

toxicity levels. The names of the chemicals with their CAS numbers are arranged alphabetically in the book and can also be accessed through the CAS number, but no molecular or structural formulas are given. What are given for each compound are summaries of government reports or bulletins with brief descriptions of the effects of interest, such as carcinogenicity (or lack thereof), mutagenicity, teratogenicity or reproductive effects. Reported uses are also provided. The data were primarily obtained through the US Consumer Product Safety Commission's System for Tracking the Inventory of Chemicals. Unfortunately, this book does not furnish a critical evaluation of each government report or discuss the relevance of the data to humans. An appreciable number of the compounds included are not likely to be in industrial or consumer use; examples are carcinogens used for laboratory models, plant products not likely of interest, and antineoplastic drugs that have not been used for many years. Data sources included the Annual Report on Carcinogens, the National Toxicology Program, monographs of the International Agency for Research on Cancer, listings from the Occupational Safety and Health Administration, National Institute of Occupational Safety and Health, and various lists of toxic or priority chemicals from the Environmental Protection Agency. The most valuable government resource on toxicity, the Registry of Toxic Effects of Chemical Substances (RTECS), sponsored by NIOSH, is not even mentioned. Thus, this is not a book which serves as quick reference on the toxic properties of chemicals. For those who need to find official reports on chemicals, it will be useful.

ELIZABETH K. WEISBURGER

*Risk Assessment: Principles and Applications for Hazardous Waste and Related Sites*, by Peter K. LaGoy, 248 pages, ISBN 0-8155-1349-6

The risk assessment in the hazardous waste area can be thought of as a process used to measure the need for, and success of, remedial action. The US EPA's *Risk Assessment Guidance for Superfund (RAGS)* is the standard guidance used by risk assessors to evaluate the imminent and substantial endangerment posed by waste sites. However, this guidance is less useful in providing answers on appropriate cleanup goals. The present book provides a simple, clear and practical overview for people wishing to learn about, conduct, or use risk assessment procedures in evaluating hazardous waste sites.

According to the author, risk assessment would ideally be a strictly objective process with decisions on risk based solely on scientific evidence. However, a considerable amount of uncertainty is inherent in the risk assessment process because of natural human variability in sensitivity and behavior, uncertainty in the knowledge of the potential for human exposure, and a paucity of information on the toxicity of chemicals to humans. Consequently, subjectivity has played a major role in risk assessment since its inception. Therefore, the focus of the book is on the subjective nature of risk assessment, the art rather than the science. LaGoy also cautions the reader to remember that the term risk assessment is used to refer to both scientific and

policy aspects of the process and not to confuse the two areas when they should be separated; however, the reader should be aware that site-specific risk assessment almost always contains elements of both science and policy.

The book provides guidance on the mechanics of risk assessment preparation, illustrates these approaches with examples, and devotes a substantial amount of space to issues of uncertainty and the need to address this uncertainty. The author writes that the actual risk (i.e., the right answer) may never be known; however, an answer can be obtained if the risk assessor employs reason and common sense.

BETH LADD  
CURTIS C. TRAVIS

*Risk is a Construct: Perceptions of Risk Perception*, edited by Bayerische Rück, from the series *Society and Uncertainty*, Knesebeck GmbH&Co., Verlags KG, Munich, 1993, 337 pages, ISBN 3-926901-65-9

It is widely appreciated that risk is perceived differently by different people. The civil engineer perceives risks much differently than the truck driver; the construction worker differently than the neurosurgeon. The subject text is an excellent and provocative collection of articles that brings together different perspectives of perception represented by various disciplines. A wide range of experts (i.e., sociologists, psychologists, economists, safety engineers, and philosophers) share their views on the origin, history, and evolution of risk perception. In addition, the authors are from German-language areas as well as the English-speaking world thereby making the discussion of risk perception more tangible to a wider public.

The definition and perception of risk is as varied and diverse as are those who try to define and perceive it:

“... risk is all in the mind. That is to say, risk is (also) a notion of observation, and not just an object to be observed. As a notion of observation, it is a kind of lens ... What we see as a risk is not absolute reality, but instead depends on the *kind* of lens and the *way* in which we look through it.”

Indeed, it is obvious that different disciplines use *different kinds* of lenses, and so they may perceive things differently even when considering the *same* topic.

According to the authors, there is no uniform scientific concept of risk. An individual's subjective perceptions shape his view or opinion of reality; therefore, different people will perceive the same risk in different ways: “risk is a construct”. For every different person, there is a different perception of risk. Risk, in addition, is not just a product of individual existence but also a result of social and cultural factors. Individuals interact with and adopt opinions and experiences of others and subsequently draw conclusions based on these social interactions. With the help of mass media conduits, the public's idea of what is detrimental or useful can be changed by protest and information campaigns.