multidisciplinary approach allows real progress to be achieved.

W. N. ALDRIDGE

Industrial Toxicology, 3rd edition. By Alice Hamilton and Harriet L. Hardy. (Pp. 575; £20.00). Massachusetts: Publishing Sciences Group. 1974.

Forty years have passed since the first edition of this book and 25 years since the second. While this is a testimony to the great experience of the authors, it might prompt the critical reader to wonder if the authors will continue to incorporate information on the many new hazards and how they will reflect some of the new approaches to industrial diseases.

One does not have to look far for sections on new hazards. There are sections on lasers, microwaves, proteolytic enzymes, and other new topics. Equally, the authors have incorporated much new knowledge on well established diseases. Thus recent studies on the relationship between smoking and lung cancer in asbestos workers is carefully considered, so is much of the recent work on the disturbance of haem synthesis by lead.

The approach to the subject is essentially that of a clinician so that discussions on disturbance of function are introduced mainly for their contribution to diagnosis. There is little attempt to describe pathogenesis so as to derive from it the disturbances to be found not only in established cases of disease but also those disturbances to be found in the early (presymptomatic) states. It is on a consideration of these that the industrial physician will base his biological monitoring tests.

The purpose of this book is to provide an account by experienced clinicians of the clinical manifestations of occupational disease. It succeeds admirably. I shall use it frequently in the future. It should be available to students of industrial medicine and on the bookshelves of every industrial physician. Fortunately it is well and stoutly bound for it will probably be much used.

W. R. LEE

Dust Control in Building and Excavation Work. Proceedings of a Symposium in N.S.W., Australia, 27th July, 1973. Edited by E. Francis. (Pp. 98; no price stated). Health Commission of N.S.W., Division of Occupational Health and Pollution Control, Joseph Street, St. Lidcombe 2141. 1973.

This report, presented by the New South Wales Division of Occupational Health and Pollution Control, the Health Commission of New South Wales, and the Workers' Compensation (Dust Diseases) Board contains valuable and practical information on the hazards and control of silica dust as it affects building workers, a subject which has so far received comparatively little attention in the United Kingdom though the 1974 Acts for Health and Safety at Work and for the Control of Pollution may change this.

The symposium covered dangers to health, methods of dust control, new statutory regulations, and the practical difficulties of enforcement and compliance. Silicosis has been a severe hazard among builders in New South Wales for many years because cities such as

Sydney are based on sandstone, and recently demand for multi-storey buildings with their deep foundations has worsened the dust problems. In the United Kingdom, Liverpool might be comparable where at one time silicosis was an occupational disease among grave diggers.

One paper describes dust control in the mines from the second century and traces developments up to the present day when cases of coal miners' pneumoconiosis in New South Wales are rare. There is a clear account of the causes and pathology of silicosis, and of the particles (2 to 5 μm) which destroy lung tissue and lead to cardiac failure. The international maximum concentration of 200 particles/cm³ for a 40-hour week has in practice in New South Wales been exceeded by concentrations of 1000 to 12 000 particles/cm³ for a 50 to 60-hour week. The problems of control are exacerbated by the variety of tools and machines in use, and although a satisfactory method of directing water jets on to the point of a pneumatic tool has been devised, the efficient application of water to heavier machines is difficult to achieve. Water/detergent mixtures have had some success. The effectiveness of respirators and ventilation systems is discussed.

The new regulations are quoted in full and are worth serious study. There is a plea for clear, concise, and unambiguous regulations and that they should be administered by a single authority, which will be echoed in the United Kingdom. We may be approaching the latter by means of the Health and Safety at Work Act, 1974 but are still very far from the former.

A trade union speaker rightly reminded the conference that if the men on the job ignore the many regulations such safeguards are useless; they may object to the wet conditions and turn off the dust suppressing water without a thought for their own safety. Discipline is essential—self discipline of the individual as well as of those who direct and supervise the work.

The seminar lasted one day. On reading the mass of information in the report one wonders how much was absorbed in such a short time.

D. SHORT

Reliability and Safety. Factors for the Ergonomics of Systems in an Industrial Environment. Studies of Industrial Physiology and Psychology. Study No. 7. Edited by the Directorate General for Dissemination of Information. (Pp. 267; no price stated). Luxembourg: Commission of the European Communities. 1972.

This work was sponsored by the European Economic Community Coal and Steel Industry and outlines the principles of an approach which should be of general application. Safety is considered as one aspect of total system reliability which in turn is equated to the probability of a failure-free system.

Failures, that is, unreliability, can therefore be quantified and viewed from both production and human factors or safety standpoints, thus encouraging a common interest and methodology between functions which often are regarded as separate.

The treatment is largely mathematical, and terms are derived for 'technical confidence' related to system

reliability. Since production is a man-machine system, a factor is designated as 'human confidence' which is considered as synonymous with safety. This is a useful concept, particularly as it enlarges the amount of data upon which the safety investigator may work, to include work factors other than those directly concerned with accidents. It is valid however only if more accidents occur as system reliability decreases, and the authors give limited evidence of this. In relation to the theoretical development the reader may feel that the treatment of accident prevention is rather inadequate.

The test of this type of concept, however, is whether it is fruitful in promoting progress, and anyone seriously interested in safety who is equipped with appropriate technological assistance should study this document.

There are many concepts of value to be found, for example, the categorizing of activities into production, prevention, and recovery phases; and the observation that recovery activities are associated with at least three times more accidents than other parts of the work cycle.

Examples are given of worker involvement in defining and implementing safe practices of work, and these are advanced as the most effective means of obtaining success.

In the discussion on reliability and experience, an important point for training methods is made, namely that operators learn by the diagnosis of malfunctions, and the larger the number of different situations that are encountered, the more effective is the experience acquired. This re-emphasizes the trial and error concept of learning and is related to problems of automation, process, and control.

This book will be heavy going for anyone but an ergonomist or specialist in process control, and its mathematical bias although essential may deter many. The lack of a concluding chapter gathering together the salient points is a serious omission.

For the industrial physician this work is of general interest but not essential reading, except for those with a direct responsibility for safety or ergonomics who are prepared to devote some time to the mathematics. To these it offers considerable possibilities of advancing their practice.

J. W. HILL

NOTICES

American Academy of Clinical Toxicology

The American Academy of Clinical Toxicology will convene its 1975 annual meeting 8–10 August 1975 at the Crown Center, Kansas City, Missouri. Further information may be obtained from Dr. Walter J. Decker, Lt. Col., MSC, US Army Medical Laboratory, Fort Sam Houston, San Antonio, Texas 78234.

XVIII International Congress on Occupational Health

The XVIII International Congress on Occupational Health will be held at the Hotel Metropole, Brighton, England from 14–19 September 1975. For all information relating to the Congress please write to: XVIII International Congress on Occupational Health, Conference Services Limited, 43 Charles Street, Mayfair, London W1X 7PB.

Institute of Sound and Vibration Research

A further course on Industrial Audiology and Hearing Conservation is being organized within the Institute of Sound and Vibration Research 23 to 26 September 1975. The course will be particularly suitable for industrial medical officers, occupational hygienists, senior occupational health nurses and others involved in audio-metry and hearing conservation programmes.

Further information may be obtained from: Mrs. O. G. Hyde, ISVR Conference Secretary, The University Southampton, SO9 5NH.

OMISSION

On page 298 of the October 1974 issue of the journal Dr. F. Whitwell's address was not given. This is Broadgreen Hospital, Liverpool.