

This is an Inaugural Lecture by the Haden-Pilkington Professor of Environmental Design and Engineering in the University of London. Professor Hopkinson discusses the need to set standards, to develop valid techniques for setting the standards, and to develop methods of sensory evaluation in the completed building which will reveal whether or not the standards have been met at a subjective level.

Much of the lecture is devoted to methods of correlating the physical measurements of the environment with the subjective sensations of observers. For a time, with increasing familiarity with an environment the observer becomes more sensitive to its imperfections until a steady state is reached—his subjective impressions are then more valid and reproducible. In designing experiments it has to be remembered that, broadly, successive doubling of the strength of a stimulus to a sensory system is required to produce equal changes in the subjective sensation.

The illustrative examples are mainly from the effects of environment on vision—in particular refinements in the daylight lighting factor and glare index and their application to the design of schools and hospitals.

This interesting and closely argued lecture is rounded off with a discussion on the implications for architecture and town planning of the development of validate standards for all aspects of the built environment.

P. A. B. RAFFLE

**Compendium of Emergencies**, 2nd Ed. Ed. H. Gardiner-Hill. (Pp. 374; 60s.) London: Butterworths. 1965.

It is not surprising that the first edition of this book, which appeared in 1963, was sold out so quickly. Dr. Gardiner-Hill, the editor, was wise to prepare a second edition rather than a reprint. This made it possible for his authors to revise and bring up to date the material in the original chapters.

In this edition there are three more chapters, each written by a specialist in the subject; the new section on air, sea, and underwater hazards could well have been fuller, especially on in-flight emergencies, and the hazards of high-altitude flying are not dealt with but the emergency problems of drowning, underwater hazards and decompression sickness are succinctly and adequately described. The new chapter on burns and scalds comprises an excellent up-to-date description of their assessment and treatment.

This is not a book for the first-aider. It is an informed description of the nature, pathology, diagnosis, treatment, and management of medical and surgical emergencies. The new chapter on the hazards of medical procedures is therefore perhaps not misplaced in this volume, and it may be necessary reading to those who have to undertake some of the procedures advocated in the rest of the text, procedures as routine as blood transfusion or as esoteric as pericardial aspiration.

It should be emphasized that this is a book for doctors who may have to undertake emergency treatment in conditions outside their own spheres of practice. Industrial medical officers should find it of great practical

value when they are faced with certain serious emergencies and when specialist help is not immediately available.

T. S. SCOTT

**The Prevention and Control of Dust Diseases in Industry.** (Pp. 20.) London: British Chemical Industries Safety Council. 1966.

This publication is the most recent in a series on medical care and safety published by the British Chemical Industries Safety Council which was established as a joint body by the Association of British Chemical Manufacturers and the Association of Chemical and Allied Employers now amalgamated as the Chemical Industries Association. The size of the pamphlet precludes it from being a comprehensive treatise on dust disease but it summarizes well the physical properties of dust and the various types of pneumoconiosis. The control of dust in industry is discussed on general principles of occupational hygiene. A comparison of the relative efficacy of the different types of dust mask is made. Methods of estimating dust in the working environment are described shortly but no real comparison of their value or any recommendation of which to apply in any given situation is made.

The booklet contains little for the expert but for the novice in industrial medicine and the lay administrator it provides a broad outline of the problems created by dusts in industry, of the means at present available for assessing them, and methods for the suppression of dust in the atmosphere. It is a useful starting point for the layman or the doctor unfamiliar with industrial problems who wants an introduction to the general aspects of occupational dust disease.

T. S. SCOTT

**Death Rates by Site, Age and Sex 1911-1960, Scotland. Series 1. All Causes of Death. Deaths from Cancer at all Sites. Deaths from Cancer of the Digestive Organs.** Compiled by Joyce L. Harley and Catherine A. Hytten. (Pp. 49). University of Aberdeen: Dept. of Public Health and Social Medicine, 1966.

This is the first of a set of publications showing the mortality rates in Scotland from cancer from 1911 to 1960, by site, sex, and age, and also mortality rates from 'all causes'. The method of presenting the tables follows that described by Case and Lea as comparative cohort analysis. This volume contains the rates for 'all causes' and for cancer of the various sites of the digestive organs. The denominators on which the rates are based are shown in separate tables.

Workers in research and teaching of epidemiology will be grateful to the authors because tables of this type are essential in our libraries and it needs a great deal of work to prepare them. Cohort analysis, as the method is called, has proved its value in a number of instances, and mortality studies in general still have a lot to offer. The tables are well set out and the explanatory notes are adequate although a beginner may want to

consult some of the references for a fuller discussion of the rationale of the cohort method. In the introduction Professor Backett points out that the records from Scotland can play an important part in elucidating the reasons for regional and secular variations in mortality from cancer of the digestive organ.

A. M. ADELSTEIN

**Noise, Hearing and Deafness.** By Philip H. Beales. (Pp. 199; 42s.) London: Michael Joseph. 1965.

There is no doubt that a requirement has long existed for a book of this sort. Aimed at the educated layman, deaf person, parents of deaf children, and industrial medical officers, it contains much interesting material.

The sections on child deafness, education of the deaf, and the medical and surgical treatment of deafness will be especially useful to the non-specialist.

The specialist and the industrial medical officer may disagree with some of Mr. Beales' interpretations of the authoritative literature concerning the relationship between noise and hearing. For example the Wilson Committee's sober appraisal of noise and its effect is quite severely criticized. The Committee are upbraided for omitting reference to the scientific work which receives more than occasional mention in this book and which, in Mr. Beales' view, proves that all noise is harmful.

As far as this particular evidence is concerned, the Wilson Committee were correct in their rejection because the comparisons contained in it are scientifically inadmissible. The hearing of a quiet living Sudanese population was compared with that of urban Americans examined during the 1956 Wisconsin State Fair. Reference to the original papers shows that, on the one hand, the age structure of the Sudanese was arrived at by guesswork, and on the other, that the urban Americans were a self-selected and therefore heavily biased group. If more suitable groups are used for the comparisons the differences, of which Mr. Beales makes so much, become less conspicuous and perhaps even trivial.

There has never been, so far as I am aware, any real attempt to discredit the widely held notion that noise is bad for people. It seems a pity therefore that this otherwise interesting and useful book has been spoilt by over-emphasizing one point of view.

G. R. C. ATHERLEY

**Principles of Medical Statistics**, 8th Ed. By A. Bradford Hill. (Pp. ix + 381; 15s.) London: The Lancet Ltd. 1966.

'The attractions of this little classic lie in the choice of the statistical methods for exposition, the manner of their presentation, and perhaps most of all, on the emphasis implicit throughout the book that these methods are merely aids to, not substitutes for, clear thinking throughout an investigation. . . .' This extract from a review of an earlier edition is as appropriate to the eighth as it would have been to the first, which appeared nearly 30 years ago.

The seventh edition was reviewed in this journal (*Brit. J. industr. Med.*, 1962, 19, 148) and will be well

known to most readers. In the present edition some minor alterations, to what has appeared before, and two major additions have been made. Sir Austin has taken the opportunity to expand his comments on the ethical implications of clinical trials and has included the texts of the Medical Research Council's statement on 'Responsibility in Investigation on Human Subjects' and the World Medical Association's Declaration of Helsinki ('Recommendations Guiding Doctors in Clinical Research'). The final chapter, now titled 'Statistical Evidence and Inference', has been expanded to include an important discussion on the problems inherent in the interpretation of the associations between disease and environment observed in epidemiological studies: the discussion typifies the author's practical approach to such problems by enumerating a series of points to be considered before a 'cause-and-effect' hypothesis can be accepted or rejected.

I shall look forward to future editions because it has always been my hope that one day Sir Austin will introduce us to analysis of variance as painlessly as, in the past, he has introduced us to other statistical methods.

E. A. CHEESEMAN

**Particle Size—Theory and Industrial Applications.** By Richard D. Cadle. (Pp. 390; illustrated; 132s.) London: Chapman and Hall. New York: Reinhold Publishing Corporation. 1966.

The importance of particle size in relation to pneumoconioses and community air pollution problems is well known by readers of this Journal. Perhaps less well known is the importance of particle size in paint technology, in the ceramic industry, in powder metallurgy, in synthetic detergents and paper manufacture. New technologies in aerospace developments and aerosol packaging, virtually unknown 20 years ago, have also produced new particle problems.

The book includes sections on all these, besides an extensive review of the physics of fine particles and the statistics of particle size analysis. The scope is so great that individual aspects are necessarily covered rather superficially. It is not a book for the beginner, nor for the practitioners of occupational medicine and hygiene. Rather it is for the scientist or development engineer in the field of particle technology who will undoubtedly be stimulated by the ideas and methods used in related fields. Many, but by no means all, of the important references are given in the text.

This is an unusual book, broad in scope and moderately advanced, but quite readable. It is rather expensive at \$16.50 for 390 pages.

S. A. ROACH

#### Erratum

**Evolution of Concepts in Industrial Medicine**  
by T. A. LLOYD DAVIES

On p. 170 of the July issue of this journal the figure in the bottom row of the last column of the table should read 2,086 not 20,786.