motivation, working in groups, social skills as distinct from manual skills, and certain aspects of rôle theory connected with working in large-scale formal organizations. They may be recommended as a summary introduction to those who want to make acquaintance with the current situation with a view to exploring it further by means of the 16 pages of references.

A brief appendix compares work in Israel, Yugoslavia, and Japan, but one misses any reference to modern labour camps in Russia where work may be said to be an interestingly intense preoccupation at all levels. There is surely considerable material on these available now. The author is clearly happier in the other appendix on Herzberg's two-factor theory of job satisfaction, where his empirical and experimental interests have fuller play (or work).

Perhaps the unease which may be felt by those who have much, or too much, experience of work on reading books about work—even such skilled and conscientious summaries as this—is similar to the disquiet many feel when reading determinedly scientific, research-based studies of human love or religion or politics. One is inevitably aware of the aspects of the experience which are not scientific facts but which constrain one's thoughts as facts do or ought to. Perhaps we assume too readily that all facts are scientific facts.

D. C. RUSSELL

Rand Mines Limited (Health Department) Annual Report, Director of Medical Services, 1971. (Pp. 27; 25 tables; no price stated.)

The Rand Mines Limited is a holding company for all mining operations of the Barlow-Rand Group, both in gold and coal mining, mainly in the Transvaal and Orange Free State, South Africa. The Group employs over 60 000 Bantu, most of the tables being based on Bantu rates. The labour turnover rate is very high, 75.5% compared with 87% in 1970.

The Health Department provides a general hospital service to both the mining and non-mining communities in a district. The report mainly comprises tables dealing with incidence and lost shift rates per 1 000 for accidents and diseases. The morbidity and mortality rates for these broad groups, with the attack rates of 13 important diseases, are listed according to whether the workers were from the tropics or from the east coast. The three highest total shifts lost were from pulmonary tuberculosis (69.29 per case), meningococcal meningitis (8.77 per case), and mumps (6.49 per case). Of the underground 28.5%, and of surface Bantu workers 20.1%, are first-aid holders.

Apart from the accident statistics, the only other reference to specific occupational health statistics is to pneumoconiosis, which showed an increase in the number of cases—84 (1.39 per 1 000) compared with 59 cases (0.96) in 1970. This table differentiates between gold and coal mining: 54 cases with pneumoconiosis only and 30 with pneumoconiosis and pulmonary tuberculosis in the former, and four cases with pneumoconiosis only and five with superadded pulmonary tuberculosis in the latter. In addition, two cases of heat stroke, one of which was fatal, were briefly mentioned.

127 767 miniature radiographs and 3 365 full-size control films were taken of the gold miners.

Every case of enteric fever is investigated thoroughly. Twenty-six cases were recorded (0.43 per 1 000) compared with 15 cases (0.24 per 1 000) in 1970. There were no deaths. The main infection source appears to be food bought outside the mines. Bronchitis with 1 370 cases, and disease of ear and mastoid 1 452, accounted for most of the disease cases in 1970 and 1971, the highest number of deaths resulting from primary carcinoma of the liver and disease of the heart and pericardium.

Separate tables are also included for physiotherapy, dental services, hospital costs for the different types of mining, and feeding costs.

Research concerns primarily The Primary Liver Cancer Project, centred at Crown Mines Hospital and sponsored by the National Cancer Association, the South African Chamber of Mines, and its Mine Labour Organizations; an investigation of tuberculosis in 10 000 men during their sojourn in the mines up to 1972 on behalf of the Medical Research Panel of the South African Chamber of Mines; and preliminary studies on a vaccine for pneumonia.

This report is the last from Dr. A. M. Coetzee as he left the Group after some 16 years' service as Medical Director, and although it is primarily a comprehensive collection of tables, it leaves one with the impression of a well-run Mines Medical Service concerned with the workmen's welfare. One small criticism is that occupational health problems receive little mention although this does not mean that they do not form part of the Department's daily work.

D. J. THOMAS

Report on Proceedings of Seminar 'Absenteeism in Industry'. (Pp. 108; copies available on request whilst supplies remain.) Division of Occupational Health, Department of Public Health, Joseph St., Lidcombe, New South Wales, Australia. 1973.

Concern with rising trends in absence from work attributed to sickness is found in every industrialized country. It is interesting to read this report of a two-day seminar held recently in Sydney, where the problem of the 'sickie' is clearly just as troublesome and difficult to control as it is in the United Kingdom. There is much of this volume to interest and sometimes to provoke the reader, and in contrast to many other papers on this subject it contains many suggestions for managers and doctors to apply in an attempt to control this problem. There are 16 contributions from managers, a trades unionist, and social scientists as well as from doctors. The first part consists of papers analysing the problem of absence and its many underlying causes while the rest includes proposals for its control. Although most are quite short, three are longer and are well referenced. The first, by an economist, Mr. Gillin, describes how the very substantial costs of absence can be measured; the second, by Dr. Ferguson, describes his epidemiological studies on absence among telephonists and telegraphists; and the third is an

historical survey of occupational health practice by Dr. Simson. The volume ends with 44 specific recommendations grouped under headings such as company policy, personnel practices, occupational health, rehabilitation, safety, and the vexed matter of medical certification. While there is little here that has not been proposed elsewhere, this report has the advantage of having a strong practical bias and collecting all the opinions in one booklet.

P. J. TAYLOR

Statistical Tables on the Health of the Army, Vol. I 1967, Vol. II 1968, Vol. III 1969. (Pp. 129; 131; 129, no price stated.) **Statistical Tables on the Health of the Army 1970.** (Pp. 142; no price stated.) London: Ministry of Defence. 1972.

Detailed statistics on morbidity are always welcome and these four volumes on the health of the British army at home and abroad contain many interesting figures, but without a more detailed description of the population at risk they are of rather limited value. For example, few actual numbers are given and none of the tables is broken down by rank. It is appreciated that some of these shortcomings may lie outside the statistician's control.

The main area of interest is the differing incidence of a few conditions (skin disease, appendicitis, diarrhoea and enteritis, tonsillitis and pharyngitis) in commands situated in various parts of the world. Injuries, the main cause of admissions for treatment, are rather summarily dealt with.

The statistical appreciation with which each volume begins is somewhat terse, and several points of interest which arise from the tables are not discussed. It is a pity that more has not been made of the labour which has gone into collecting the data and compiling the tables.

D. APPLETON

Microbiology of the Atmosphere, 2nd ed. By P. H. Gregory. A Plant Science Monograph, general editor N. Polunin. (Pp. 377; 8 plates; 47 figs; £7.50.) Aylesbury: Leonard Hill. 1973.

The behaviour of small living particles in air is of interest in many biological disciplines and Gregory's *Microbiology of the Atmosphere*, now in its second edition, provides a great deal of factual information that will be valuable to a variety of workers. Dr. Gregory discusses the nature of the atmosphere and the behaviour of the air masses that may transport living material and then describes the mechanisms by which microbes, pollens, and spores may be liberated into the air and travel through it. As befits a volume in the series Plant Science Monographs, attention is concentrated on the spread of plant pollen and spores, and of the fungi that can infect them, and, in consequence, dispersal in the open air is predominant and is well described and illustrated. In contrast, the intramural spread of bacteria and viruses infecting men (and animals) is given relatively little space, supported by a very curious balance of references, many culled

from the last decades of the nineteenth century. Despite the use on the dust-cover of a photograph of bacteria on an epidermal scale, dispersal of bacteria from the skin has scant treatment.

The book is enriched by illustrations of fungal and other spores and pollen grains and there are 38 pages of references; it will continue to serve as an important manual for all those interested in the living matter of the air.

R. E. O. WILLIAMS

Occupational First Aid. The Authorised Textbook of the St. John Ambulance Association and Brigade. (Pp. 43; illustrated; 75p.) London: Macmillan Journals Ltd. 1973.

Most of the day-to-day problems that face first-aiders working alone are, of course, minor ailments and injuries. Their abilities to splint fractures, stem haemorrhage or care for an unconscious patient are seldom—if ever—put to the test except in examinations or competitions. This booklet, which supplements the standard St. John training manual, will be widely welcomed because it provides much of the guidance that has long been needed. A great improvement on previous editions, it is well laid out and easy to read. Its scope is best indicated by the titles of its six chapters, the longest being only seven pages—duties and responsibilities of first-aid attendants; treatment of minor injuries; treatment of minor illnesses; emergencies and major incidents; anoxic states and their treatment; and the first-aid and safety. The importance of good record keeping is stressed and the Birmingham Accident Transfer form is illustrated.

Reference is made to various topical subjects, such as the Robens' report and the impending translation of the Medical Officer of Health to Community Physician. Paracetamol is recommended as the analgesic of choice, and the risks of aspirin are described. Since there must still be many first-aiders who use APC or its proprietary equivalents it is a pity that no mention is made of phenacetin. The analogy of a coal-fired power station used to explain the various types of anoxia is, however, complicated—some may think laboured—and its accompanying diagram lists medical conditions such as 'pulmonary oedema' and 'cerebral ischaemia' without explanation. This chapter also describes how to use amyl nitrite in cyanide poisoning, and advises the injection of atropine by the nearest person for organophosphorus-induced respiratory paralysis but with no mention of any earlier warning signs or symptoms.

This booklet will certainly be widely read by first-aiders and it should also be read by all doctors and nurses who practice in industry or commerce, since they may be asked for their views, and perhaps even to clarify a few points.

P. J. TAYLOR

Institute of Occupational Medicine. Report 1969-72. (Pp. 21; 50p.) Institute of Occupational Medicine, Roxburgh Place, Edinburgh EH8 9SU. 1973.

In the early years of the National Coal Board's Medical