

Stephen Bocking, *Nature's Experts: Science, Politics, and the Environment* (New Brunswick, NJ: Rutgers University Press, 2004).

Harold L. Platt, *Shock Cities: The Environmental Transformation of Manchester and Chicago* (Chicago: The University of Chicago Press, 2005).

These are two quite different books. Nevertheless, they speak to each other about two key issues in environmental history. These are the effects on the environment of science and technology and of policy and politics.

Nature's Experts: Science, Politics, and the Environment, by Stephen Bocking, is the more atypical of the two, at least for a historian. A member of the School of Environmental Studies at Trent University and a historian of science, Bocking is the author of *Ecologists and Contemporary Politics: A History of Contemporary Ecology*, a study of the way in which the institutional context in which ecology has been practiced in the postwar world has shaped its development as a science and its relationship to environmental issues. *Nature's Experts*, though deeply grounded in the history of postwar environmental management, tackles what is essentially a question of contemporary policy: what role can and should environmental science play in guiding state decision-making about the environment? The question arises because historians of science since Thomas Kuhn have argued that the idea of the scientist as a neutral fact-gatherer, unaffected by socio-political trends and descending into theory and argument only when forced to by undeniable experimental fact, is a myth. Science engages in a complex game of authority. Scientists lend to institutions the authority they have as perceived gatekeepers to objective truth about the natural world; in return, universities, government and industry provide material support for scientific work and rhetorically support its claims to truth. The discourse of science ignores the effects of these institutional and cultural supports, however, with the result that scientists tend to frame their questions in ways that implicitly support the existing socio-political order. Seeing environmental problems as technical in nature, scientists too easily produce conclusions favourable to the powers that be, conclusions that they wrap in their cloak of objective scientific truth. Bocking's devastating critique of natural resource science, showing its tendency to endorse the practices of large companies employing expert management and to dismiss local needs as parochial, makes this point abundantly clear.

The fundamental disconnect between the influence of social and political context on science, and the popular view of science as objective, produces problems for science's ability to adjudicate on environmental issues. The climate change "controversy," in which the vast majority of reputable scientific opinion can be countered by a small number of mostly industry-supported dissidents, illustrates the problem. If science is truth, then disagreement—any disagreement—

must mean someone is lying, or the truth has not yet been arrived at. What we need instead of the scientist as truth-dealer, Bocking argues, is an “effective science,” which he defines as one that can be used to “address society’s concerns and priorities with respect to the environment” (175). He sees this science as a emerging from a process of deliberation that involves all the players, and especially that takes what he calls ‘local’ or ‘ordinary’ knowledge into account.

Bocking’s scepticism towards modern science is not echoed in Harold Platt’s *Shock Cities*, a wide-ranging look at changes in city form and urban environment in Chicago and Manchester from the late eighteenth century to the 1920s. Platt’s previous work was on the development of urban infrastructure, particularly electricity, in Houston and Chicago. In this book, as its original title—“City Power: Energy and Environment in Two Industrial Cities...”—quite neatly states, the metaphor of urban energy leads Platt out into the wider environmental systems on which urban infrastructure depended. Focusing on the same set of phenomena as William Cronon’s classic of environmental history, *Nature’s Metropolis: Chicago and the Great West*, Platt explores the way in which the industrializing city spread its tentacles into its surrounding region in search of resources like water and coal. Unlike Cronon, however, Platt is interesting in exploring the environment of the city itself, charting the growth of pollution and spatial inequality (in the form of polluted inner-city neighbourhoods versus bucolic suburbs), and the way in which these problems were dealt with by the municipal political system. Industrial pollution, Platt argues, created a new ‘industrial ecology’. In the first half of the book, covering the late-eighteenth century and the nineteenth century, he charts the ways in which the very different civic systems thrown up by American and English society dealt with, and did not deal with, the resulting problems. The second half of the book is concerned with the efforts of ‘progressive’ reformers in the early-twentieth century to clean up the industrial city. One of the central beliefs of progressive reform was that the urban environment, and not moral failings, was responsible for the condition of the poor. Platt usefully argues that this conviction led reformers to address the problems of the polluted urban environment. In so doing he neatly links environmental and political history, and demonstrates the effect of the natural environment on state formation. Environmental historians, especially in the US, have had surprisingly little to say about the relationship between government and the environment. (A notable area of exception is the history of irrigation development in the west, in which the federal Bureau of Reclamation was a big player, and especially the work of Donald Worster and Donald Pisani.) What they have done has tended to focus on politics—the forming of political coalitions, lobbying and protest—and not state structure. Usefully and refreshingly, Platt argues that the different ways in which Manchester and Chicago dealt with their environmental problems was centered in the very different structures of their political systems. In Manchester an elitist system meant that political power was extended to the working class only grudgingly, whereas in

Chicago a more populist system kept politics in the thrall of large landowners. Addressing urban pollution meant that reformers had to change the structure of the local state.

Platt demonstrates clearly that concern with the environment (even if that term was not used) was not solely a phenomenon of the late-twentieth century. Further, he shows how the environment was an integral part of the process of industrialization, and how both were linked to political, as well as social and geographical forces. This comprehensive vision, however, does not come without cost. Though all the steps in the path Platt leads the reader down make sense, the overall point of the journey is less clear. The various themes weave through a narrative focused on a series of incidents and developments—floods, epidemics, the development of the germ theory of disease—that together are said to drive such significant developments as the construction of municipal water management systems and restrictions on air pollution. Platt is consistently approving of the expansion of state authority to the management of the relationship between nature and the city. He is generally critical of municipal reluctance to embrace the scientific insights and technological solutions offered by experts. In this, Platt challenges the general run of environmental history. Environmental historians have tended to prefer the local and the ad hoc to large-scale environmental management, though this preference ignores the way in which problems of fouled water and pollution from privies were solved by the projects Platt praises.

Platt never makes this challenge explicit, however. To do so he would have had to deal with Bocking's critique of environmental science. As Bocking might remind us, environmental engineering projects assume that scientists and engineers can understand and order nature. Such assumptions have tended to produce unintended consequences, for instance the problems that progressive reformers attempted to solve. Yet Platt never explicitly deals with the limitations of science and technology.

Would Bocking's locally-oriented, collaborative, science-as-participant model produce better solutions? I highly recommend Bocking's book to anyone looking for an understanding of the status of contemporary environmental science and its relationship to society. Environmental science majors and their instructors, in particular, could benefit greatly from giving it close study. In the context of this respect for Bocking's achievement, however, I do want to raise two issues.

First, Bocking puts great faith in local knowledge of environmental needs and conditions, and calls on scientists to recognize this knowledge and take it into account. Yet he mostly assumes the existence, nature and value of this knowledge. The unrepentant Marxists amongst the readers of this journal will surely be surprised to hear that "people know best what is consistent with their own interests and values" (203). The dead spectre of false consciousness aside, it remains that Bocking spends relatively little time theorizing ordinary knowledge. He offers lit-

the understanding as to how, under conditions of modernity, such knowledge develops and exists. Do people working in capitalist resource-extraction industries, or with little day-to-day contact with the environment at all, really have knowledge of the environment based in personal narratives and experience? Or is their understanding of the environment and their experience a composite of competing scientific ideas, press reports and cultural assumptions? This is not to say that people are misinformed, nor is it to deny the absolute importance of learning about local context – needs, values, and customs – as part of the environmental decision-making process. But I need further convincing that a unique form of local knowledge exists that can be opposed to, and tapped into by, science and industry. In North America, after all, we are usually not dealing with communities with long pasts on the land. We are dealing with the people who displaced those communities in favour of suburbs and industrial logging.

Second, I am not sure that this is really a book about politics. It is more a book about policy. When Bocking imagines environmental politics as a “conversation, with no one interest dominating, but all parties able to have their say...,” (221) I think of the Harper government’s manipulative “Clean Air Act” of 2006, which concentrated on smog to divert attention away from climate change. I think of the way that the Bush administration has hijacked the language of postmodernism for political gain. In one well-known incident, a Bush staffer dismissed reporters by telling them that they were part of the “reality-based community,” whereas Bush’s people “created realities.” I am convinced that Bocking’s critique of science is correct and that science must be much more firmly rooted in political and social context to become effective at solving environmental problems. But we cannot assume that our enemies will be reasonable. The previous generation of environmental politics relied on the authority of science. Bocking (and others) have pointed out the chinks in the armour, and Bocking offers a solution that seems sensible for the policy process and local politics. However, more needs to be said about politics at the larger provincial, state, and federal levels at which the rules of the game are set, and where conflict, not consensus, is the norm.

I offer these points as arguments with a piece of work I admire. In general, both books raise issues around science and politics that need to be addressed in contemporary environmental history.

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Sheila McManus, *The Line Which Separates: Race, Gender, and the Making of the Alberta-Montana Borderlands* (Edmonton: University of Alberta Press, 2005).

Even by today’s standards, the Montana-Alberta borderlands are ‘remote’. This semi-arid and serenely beautiful setting is one where the weather can quickly turn, and the open plains can leave one suddenly feeling very exposed. These border-