hearing loss, whether in the court room or behind the scenes. Whether this be doctor, otological consultant, audiologist, occupational hygienist, acoustical engineer, insurance assessor, solicitor, or advocate, it is certain that none will possess the requisite depth of knowledge in all these specialties; few indeed will be master of more than one or two. All will find the book informative throughout, and it should do much to promote a meeting of minds between those of the scientific persuasion and their adversarial brethren whose habits are foreign—even distasteful—to the logical engineer.

This is neither a beginner's guide nor a definitive treatise although it is a substantial volume packed with detailed information. A strong feature is the copious range of examples—some evidently from real life—illustrating the various stages of examination, diagnosis, reporting, and pleading from the straightforward to the much more intricate. Where technical precision and a certain depth of treatment are needed to convey the finer points on which a claim may stand or fall, including the minefield of the common law, the author and his specialist collaborators do not shrink from immersing the reader in the deep end. A notable example is the vexed question of allocation—the subdivision of a proven disability into parts—some admissible in a claim (like noise exposure) and some that may not be, like the natural ageing process or a previous medical condition. The author's novel median approach strikes a sensible compromise to get round this problem.

Another topic treated in some detail is the audiological evaluation of the malingerer, presenting with a spurious, but accurately reproducible, exaggeration of his condition. Also well aired is the question of apportioning an accrued disability to different events in the past and hence, when it is a case of occupational hearing loss, to the respective liabilities of previous employers. Reconstruction of the time course of a hearing loss in the absence of periodic audiometric evidence, an exercise in applied probability once termed retrodiction by the present reviewer, is illustrated by the curve-walking technique. Curiously, the author's courage for new concepts seems to have deserted him on the question of ear weighting, the allowance for unsymmetrical hearing. He is content with the traditional but arbitrary five-to-one rule. The rationally based system included in the recent United Kingdom "black book" may have come to his notice too late for consideration, although this publication is referred to in another place. For a reference work with such diverse contents, the book is remarkably up to date.

For this reviewer, the chapters on "Other otologic disorders", "Legal remedies", and the "Expert witness" were particularly informative. The expert witness is given sound advice on comportment, and how to maintain his reputation for impartiality, integrity, and accuracy while under pressure from all sides by parties more concerned with advocacy than with the whole truth.

The terminology in the chapter on "Impairment and handicap" may jar on the British reader accustomed to WHO usage. The Americans persist, with an insularity not confined to the present context, in ignoring the world at large. One has, therefore, to mentally translate their *handicap*

into our *disability* and their *disability*, with its connotation of inability to "remain employed at full wages", as our *disablement*. This, however, is a mere pinprick of inconvenience. Considerable space is devoted to detailed federal and state-wide information on hearing conservation, practice, and regulation, which is virtually untranslatable into UK practice. Fortunately, the law of tort travels much better; the principles, if not the nuances and emphasis (on product liability, for example), will be familiar.

This volume will be useful as a didactic text as well as a copious source of reference, and it is excellent value for money. This reviewer found it to be very well informed and accurate in all those parts verifiable from personal experience, and wholly free from typographical error, all of which made it a delight to read.

DW ROBINSON

Occupational Medicine, 3rd edition.

Edited by C ZENZ (Chief), O B DICKERSON, E P HORVATH (Pp 1316, price £119) 1994. St Louis: Mosby. ISBN 0 8016 6676 7.

The diversity of problems, and increasing scope and complexity of occupational medicine is abundantly illustrated by this book. It has over 100 contributors, just over half of whom are from the United States. They come from a wide variety of backgrounds: academics, medical directors of major corporations, and professional institutes or enforcement agencies. They bring with them a wealth of experience and published work. The result is a book that probably has more information packed in it than any similarly priced single volume text on occupational medicine.

The book is divided into eight parts followed by appendices. The first part deals with clinical and related aspects of occupational medicine. Occupational pulmonary diseases get an eight chapter part on their own. Part III consists of the physical occupational environment including ergonomics. Part IV deals with the chemical occupational environment, consists of 28 chapters, and is by far the biggest part of the book and probably its main encyclopedic asset for reference purposes. There follows a miscellaneous pot pourri consisting of "selected work categories of concern" and "behavioural considerations" including the diagnosis of absenteeism. The final two parts deal with related disciplines such as safety and industrial hygiene and "other special activities" especially featuring health promotion and the delivery of occupation health. This book is packed with information in a variety of styles, and on a wide range of interesting topics, many of which will never impinge directly on the average occupational physician. It is thus very difficult to resist the temptation to stray, scan and read various parts of the text.

Paradoxically the reasons for the book's main strengths are also reasons for weaknesses. The editors' attempts to cast a wider net for special topics in occupational medicine, than has been the case for any other English language book on the subject has clearly enlisted very knowledgeable and enthusiastic authors. Thus results in a book which is outstanding in parts but patchy in others. Thus, for example, the reader will

not find glutaraldehyde in the index, nor in the chapters on occupational asthma or dermatoses, although it is mentioned once, in relation to dermatitis only, in the chapter on occupational health programmes in clinics and hospitals. If, however, the reader wanted to find out about occupational health aspects, and indeed even some of the geochemistry of gadolinium, gallium, and germanium he would be amply rewarded with almost one chapter dealing with these elements and their compounds. Not surprisingly, there is sometimes considerable overlap between various chapters such as those dealing with hazards and their risks. The contents pages and index, help resolve this but the reader still needs to realise, for example, that "glucose-6-phosphate dehydrogenase deficiency" appears as such in the index, but also as "G6PD deficiency", without cross referencing. There has been a significant improvement in the tightness of the editing, which must be a herculean task for a book like this, with less overlap and similar problems than in the previous edition.

I would not recommend this as a first purchase text book in occupational medicine, nor to a candidate preparing for examinations, as it might make his goal seem unattainable, or might result in his missing the wood for the trees. For the practising senior occupational physician, however, corporate librarian, or academic wishing a book to provide access to the fine print in occupational medicine that other texts do not reach, it should be available at arm's length.

R AGIUS

General and Applied Toxicology. Edited by B BALLANTYNE, T MARRS, P TURNER (Pp 1456 (in two vols); price £195). 1993. Globe Book Services, Macmillan Press, Houndmills, Basingstoke, Hants RG21 2XS. Macmillan Press. ISBN 1-56159-107-6.

The editors of this book set out to compile a comprehensive review of the scientific basis of toxicology and its application to be used both as a reference volume and an educational text. It comes in two volumes both of which are compact to handle, well bound, and with a layout that is easy on the eye; all essential requirements for texts which are likely to be well thumbed over the years. Another essential requirement for such a book is a good index. This has nearly 40 pages of index for almost 1500 pages of text and is satisfactory for tracking down particular chemicals, target organs and systems, but is weak on pathological terms (try finding adenoma or amyloid for example), and has odd lapses such as only two single page references to teratology and teratogenesis, neither of which refer to the two main chapters covering reproductive and developmental toxicology. This will not seriously inconvenience the experienced toxicologist whose knowledge will enable them to find their way around the book, but may trouble toxicology students who use it as their basic text.

The editors have clearly put a lot of thought into what ground the 67 chapters should cover, with a good balance of interest for the experimental and the clinical tox-

icologist; too often the education of animal toxicologists stops short of understanding the human purpose behind the science, and for clinicians it is hard to find a general text, such as this, which has enough human material in it to persuade them to buy it. In volume 1, key basic areas such as biotransformation, toxicokinetics, statistics, influence of route and dose, design of toxicological studies, and techniques are discussed in the early chapters. The chapter on toxicokinetics includes a further reading list of general texts and review articles, in addition to more specialised references. This is an excellent aide for students and perhaps the editors could encourage other chapter authors to do the same for any second edition. There follows comprehensive coverage of toxicity to systems and organs. The opening part of volume 2, although entitled *Special Toxicology* is nevertheless indispensable, and covers genetic, carcinogenic and reproductive toxicity, the key areas in which compounds often survive or fall nowadays. There follows concise overviews of the regulatory systems for human and animal medicines, industrial chemicals, pesticides, food additives, and food contact materials, although coverage of both the United States and Europe is not consistent. This section will be particularly useful for the student of toxicology, but inevitably a book of this nature cannot include the level of detail that will be needed by company toxicologists. Finally, an eclectic but interesting group of chapters under the general heading of *Toxicology in Special Situations* focuses on the dramatic (disasters, chemical warfare), the unusual (combustion toxicology, animal poisons), the thought provoking (ethical, moral, and professional issues) and topics of current high profile (air pollution, recombinant DNA derived proteins).

Have the editors and authors achieved their demanding goal, to serve the needs of both first degree students and those studying for higher qualifications, as well as a reference text for more experienced toxicologists? In scope, undoubtedly; the

quality of individual chapters is generally high, although a few are frustratingly short in length and depth. For the industrial medicine specialist there is much in here to command attention, not only the discussions on human toxicology, epidemiology, and information on specific chemicals, but also in the overviews of key areas of animal toxicology, such as mutagenicity, carcinogenicity, and reproductive toxicity, which need to be understood when discussing the significance of hazard warning labels with workers. A final refreshing feature is that with less than a third of the authors coming from the United States, and the reminder mainly from the United Kingdom, this book reverses the usual trend, and puts the United Kingdom toxicology community firmly on the international map.

S M BARLOW

Occupational Lung Disorders, 3rd edition. By R PARKES. (Pp xix + 874; price £135). 1994. Linacre House, Jordan Hill, Oxford OX2 8DP: Butterworth-Heinemann. ISBN 0 7506 1403 X.

The first edition of Parkes was a relatively slender volume, dealing almost exclusively with those matters, primarily the mineral pneumoconioses, of which the author had considerable personal experience. The third edition is a huge, encyclopaedic book, beautifully produced and illustrated, and correspondingly expensive. The author/editor modestly admits in his preface that the task of keeping it up to date is now too much for one person, although his erudition shows through in those 11 of the 25 chapters that he has written or contributed to personally.

The first quarter of the book is concerned with general subjects, anatomy, physiology, immunology and so on, well written but with the exception of Denison's scholarly chapter on physiology and the chapter on imaging, not much different from similar accounts in many other books. Thereafter,

there is a comprehensive account of the clinical and pathological features of the pneumoconioses, asbestos-related disease, toxic lung conditions, neoplasms, and allergic and infective lung diseases. All include detailed consideration and discussion of recent literature, Browne's chapter on asbestos being particularly good.

Some controversial matters are touched upon, and here one gets the feeling that the authors have their eyes on the libraries of lawyers. Certainly this profession will find the book very useful. To the mind of this reviewer, however, the chapter that describes the differentiation between asbestosis and idiopathic pulmonary fibrosis is biased by a lack of wide experience of the very varied natural history of idiopathic pulmonary fibrosis, which makes the large grey area between the conditions seem rather too black or white. The discussion of silicosis and lung cancer is wisely cautious, but the possibility of a relation between exposure to industrial dust and fumes on the one hand, and disabling airways disease and emphysema on the other is largely discounted, in spite of an increasing body of evidence. One suspects that the next edition will have another tale to tell, particularly in view of recent work on the effects of sub-micron sized particles on the lung.

Overall this is a valuable book with a comprehensive range of information on the clinical features of occupational lung diseases, and is essential as a reference work for libraries and those involved in medico-legal practice. It is not always an easy read, as this book aims to be comprehensive and to cover both sides of an argument. It only has one major failing, an important one for occupational physicians; it virtually ignores matters relating to prevention and management. It is thus the classical medical textbook that recognises the excitement of diagnosis and discovery of causation of disease, but underemphasises things of greater interest to our potential patients. In a future edition one would hope to see this replace some of the detail in the earlier chapters.

ANTHONY SEATON