for information and protection. Over time these toxins have been vented into the air, spilled into waterways, and dumped onto the land, both legally and illegally, making industrial pollution an issue of widespread public concern. But the general public, like workers before them, has not been given sufficient information to understand the danger that exists all around them. It has taken catastrophes like Love Canal in Niagara Falls, New York, Times Beach, Missouri, and Bhopal, India, to bring home to people the danger industry poses to their lives and the environment and the public's need to have free access to information about toxic substances in the environment. Despite all this, industry has continued to hide and obfuscate information it had about the toxic characteristics of some of its products and, in the wake of the attack on the World Trade Center, the Bush administration has further undermined the Freedom of

Information Act. As a result, people have been denied information about the toxins they have been ingesting and inhaling every day.

Nonetheless, a great deal has happened outside of industry (often in spite of industry manipulation) to educate the public about the dangers of pollution and to begin to confront industry's negligence. In 1962 Rachel Carson published *Silent Spring,* which publicized the harm pesticides caused the environment. Ralph Nader began his crusade as a consumer advocate by exposing the willingness of General Motors to sacrifice human beings for profit, as exemplified in its promotion of the dangerously designed Corvair. Paul Brodeur and Barry Castleman dramatized the duplicity of the asbestos industry's willingness to expose workers and entire communities to asbestos, despite the known risk of cancer and lung diseases. By the 1970s questions were raised about the safety of a host of products: DES growth hormone, red dye No. 2, phosphates, Firestone radial tires, the Ford Pinto, tampons, Dalkon Shields, cyclamates, and saccharine. The Three Mile Island disaster led to widespread skepticism about the safety of the nuclear power industry.

By the 1980s, civil rights groups developed the concept of "environmental racism" to describe the tendency of industry to situate polluting plants and toxic waste dumps primarily in poor and minority communities. Environmental activists made "environmental justice" a rallying cry when demanding that industry redress the race and class bias in many industry decisions. In the 1990s citizens became aware of perhaps the most serious breach of the social contract with corporations: major players in the tobacco industry, after decades of denying that cigarettes were addictive and carcinogenic, were finally forced to admit that they had manipulated the nicotine content of their products for the specific purpose of keeping smokers addicted and that they had falsified scientific research, thereby lying to the public about the deadly effects of smoking tobacco. Companies like Johns Manville, which mined and processed asbestos, and Philip Morris, which grew and marketed tobacco products, were notorious for their willingness to hide information about the dangers of their products. Although it might be maintained that these were rogue corporations acting outside the norms of industrial practice, the history of industry points to a different conclusion. In the case of lead and vinyl, entire industries have banded together to deny and suppress information about the toxic nature of their products and to call into question results by outside researchers that indicated their products pose a danger to the health of individuals.

In addition to withholding information, some industries, including lead and vinyl, have reassured the public that their products are benign by controlling research and manipulating science. Throughout much of the twentieth century, most scientific studies of the health effects of toxic substances have been done by researchers in the employ of industry or in universities with financial ties to members of that industry. At times their results were subject to review by industry; if the results indicated a problem, the information was suppressed. At times the independence of the academy has been undermined by industry's influence through grants and other support for research. As Marcia Angell, editor of the *New England Journal of Medicine,* has argued, "When the boundaries between industry and academic medicine become as blurred as they now are, the business goals of industry influence the mission of the medical schools in multiple ways."[2] Dr. Linda Rosenstock, head of the National Institute for Occupational Safety and Health (NIOSH) in the Clinton administration, observed that "efforts of powerful constituencies to manipulate researchers and scientific organizations may constrain vital research on health risks."[3] A recent study of corporate funding of academic research revealed that "more than half of the university scientists who received gifts from drug or biotechnology companies admitted that the donor expected to exert influence over their work."[4] The concern about corporate corruption of science is so widespread that many scientific journals, including the prestigious *New England Journal of Medicine,* now require that the source of support for the investigator's research be clearly identified. Even NIOSH's own "scientific work continues to be attacked by special interests on an issue by issue basis," Rosenstock asserted, such that "in many cases of public health science, politics is winning out over research because of the carefully executed tactics of special interest groups."[5]

Since the establishment of the Occupational Safety and Health Administration (OSHA), NIOSH, and the Environmental Protection Agency (EPA) in 1970 and of independent foundations working with university researchers and public interest groups, a new generation of scientists not employed by industry is highlighting the risks and discounting industry's assurances about their products and production processes. They are providing research for the public and the public health community to consider. Newspaper articles, television specials, and presentations in other media bring home the personal toll that industry practices take on people's lives. Increased knowledge has become a powerful weapon in the battle to hold corporations accountable for their impact on public health.

At the heart of the current struggle is the very difficult question of how industry or the government decides what is safe. Industry has always taken the position that there is no reason to hold up production of useful products if no danger has been proven. But the history of the twentieth century is riddled with disasters resulting from industry's moving forward with products whose danger only became apparent over time. Lead, asbestos, tobacco, and radioactive materials became widely used because scientific studies could not *prove* with certainty that these substances caused harm. In the realm of environmental health, it is extremely difficult to say that a particular substance causes a particular health problem; usually only after decades of observation can a statistically significant correlation be made between exposure to a chemical and increased death and disease in a large population. Even then it may not be possible to establish a connection conclusively and to the satisfaction of the entire scientific community.

As a result, the battle being waged today by public health advocates is to establish a different method for deciding how and when industry should proceed with the introduction of new substances or products. Many argue for the *precautionary principle,* according to which suspect substances must be held off the market until their potential dangers are more clearly understood and their safety is better established. Public health officials and some politicians are increasingly aware that the threats from dioxins, chlorinated hydrocarbons, and greenhouse gases in the environment are so high that social policy demands regulatory action—even before the existing data absolutely prove danger. Many argue that we should protect our citizens and not wait for "objective studies" to prove further danger.

The lead and plastics industries have been central to the expansion of the American economy throughout the twentieth century. For the first half of the century, lead was critical to every industry involved in the building of the urban infrastructure, the modern suburb, and the expanded agricultural system. After World War II the plastics industry came to dominate American consumer society; plastics were used in vinyl siding, linoleum, tabletops, rugs, clothing, phonograph records, computers, and thousands of other products. Because evidence about danger from these products or the chemicals that went into them began appearing, a struggle developed over the fate of these two substances. In many ways, these struggles are paradigmatic of a broader struggle that continues to this day over the responsibilities of industry and government to protect public health.

Industry was well aware of the dangers of lead throughout the nineteenth century. In the early twentieth century reformers such as Dr. Alice Hamilton, often considered the founder of industrial hygiene in America, documented the extent of lead poisoning among the workforce and sought to clean up paint factories, battery manufacturing plants, potteries, and other industries where workers were being poisoned by lead. Despite this understanding of the toxic nature of lead, the automobile and gasoline industries decided in the 1920s to proceed with the introduction of tetraethyl lead into gasoline. Alarmed public health officials warned about the possible long-range effects of putting so much lead into the streets of cities all over the country, but industry successfully argued that in the absence of absolute proof of tetraethyl lead's dangers to consumers, such a tremendously useful product must not be banned or restricted. Industry learned valuable lessons from the tetraethyl lead crisis in the early 1920s, when workers died in factories producing this gasoline additive and municipalities, fearing widespread contamination of urban streets, banned its sale. Industry's successful effort to end the ban of its product taught it about the need to keep knowledge about harm out of the public eye or to find ways to argue that while these constituent materials might be toxic, the products produced from them were not.

The story of lead paint illustrates industry's efforts to keep information about dangers hidden. As children were identified as suffering from lead poisoning, industry sought to forestall a threat to its product's popularity. In many ways the story of lead in paint is that of a guerrilla war fought by small groups of individuals—mostly doctors and a few public health officials—against the giant lead corporations. As evidence of lead's dangers emerged, first in the factory, then among children, then in the environment, the industry attempted to frustrate the efforts of any people or organizations who warned of the dangers of lead or called for lead regulation in consumer products. Industry also controlled the damage to its image by funding the research conducted about the toxic effects of lead.

The most cynical response of the lead industry to reports of danger was a fifty-year advertising campaign to convince people that lead was safe, and most insidiously, to target its marketing campaign specifically to children. Not until the 1950s was there a significant challenge to the lead industry's dominance over lead research and the definition of lead poisoning. As a result of public health activities, municipalities restricted the use of lead as a pigment in paint and in the 1960s new attention was directed to the potential long-term damage caused by this mineral. Finally, in the

1970s and 1980s, the federal government banned lead in paint and in gasoline, signaling a major victory for public health.

The establishment of OSHA and other government regulatory agencies, combined with a growing movement among environmental activists and labor unionists, signaled a serious challenge to business. After World War II the production of new petrochemical synthetic materials gave rise to a new set of concerns. Unlike lead, many of these chemicals and products were of unknown toxicity. Because they were so new, there was little history by which to judge the potential problems they posed for the broad community. When the chemical industry's own research indicated the possible carcinogenicity of vinyl chloride, the industry embarked on a serious effort to mislead the public and avoid federal regulation. But in 1974 the deaths of four workers in one plant from an extremely rare cancer forced the chemical industry to inform state and federal officials of these deaths. In the case of lead, no federal agencies existed to oversee the regulation of environmental and work-related diseases until the 1970s. By the time the dangers of vinyl were suspected, the EPA and OSHA had been established, a much stronger environmental movement was evolving, and a portion of the labor movement was focused on occupational disease. After sustained battle over the regulation of vinyl chloride, the new federal agencies initiated strict controls over the industry. But this was a pyrrhic victory. In the years following the vinyl crisis, the business community mounted a sustained public relations and political offensive that caused OSHA to be more wary of confrontations with industry.

During the 1980s, when the Reagan administration constrained OSHA, NIOSH, and EPA, many struggles to confront environmental dangers shifted to communities. Citizens of Louisiana, driven by a growing sense of the danger posed by a chemical industry that seemed out of control, asserted their right to defend their communities and forced the chemical industry, which dominated Louisiana politics, to deal with their demands. In the 1990s in Convent, Louisiana, hundreds of people organized and used the media, the law, and especially the threat of federal intervention to prevent a multinational corporation from placing one of the world's largest polyvinyl chloride plants in their rural, poor, and overwhelmingly African American Mississippi River town. One EPA official called Convent the "poster child for environmental justice." It was a defining moment in the century-long struggle to get industry to acknowledge and respect public health. Moreover, this was the first time the federal government acknowledged the importance of environmental justice on behalf of an economically depressed African American community in opposition to industry's preferences.

In the beginning of the century, Mrs. Emmers—poor, powerless, and frightened for her family—raised her voice to inform the company where her husband worked and the president of the United States that her daughter had been poisoned by lead from the plant. She asked for help, but received none. In Convent, people like Mrs. Emmers—also poor and powerless—raised their voices against industry. Their success was the result of more than a half century of struggle in which the public became less willing to trust their well-being to industry and decided instead to take control of their fate. Of course, the victory in Convent was small: the company had the resources to build elsewhere and pollute another community. It is for this reason that the movement to control industry is moving to a larger arena.

The struggle over environmental exposures continues with uneven results. Certainly there have been successes. Lead, identified as a major danger to children in the 1920s, was largely controlled as an environmental threat in the 1980s and 1990s. Standards regulating exposure of workers and community residents to vinyl are considered models of effective government regulation. Chief executive officers (CEOs) of major corporations must reconcile their fiduciary responsibilities to their stockholders with their environmental responsibilities to the public. They must, for example, reduce toxic air and water emissions from their plants in order to satisfy government regulations. In order to protect its interests, industry has escalated its efforts to oppose the work of environmental groups. Organizations such as the Business Roundtable, made up of the CEOs of two hundred of the largest corporations in the country, have intensified their lobbying efforts among government officials and established well-funded and large offices in Washington. Through political contributions, "message ads," support for pro-industry legislators, and direct contact with members of the executive branch—at the very highest levels—industry attempts to protect its interests.

The effect of environmental toxins does not end simply because regulators have done their job. The effects of lead and vinyl will be felt for generations. Recent studies show that all Americans carry in their bodies materials not normally found in human tissue and whose health effects may not be understood for many years. Because of their developing physiology, children especially are at risk. The walls of millions of homes are still coated with lead paint, which poses a serious threat to children. The

landfills of our country are absorbing millions upon millions of pounds of polyvinyl chloride that will deteriorate, releasing vinyl chloride monomer, a known carcinogen, into the air and groundwater. The casings and components of computers, a commonplace of contemporary American life, are among these causes of pollution. Computer monitors, on average, contain four pounds of lead, and millions of them are crowding landfills and leaching into drinking water. Even new methods of waste disposal pose new problems—for example, the burning of plastics, particularly vinyl, produces dioxins in all but the most efficient incinerators.

Policy makers are faced with what to do about suspected toxins when there is uncertainty or ambiguity in the science used to judge risk. Industry members continue to argue that it is irresponsible to sacrifice new products and undermine fiscal prosperity by halting product development before the data conclusively indicate danger. But many public health advocates argue that the precautionary principle should prevail: when society is faced with devastating health problems as a result of using potentially toxic chemicals, those chemicals should be held in abeyance until they are proven safe.

In the 2000 presidential election debates between Al Gore and George W. Bush, the political value of scientific ambiguity was apparent in discussions about global warming. When Gore asserted the seemingly self-evident fact that American society had an obligation to reduce emissions that were harming the environment, Bush countered that all the facts were not in and that more research was needed before policy makers should act. The call for more scientific evidence is often a stalling tactic. The inability of science in the 1920s to prove that lead in gasoline, for example, was dangerous resulted in severe damage to children a half century later. The inability of scientists to agree about whether or not there is a problem with the use and disposal of plastics and the willingness of industries to use new chemicals before they are proved safe may also have terrible consequences for society. The possibility of hormone disruptions and mutagenic (causing genetic change) and teratogenic (causing abnormal embryonic development) effects from exposure to chlorinated hydrocarbons require new paradigms of science. Public health professionals argue that placing untested, potentially harmful chemicals on the market is not worth the risk. In December 2000, delegates from 122 nations (including the United States) agreed to ban dioxin and eleven other highly toxic chemicals that are "persistent organic pollutants that dissolve slowly, travel easily and are absorbed by living organisms, including humans."[6]

The activities of the lead and vinyl industries with regard to the known dangers of their products are not exceptional. Lying and obfuscation were rampant in the tobacco, automobile, asbestos, and nuclear power industries as well. In this era of privatization, deregulation, and globalization, the threat from unregulated industry is even greater. In fact, a deeper schism than ever separates the broader population's concerns about industrial pollution and the current political establishment's infatuation with market mechanisms and voluntary compliance. For this reason it is imperative for future policy decisions that all citizens and those with responsibility for the public's health be aware of industry's response to environmental danger.