

**Gerald Markowitz, David Rosner.** *Lead Wars: The Politics of Science and the Fate of America's Children*. Berkeley: University of California Press, 2013. 328 pp. \$29.95, paper, ISBN 978-0-520-28393-0.

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In *Lead Wars*, David Rosner and Gerald Markowitz synthesize and expand on their decades-long research into the history of lead poisoning, especially the “wars” among scientists, reformers, bureaucrats, and industry over the science, regulation, and mitigation of lead hazards. In contrast to other major histories of lead, including Rosner and Markowitz’s *Deceit and Denial* (2002), *Lead Wars* focuses on the late twentieth century. The authors also use the “lead wars” to explore two broader themes: the growing challenge of chronic diseases and the changing way professionals have approached public health problems.

*Lead Wars* follows two connected narratives: The first is the way the lead industry tried to block regulations and stymie bad press about lead products. The second is the rise of what the authors call “public health pragmatism.”

Chapters 1 and 2 recap the creation of the Lead Industry Association (LIA) and early battles about the hazards of lead paint and causes of child lead poisoning. As cities identified more child lead poisoning cases in the 1950s, the LIA cast child lead poisoning as a disease of poverty limited to black and Puerto Rican families. Flaking paint in deteriorating housing was the issue, according to the LIA, not lead paint per se. “The problem of lead poisoning in children will be with

us for as long as there are slums,” the association declared in 1957 (p. 60). The LIA also blamed child lead poisoning on “ineducable” parents. The LIA successfully thwarted most regulations before the 1970s, but a few local governments did ban lead paint. The first was Baltimore City in 1951.

Chapters 3 and 4 describe how scientists, government officials, and social activists put more forcefully challenged the lead industry in the 1960s and 1970s. Before this period, the lead industry dominated the funding, networking, and interpretation of the science surrounding lead poisoning. This science endorsed high “natural” lead levels in humans, denied that chronic low-level lead exposure was harmful, and dismissed the idea that leaded gasoline contributed to lead exposure. In the 1960s, non-industry scientists increasingly challenged these positions. The creation of the Environmental Protection Agency (EPA) and the National Institute for Occupational Safety and Health in 1970 expanded funding for non-industry science, helping to break the industry’s hegemony. The industry fought back, hiring public relations firms and attacking the credibility of scientists who challenged it. The industry’s views became increasingly marginalized, however, and the federal government finally banned lead paint in the 1970s and began the phase-out of leaded gasoline. Civil rights, labor, environmental,

and black and Latino/a power groups played important roles in advocating for policies to curb lead poisoning. The lead wars over the lower safe limit of blood lead raged on into the 1980s, but scientists continued to push down the safe limit of lead in children.

But bans on the use of lead and lower acceptable lead levels in blood were only half the war. Regulating lead production and use was more politically acceptable than removing lead from the environment. Lead paint removal was particularly expensive, and when done, it often increased hazardous, lead-tainted dust. As chapter 5 discusses, lead paint abatement strategies after 1980 were also heavily shaped by the rise of cost-benefit analysis, the Reagan administration's cuts to federal programs, and the decline of social movements. Public health professionals increasingly took a "pragmatic" approach to abating lead, which entailed targeting high-risk households and neighborhoods, and researching cost-effective ways to reduce, but not eliminate, lead hazards.

It was in this context that Johns Hopkin's Kennedy Krieger Institute (KKI) carried out its now infamous study of lead abatement in Baltimore, a story that is covered in chapters 6 through 8. KKI's experiment, funded by the EPA in the 1990s, placed low-income Baltimore families into in homes that were then "treated" with different partial abatement methods. The study measured the cost of abatement methods and tracked how these methods affected child blood lead levels. The principal investigators, who were committed advocates of reducing child lead poisoning, recognized that complete lead paint removal would be ideal, but they believed—"with some justification," according to Rosner and Markowitz (. 27)—that requiring full abatement was politically unfeasible given the cost, and would likely result in landlords abandoning their rental properties. The investigators believed that their study would help low-income families at risk of lead poisoning in general, and also that the specific

families involved in the study would benefit from abatement methods that reduced lead hazards. But in two homes, the blood lead levels of children increased over the course of the study. These families sued KKI. In 2001, Maryland's highest court excoriated KKI for putting vulnerable children in harm's way, comparing the KKI study to the Tuskegee Syphilis Study and Nazi experimentation.

Rosner and Markowitz eschew this assessment as simplistic in their concluding introduction and conclusion (chapters 1 and 9). They suggest that the KKI study was less the result of a personal or institutional failing than of historical changes that made such a study seem necessary. With little social-movement support, little funding, and a public health profession that had become less visionary and more "technocratic" (p. 28), child lead poisoning advocates—and indeed all of society—settled on "half measures" (p. 52).

Public health "pragmatism" was a product of its time, not an inevitability, Rosner and Markowitz argue. Public health in the Progressive Era and the Great Society was far more expansive and ambitious. Practitioners sought to remove health hazards before they sickened people (primary prevention), rather than mitigating problems afterwards (secondary prevention). They challenged corporate power. And they linked public health to broader social movements and social issues, such as housing reform. This ambitious, visionary public health approach did not entirely disappear after the 1970s. Herbert Needleman, a key researcher on the harmful effects of low-level lead exposure, argued vociferously for complete removal of lead paint from housing. Needleman figures prominently in *Lead Wars*, and the book can be read as a historical brief in support of Needleman's position.

*Lead Wars* exposes tensions within, and questions about, the public health professions. But the book also contains its own tensions and yields its own questions. One question concerns the role of

social movements. The book argues that social movements were critical to ambitious public health efforts. Yet, the book is overwhelmingly a history of prominent scientists and national institutions, not a from-the-ground-up social history. The theoretical and empirical relationships of social movements to lead abatement are not explicated in detail. The Black Panthers and the Young Lords developed programs to address child lead poisoning that coincided with progressive changes to the regulation and conceptualization of lead at the national level. But it is not clear if, or how, these programs and changes were connected. Moreover, the book glosses over what social movements are, how they changed over time, and what constituted an era of rising or diminishing social movements. By some measures, for example, social movements declined after the 1970s. On the other hand, environmental organizations burgeoned in the 1980s in response to the Reagan administration's assault on environmental protections, with groups like the Environmental Defense Fund and the Natural Resources Defense Council effectively pushing for a full ban on lead in gasoline.

It is also questionable whether social movements were necessary to spur ambitious attempts to control child lead poisoning. Baltimore's most aggressive approach to child lead poisoning—its only true attempt at primary prevention—occurred in the 1950s. Afterwards, the city took a more conservative, secondary prevention approach. But there were no social movements concerned with lead poisoning in the 1950s. Primary prevention originated, instead, in the expanded authority given to the city health department during World War II due to concerns about overcrowding and disease. None of this is to say the authors are wrong, but only to suggest that more research connecting social movements to public health policy is needed.

The book also reveals tensions about how to characterize the cause(s) of child lead poisoning,

and by extension, its resolution. Rosner and Markowitz are critical of the LIA's position that lead poisoning was a disease of the "slums" and racial minorities. Like Christian Warren, the authors argue that the LIA's position was a cynical attempt to evade blame, and also that the general framing of child lead poisoning as a disease of poverty/race undermined efforts to tackle the problem.<sup>[1]</sup> But even if this depiction of the LIA's motives and problems of framing is correct, it does not follow that it was not true that lead poisoning primarily affected the poor and racial minorities. Virtually all children were exposed to lead in the twentieth century, but there is overwhelming evidence that there were great disparities in exposure to lead across class, race, and space. At many points in *Lead Wars*, the authors note these social disparities. But for a book about environmental injustice, there is little attention given to the social and economic factors that produce these disparities. That is not bad per se, as *Lead Wars* has its own important focus. But it does raise a critical question: Can historians of lead analyze the broader social structures that produced disparities in lead poisoning—that produced "slums" and "poverty" and "racial disparities"—without exonerating the lead industry?

These tensions about causation and blame, in turn, engender questions about how child lead poisoning (and similar issues) could have been, or should be, resolved. Rosner and Markowitz contrast the strategy of full abatement—Needleman's "radical" vision, as they put it—with partial abatement. But there was, and is, another possibility as well: social reforms that challenge the social inequality that is at the root of many environmental inequalities. These reforms might include living wages and an end to discriminatory housing—or, more radically, a right to housing and an end to capitalism itself. There is nothing mutually exclusive about arguing for policies to end specific problems, such as lead poisoning, while also calling for broader social reforms. Indeed, Rosner and Markowitz appeal to public health profes-

sionals to do exactly that. But they do not explore the potential tensions between an aggressive attempt to eradicate a particular public health problem and broader social reforms.

Other stories in public health have brought these tensions to light. For example, Rosner and Markowitz portray the sanitary movement as a model of a more socially engaged, ambitious approach to public health. But Christopher Hamlin has argued that the nineteenth-century sanitary movement originated in an attempt to eradicate diseases with a “technical fix” (sewers, drains, etc.) instead of deeper social reforms that challenged industrial capitalism.[2] Similarly, Randall Packard has argued that the postwar efforts to eradicate malaria in the developing world with a technical fix, the pesticide DDT, was shaped by Cold War anticommunism that was suspicious of public health solutions to the disease that included social and economic reforms.[3] In this light, full abatement looks less like a “radical” solution than a middle-of-the-road solution. In fact, while full abatement is often cast as extremely expensive, cost-benefit analyses—the quintessential technocratic justification—suggest that abatement would “pay” for itself. The point is that arguments for full abatement need not entail commitments to broader social justice reforms, even if they often do—just as those who have accepted the “pragmatism” of partial abatement in some contexts can also be committed to broad social justice reforms.

As should be apparent from the foregoing, *Lead Wars* is full of ideas and interpretations that historians and other scholars will grapple with for some time. In addition to its value to scholars, it should stimulate reflection among public health professionals. Having taught it several times, I can attest that it provides a compelling read for students and produces rich class discussions. It is hard to recommend this well-researched, well-written, and well-conceptualized book enough.

Notes

[1]. Christian Warren, *A Brush with Death: A Social History of Lead Poisoning* (Baltimore, MD: Johns Hopkins University Press, 2000).

[2]. Christopher Hamlin, *Public Health and Social Justice in the Age of Chadwick: Britain, 1800-1854* (Cambridge: Cambridge University Press, 1998), 13–15.

[3]. Randall M. Packard, *The Making of a Tropical Disease: A Short History of Malaria* (Baltimore, MD: Johns Hopkins University Press, 2010), 145–46.

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