

ogy, and other resources, not farms. In spite of the authors' awareness of the importance of policy — the book is, after all, an attempt to affect policy to get some sort of risk analysis and testing adopted — there is no critique of the policy matrix that encourages and maintains the industrial agricultural system of which transgenic development is a part.

The three-tiered system of testing Rissler and Mellon propose as a solution may be a palliative. But one wonders why, having lucidly pointed out the problems that genetic engineering of crops indicate and entail, they did not offer a more systemic critique and more appropriate solutions than a testing protocol that would, if adopted, function more as a nuisance to corporations with products to market than as a corrective for the ills that Rissler and Mellon so accurately document.

**David Pepper 1996 *Modern Environmentalism: An Introduction*, viii, 376 pp., figures, tables, glossary. London and New York: Routledge.**

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Ever since its initial publication in 1984, David Pepper's *The Roots of Modern Environmentalism* has been an indispensable text for any student of environmental issues in postmodern society. Thirteen years on, it is difficult to capture the intellectual excitement that reading that book generated. It so obviously stood head and shoulders above all other attempts to draw together the diverse historical and philosophical influences that made environmentalism one of the most potent political discourses of the late 1970s and early 1980s. Pepper was especially astute in detailing the influence of Marxist and neo-Marxist thought on environmental ideas, a concern substantially understated since then. But it was the scope of the text as a whole that caught the reader's imagination and encouraged her or him to become further immersed in the wide-ranging literature upon which the author had skilfully drawn.

As Pepper points out in the opening pages to *Modern Environmentalism: An introduction*, there has been an exponential outpouring of social science literature on environmental issues since the mid-1980s. His new book constitutes a major revision of Chapters 1 to 5 of *The Roots of Modern Environmentalism* in the light of this more recent literature; only a brief glance at the bibliography drives home how extensive it is. Yet *Modern Environmentalism: An introduction* displays the same impressive command of source materials, the same even-handed appreciation of radically divergent ways of interpreting the relation between nature and society, and the same clarity of expression when dealing with awkward technical arguments, most especially those postmodern scientific ones that have entered the marketplace of ideas over the past decade or so. Pepper writes that his book is "basically an anatomy and history of the ideas about nature and environment that appear in modern environmentalism, both reformist ('technocratic') and radical ('ecocentric')" (p. 7.) It is about as balanced and sober an assessment as is possible, considering the strong reaction that ideas from one political camp are likely to provoke nowadays within the ranks of the other.

Chapter 1 is entitled "Defining Environmentalism," and it more or less opens with an extended table that distinguishes between green values and conventional ones on such topics as nature, humans, science and technology, production and economics, and politics. Pepper uses tabular presentations extensively throughout this text, and they are to be nei-

ther scoffed at nor skipped over, for they are careful distillations of complex comparative issues. The first is an excellent case in point for it details how very different the ecocentric ideas at the core of radical environmentalism are from conventional, modernist thought on nature and the environment. As Pepper puts it, "The core green values are *ecocentric*, that is, they start from concern about non-human nature and the whole ecosystem, *rather than* from humanist concerns. They invoke, in 'deep' ecology, the idea of *bio-ethics*" (p. 15, Pepper's italics.) Not only does this Gaian emphasis on the integrated totality of human and nonhuman experience resonate strongly with the recurrent concerns of Eastern cosmologies, as well as, indeed, those of contemporary physics, it meshes with central strains of much New Age thought, a linkage to which Pepper repeatedly returns. The important contrast, however, is always that between radical and reformist environmental perspectives, and Chapter 1 clearly establishes what their respective components are.

Chapter 2 takes this further by detailing the pedigree of the issues critically addressed by radical environmentalism. The central one, of course, must be that nature is the source of worth in its own right. Far from its being readily and anthropocentrically assumed that the value of nature can only be established by humans, the ecocentric position insists that nature has intrinsic worth (which can, however, itself be variously established.) Because human beings are themselves part of that nature, it follows that people cannot assume right of custodianship over the remainder; equally it follows that animals must be minimally treated in as humane a fashion as possible. From such core ideas, Pepper explores a range of further issues that, in a sense, define the essence of radical environmentalism, and thus enduringly distinguish it from other political positions. These include questions about the carrying capacity of the world's commons, the challenge posed by green economics to the assumptions of neoclassical economists, the principled opposition to high technology as well as the practical dangers of compromise with its intermediate manifestations, the global issues raised by development economists, as well as those provoked by different genres of ecofeminism.

Pepper then tackles in detail the ways in which the relation between society and nature has been construed over time, beginning in Chapter 3 with the premodern and modern ideas which inform technocentrism (defined in the useful, ten page Glossary as "a 'mode of thought' ... which recognizes environmental problems but believes either unrestrainedly that society will always solve them through technology and achieve material growth ['cornucopian'], or, more cautiously, that by careful economic and technical management the problems can be negotiated [the 'accomodators']" (p. 336).) He clearly establishes that it was only from the mid-sixteenth century, and then through to the opening of the eighteenth, that the principles of classical science and Cartesian dualism were firmly laid down. Henceforth, not only were humans irrevocably considered separate from nature, they were situated in a position of unrivalled authority over it. Next, and by the early seventeenth century, it was Bacon "who asserted the creed that *scientific knowledge equals power over nature*" (p. 143, Pepper's italics), and who established that the scientist was an objective figure dealing in universal knowledge, whilst science and the scientist were to become the unrivalled sources of societal progress and the advancement of civilization. The achievement of the eighteenth-century philosophers, especially Voltaire and Condorcet, was to build on these understandings. Henceforth, the scientist would deploy his reasoning and his knowledge to rid the world of superstition, to challenge the improper exercise of power, and to fashion an improved future for all.

Pepper's line of argument is here fundamental. Notwithstanding the taken-for-granted character of these ideas as the modern, industrialized epoch became established, in historical perspective they are quite recent and limited to Western society. In anthropological terms, they are culturally arbitrary, and the challenge to a radical environmentalism is to reveal them as such. In the opening to Chapter 4, Pepper establishes that not all premodern ideas about the holistic relation between society and nature were expunged by

classical scientific thought, and it was in the residue that the roots of modern day ecocentrism took hold. ("Ecocentrism: a 'mode of thought' ... which regards humans as subject to ecological and systems laws. Essentially it is not human-centred [anthropocentric] but centred on the natural ecosystems, of which humans are reckoned to be just another component" (p. 329).) Pepper carefully charts an embryonic but expanding thread of environmental ideas from the work of the parson of Selbourne, Gilbert White, through Darwin and Lyell, to the central figures of the Romantic era; for it was within the ranks of Blake, Byron, Shelley, and the like, but most importantly Turner, Wordsworth, and Constable, that the ultimate sense of unity with, and the unity of, all nature was not just maintained but elaborated in significant, if variable, ways. Alongside these ideas, Pepper discerns the similarly resilient, and ever-innovative, thread of Utopian socialism, which was always distinct from, but on the whole proved consonant with, the emergence of ecocentric thought. He singles out William Morris, for whilst others made occasional contributions to environmental thinking, it was Morris alone who "elaborated virtually all of the 'themes' discovered by radical environmentalists over the past quarter-century about a century before they did" (p. 214.)

How these romantic but rational readings of nature were woven into the early phases of the preservationist movements of late nineteenth century Britain and (to a considerably lesser extent) the United States, provides the conclusion to Chapter 4. In Chapter 5, Pepper returns to the historically constituted centrality of science as "the cultural filter" through which the relation between nature and society has become customarily interpreted; for it is, of course, this prism of science that remains integral to the authority of any kind of technocentric thought. Pepper's judgement is that the idea of science as the ultimate source of detached understanding is less pervasive than was previously the case. He charts the arguments that eminent, early-to mid-twentieth century thinkers have mounted against scientism, including Whitehead, Mumford, members of the Chicago School of Sociology, through to the likes of Capra and Zukav. On the other hand, Pepper has to concede that the overall impact on the public stature of science as a source of "truth" has not been substantial. He writes: "The image has it that, detached from society, scientists, singly or in groups, progress logically from simple to complex problems in an unerring search through the generations for ultimate truth (e.g. fundamental particles), impelled by their insatiable curiosity" (p. 260.) In order to explain this (in some ways) remarkable persistence, he argues that it is important to focus on how science influences the questions that are asked about society's needs and directions, how science responds to market forces in such a way that its paramountcy is reproduced, and how scientists exercise careful control over the answers that they provide, particularly to ensure their consistency with the political imperatives of the day as laid down by ruling elites. Not the least of influences in the reproduction of popular faith in science, however, is the alacrity with which environmentalists themselves use scientific findings when it suits their politics to do so. This raises the question as to whether science is in effect an unreliable ally for radical environmentalists, or whether, as Pepper seems to finally concede, it is a broadly essential, even indispensable, political resource for them also.

The final chapter of *Modern Environmentalism* is entitled "Ways Ahead," and here Pepper overviews the major debates over future directions being engaged in by radical environmentalists as the millennium approaches. Some of these are scarcely novel since they turn on the well-established opposition between radical idealists and historical materialists. Some seem to hinge on rather dated, modernist distinctions, for instance in the debate over "prefiguring," while yet other innovations, for example LETS (Local Exchange Trading Systems), seem quickly to reach their point of diminishing utility. By far the most interesting sections in Chapter 6 concern the prospects raised by the principles of bioregionalism and the politics of confederal municipalism. By this stage, this reader was struck by the concentration throughout the book on issues and illustrations

drawn from England and Wales. Considering that the author is Professor of Geography at Oxford Brookes University, the emphasis is much as to be expected, but such a narrow regional focus may restrict the book's appeal to students in the United States, and further afield-- Australia for example. But this may be to cavil, and no more. *Modern Environmentalism* is exceptional in the range of issues that it addresses, the breadth of sources upon which it draws, and the clarity of presentation that marks every page. The book stands in a class of its own. I recommend it without qualification to anyone with an interest in where radical environmentalism has come from, or the directions that it is likely to take in the near future.