The experienced hygienist will gain little from this book, and the learner should be forewarned of the uncritical treatment of sampling, and the limited treatment of analytical procedures. Occupational hygiene owes much to Morris Jacobs, and it is with regret that the reviewer cannot envisage this book taking the same position in our libraries as the earlier version did in its day.

E. KING

Occupational Mycotic Diseases of the Lung. By F. Kováts (sen.) and B. Bugyi. (Pp. 212; illustrated; 70s.) Budapest: Akadémiai Kiadó. 1968.

In 1936 Dr. Kováts discovered the relation between the lung disease of paprika slicers and the inhalation of spores of *Schizomyces*. The authors have made a deep study of fungi which could be of importance in pulmonary disease. But they have not produced a balanced book: their conviction that nearly all diseases produced by the inhalation of vegetable dusts must have a fungal origin is emphasized throughout and often is at variance with generally accepted opinions today. For example, the statement that 'All authors agree in that the fungi occurring in the dust of cotton, hemp, flax, jute, sisal, etc. play some presumably decisive role in the induction of byssinosis' cannot be accepted, nor can the statement that 'Byssinosis greatly resembles the lung disease of harvesters, threshers, and farmer's lung in general'. On the other hand, the mummy disease, an occupational hazard of art historians and archaeologists opening Egyptian tombs and examining their contents, used 'to be regarded as the revenge of the mummies, as the effect of the curse on sacrilegious hands that interfered with their last sleep'. The present authors would rather consider it an occupational toxomycosis. Here they may be on stronger ground.

This book must be regarded as expressing a 'minority opinion'. But minority opinions should not go unheeded; often germs of truth lie disregarded within them, and the reader of this volume will find much to interest him. The clearly written section of Chapter 1 on the elements of mycology, the breadth of respiratory disease covered and, in some instances, the unusual aetiological theories all make it worthy of study. Unfortunately there are some errors of fact: for instance, Roach and Schilling are quoted as advocating a maximum allowable concentration for cotton dust of 250 mg./m.³, a figure one hundred times too great. There are no references after 1962, and most are much older.

Although this volume cannot be recommended as a text on occupational lung disease it has more to favour it as a monograph dealing with one aspect of causation.

C. B. MCKERROW

Dust Sampling in Mines. Occupational Safety and Health Series, No. 9. (Pp. 88; free.) Geneva: International Labour Office. 1967.

In occupational hygiene it is airborne dust sampling which requires the greatest technical expertise. This is partly due to the inherent difficulties of evaluating a mixture consisting of particles of different physical size and chemical composition. However, it is also in large

part due to the extraordinary variety of available methods of dust sampling, the results from which seem to have little in common.

In this report some 35 important dust sampling instruments are described together with the methods for evaluation of the samples obtained. A brief comparison is made between them with the inevitable conclusion that an air quality standard has no significance unless the equipment and methods are closely specified.

The maximum permissible concentrations of mine dusts which are in operation in 17 countries are described and compared. Each country naturally favours its own method of sampling and the M.P.C.s are therefore not strictly comparable.

A proposal is made for some standardization by the adoption of a common dust sampling method. The method proposed is gross gravimetric sampling on the grounds of its undoubted simplicity and its fairly good correspondence with other methods. The author of the report is from Belgium where routine control of dust concentrations is provided by gross gravimetric sampling. This report is not well produced and many of the diagrams are undecipherable. However, it does collect together in one place a bibliography of 152 references on dust sampling in mines, which is a useful guide for further reading.

S. A. ROACH

The Prevention and Suppression of Dust in Mining, Tunnelling and Quarrying. Third International Report 1958-1962. (Pp. 531; free.) Geneva: International Labour Office. 1966.

This report is a more or less systematic summary of 32 national reports on the airborne dust problems in mines, quarries, and tunnels covering the period 1958-62. The material is very uneven; some countries give numerous hard statistics whereas others make only a few general observations. Also the number of undertakings in different countries varies enormously. It appears, for example, that Niger boasts only one quarry whereas France has some 50,000.

The pneumoconiosis statistics make interesting reading although their value for comparing the risks experienced in different countries is rather limited. The number of cases found depends very much on the manner of selection of the people examined and on the particular diagnostic criteria used. In South Africa the number of people with pneumoconiosis in mining occupations is effectively reduced by the simple rule that 'no Bantu person with pneumoconiosis is allowed to remain at work'.

Doubtful explanations for some of the trends are given. In Canada the sharp decline in silicosis prevalence is 'not only coincident with the institution of aluminium powder but is the direct result of this measure'. In Czechoslovakia 'An atomiser has been developed for mass inhalation cures'.

The section on research is concerned more with indicating the type of investigations in progress than with describing specific results.

General ventilation and wetting of the minerals are the principal means of successful dust control. The

procedures used for applying water in roof control practice, in shot firing, extracting minerals, and in transport are given in separate sections.

Respirators are used, or at least provided, in most countries.

Atmospheric conditions, temperature, and humidity are well-known problems in mining, and those who spend much time and money on air conditioning in modern factory and office applications will find this section rewarding. In Finland the miners work happily at 40°F. whereas in Burma 94°F. at 98% R.H. is not unusual.

France offered conclusions from its report and these show that there has been a general decline of dust concentration and pneumoconiosis.

The sampling, measurement, and analysis of dust are described briefly.

A bibliography of principal publications in each country completes the report.

S. A. ROACH

A Course on Dust Prevention in Industry. Occupational Safety and Health Series, No. 8. (Pp. 162; Free.) Geneva. International Labour Office. 1967.

The course, which was attended by two delegates from each of a dozen countries, consists of six lectures at a low technical level. No attempt seems to have been made, by the six lecturers, to partition the subject matter in a systematic way, and three of the contributions are quite trivial. The British lecturer gives a good general introduction to the physics, sampling, generation and suppression of dust, but uses a confusing mixture of British and metric units and overlaps the treatment of dust formation and elimination by the French contributor.

It is a pity that a more satisfactory course could not have been arranged for the delegates, where attendance must have been costly to the countries concerned. The reviewer can see no justification for publishing this unsatisfactory booklet three years after the lectures were delivered.

At the end of the publication there is a 27-page account of the activities of the International Labour Organization in the field of occupational safety and health.

C. N. DAVIES

The Year Book of Medicine (1967-1968 Year Book Series.) (Pp. 848; illustrated; 98s.) Chicago: Year Book Medical Publishers. 1968.

This is one of a set of American Year Books dealing with various fields of medicine, surgery, and dentistry. This particular volume deals with the whole field of medicine and is divided into seven parts: infections, chest, heart, digestive system, metabolism, kidney, and blood. Each part has a separate editor—a man of distinction in his field—who is responsible for the selection of material and its presentation. Interspersed between the abstracts are interesting comments by the editors on the contributions and the part they are playing in the general advance of the subject. This takes the place of a review article and serves to draw the material

together into a more coherent whole. The success with which this is done varies, but the method proves effective and often amusing.

Of the whole 800 pages, four are devoted to industrial disease and this is confined to 'inhalation disease'. The four abstracts given are well done and are chosen to show trends in the current thinking in parts of our field. Is it too much to expect to find more space devoted to this branch of medicine?

R. E. LANE

The Education of Engineers in Environmental Health. Report of a WHO Expert Committee. World Health Organization Technical Report Series No. 376. (Pp. 26; 4s.) Geneva. 1967.

My first impression on reading the title of this booklet was that I was not the man to review it, because the modern meaning of 'environmental health' is to denote that area of medicine which, since my student days, has changed its name with chameleon-like rapidity from public health to preventive medicine, to social medicine, to environmental health, and, lastly, to community medicine. I realized, however, that this thought was wrong when I read the definition of 'environmental health' which the WHO Expert Committee lays down. This includes occupational medicine, but, oddly enough, the committee which prepared this booklet did not, in fact, contain a member skilled in this subject.

In this pamphlet the importance of famine, parasitism, and over-population is underlined, and it is pointed out that the location of industry must be given careful thought in planning. The engineer (in this country usually a civil engineer) must work with many different types of official, and particularly with the physician, since so much of environmental health revolves around the elimination of water-borne disease through the control of water supply and waste disposal. Any engineer working in this field must be capable of organizing an information system, and he must take cognizance of the importance of the geographical region rather than that of some arbitrary political boundary.

Various types of training course are described, and the very useful suggestion is made that there should be engineering internships on the model of the well-known medical internships. There is a good deal of biology in water supply and waste disposal engineering, and we may have to think in terms of training a cross between a biologist and an engineer, or perhaps even a physician and an engineer.

It is important, the report says, to direct 'young people' to this type of engineering. One wonders whether a civil engineer, whose eyes had been opened by a period of voluntary service overseas, would not be the right man for work such as this. The report ends with a number of practical suggestions, one of which is that an international directory of training institutions should be filled up.

As a slightly diffuse description of the education of environmental health engineers, this report is worth reading, and it must be admitted at once that it is not easy to avoid diffuseness in a subject of so many different