

struggle taking place across America"? Indeed, this is in every aspect a work far inferior to Ellen Schrecker's recently published book on the same subject, *No Ivory Tower: McCarthyism and the Universities* (Oxford University Press, 1986).

There are, nevertheless, important issues raised by both Lewis and Shrecker that deserve attention, chief among them the power of universities, as well as the state, to compel loyalty and conformity. In the 1950s and 1960s, historians and social scientists portrayed McCarthyism as a mass movement of the "radical" right, a populist revolt against modernization and the nation's modern, elite-managed institutions. The latter were depicted as bulwarks against popular passion and hysteria. What seems clear from the studies by Lewis and Shrecker, however, is the degree to which such institutions became themselves not guardians of liberty but instruments of repression. Such conclusions suggest in turn the need not only to rethink our understanding of McCarthyism (as well as the "new right" of the 1980s) but also to examine more critically the role of universities and other large organizations in our political culture.

ROBERT GRIFFITH  
Department of History,  
University of Massachusetts,  
Amherst, MA 01003

## Radon Reduction

**Radon and Its Decay Products in Indoor Air.** WILLIAM W. NAZAROFF and ANTHONY V. NERO, JR., Eds. Wiley-Interscience, New York, 1988. xxvi, 518 pp., illus. \$75. Environmental Science and Technology.

When radon was first recognized as a major indoor pollutant in Canada and Sweden in the 1970s, methods of reducing radon levels in homes were emphasized and criteria to determine when satisfactory levels had been reached were set. In Canada the criterion of what was acceptable was developed not on the basis of health risk but statistically (within three standard deviations of the background radon progeny level of an uncontaminated town near another town contaminated with residues from an early Canadian radium refinery). Some justification based on health risk was later found for this criterion, and the same action-level value was applied to housing containing naturally produced radon. The criterion still appears as the no-action-necessary level in the U.S. Environmental Protection Agency's *A Citizen's Guide to Radon*.

However, now that the technology for mitigation is well established and radon reduction programs are in place in a number of countries, it is time to reevaluate what is known about radon.

The last year has seen the publication of several books and numerous magazine and newspaper articles on radon, but there have been few treatments of indoor radon aimed at readers with scientific training. As its preface states, this is the first comprehensive source book on the subject. It examines current information in an overview chapter by Anthony Nero followed by contributed chapters arranged in four parts: sources and transport processes, characteristics and behavior of radon decay products, the basis for health concerns, and controlling indoor exposures.

As a health professional, I found part 3, on the basis for health concerns, particularly helpful. In his chapter on lung dosimetry, Anthony James leads the reader through the basic biology into the physics of lung models, attaching numbers when available and ending up with a risk estimate. His comments on the interaction of radon exposure with smoking are useful, and his preliminary evaluation of the degree of synergism addresses a major concern of current radon studies. F. Steinhäusler's chapter on epidemiological evidence of radon-induced health risks is a minitextbook. Basic principles are briefly noted, the data on uranium miners are examined, and the limitations of these studies are set out. There are more than 200 citations. Steinhäusler rightly questions the validity of the risk factor, even though we now appear to have a hard number. General population-based epidemiological studies are under way in a number of countries, including Canada, with the promise of results over the next few years.

One cautionary note: the discussion of epidemiological studies of the general public does not mention that people are continually changing addresses, in North America at least. We know that in Canada, for example, about 50 percent of the population moves every five years. Epidemiological studies will have to allow for the possibility of exposure from houses previously occupied by the subjects interviewed. With the latency periods involved, current exposure may be the least significant factor of any measured.

Arthur Scott's chapter in part 4 on preventing radon entry reflects both earlier Canadian work and present experience. He describes how radon comes into a building, indicating some unusual entry points, and notes the inexpensiveness of designing new houses to be radon-proof as compared to taking remedial action in existing housing.

Nero concludes this section with a chap-

ter outlining a strategy for control of indoor radon that includes comments on planning future buildings. He gives some weight to the use of geological indicators of higher-than-usual uranium levels to identify possible problem areas. While one cannot quibble with the logic of that approach, it would not have led us to look for high-radon housing in Winnipeg and Regina, where radon levels are among the highest known in Canada, for there are no geological indicators to point to such findings; indeed we would have expected these regions to contain below-average amounts of radon.

An appendix by William Nazaroff on techniques for measuring radon and radon decay products completes the book.

All in all, this is the best book to date at providing a background for understanding radon. It does more than say that radon is a problem; it treats the science and practical experience of radon in a way that is both thorough and comprehensible. It should be on the desk of every worker researching, measuring, or mitigating radon or administering radon reduction programs.

R. S. EATON  
Health Protection Branch,  
Department of National Health and Welfare,  
Ottawa, ON, Canada K1A 1C1

## Some Other Books of Interest

**Neutral Models in Biology.** MATTHEW H. NITTECKI and ANTONI HOFFMAN, Eds. Oxford University Press, New York, 1987. x, 166 pp., illus. \$29.95. Based on a symposium, Chicago, May 1985.

The editors open this volume by noting the imprecision of the term "neutral model," which is related in meaning to such terms as "null hypothesis," "baseline model," and "stochastic approach." Rather than pursuing this semantic issue, however, they elect to focus on the research strategy associated with the term and provide an introductory discussion of the issue of levels of organization and of explanation. In the ensuing papers, a sampling of neutral models as used in various biological disciplines are discussed. The first group consists of three essays: James F. Crow on molecular evolution, William C. Wimsatt on genetics, and Stuart A. Kauffman on development and evolution. The next two papers are concerned with ecology: L. B. Slobodkin on community studies and Paul Harvey on interspecific competition in island biogeography. The concluding group of papers, representing paleontology, contains an essay including four case studies by David Raup