The resulting confusion is the more regrettable at a time when there is a growing understanding of the differences between the two conditions, particularly in their liability to open tuberculosis.

To the English reader the omission of British references is striking. Thus in the chapter on experimental pathology, while the views of Professor Policard (1933) on the pathogenesis of silicosis are described, there is no mention of the work of Professor King and his colleagues. The "two disease" hypothesis that simple pneumoconiosis of coalworkers is due to inhalation of coal dust and progressive massive fibrosis to tuberculosis is never clearly stated. Instead, on page 29, Gough's views on coal-miners' pneumoconiosis are confused with his views on classical silicosis and a misleading impression is created. The I.L.O. international classification (1950) of chest radiographs for pneumoconiosis has perhaps particular relevance to this hypothesis; but in any case, it should surely have been briefly described. The illuminating results of epidemiological research (other than a brief mention of occupational mortality) are almost completely ignored.

The detailed account of the medico-legal aspects of silico-tuberculosis in France and Germany may prove useful to doctors in those countries concerned with compensation. The situation in Great Britain, however, is dismissed too briefly to be of any value.

The book is well produced and the reproductions of the radiographs are generally adequate, though the excavation said to be present in the left upper lobe in Fig. 6 (page 55) is not seen.

Dr. Schweitzer has attempted a difficult task. It is regrettable that her book—obviously the result of considerable labour—adds little to our understanding or knowledge of silico-tuberculosis.

I. T. T. HIGGINS

Peaceful Uses of Atomic Energy. Proceedings of the International Conference in Geneva, August, 1955, Volume 10: *Radioactive Isotopes and Nuclear Radiations in Medicine*. (Pp. ix + 544; illustrated. 57s.; \$8.00.) London: H.M.S.O.; New York: United Nations. 1956.

The applications of radioactive isotopes and nuclear radiations in therapeutic radiology and in the diagnosis and study of disease were discussed in some detail at the Geneva Conference; those who are interested in these branches of medicine will find a great deal of useful and up-to-date information in the 85 papers contained in this volume. The impact of nuclear energy on radiotherapy has turned out, so far, to be less dramatic than many of the ardent prognostications of five and 10 years ago. Considerable progress has been made, however, in the refinement of well-established techniques and in the introduction of new types of radioactive sources, and there are reasonable grounds for optimism about the uses of internally administered radioisotopes, particularly in the treatment of certain diseases of the blood and of the thyroid gland.

The greater part of the volume is concerned with the uses of radioactive isotopes in the diagnosis and study

of disease and it is evident that these techniques have already made an impressive contribution in the realm of physiology and pathology.

The biological effects of radiation and the problems of radiological protection are dealt with in volumes 11 and 13 of the proceedings of the Geneva Conference.

A. S. McLEAN

Peaceful Uses of Atomic Energy. Proceedings of the International Conference held in Geneva, August, 1955, Volume 11: *Biological Effects of Radiation*. (Pp. 402; illustrated. 57s.; \$8.00.) New York: United Nations. 1956.

It is of fundamental importance that the criteria of safety in radiation work should be founded upon a thorough understanding of the nature of the effects of radiation on human beings. From the point of view of present and future problems, it is fortunate that a considerable amount of useful information has been forthcoming from studies of the injuries sustained not uncommonly by the early radiation workers. Nevertheless, a great deal of animal experimental work has been required in order to fill in the gaps. It is never entirely satisfactory, however, to have to deduce the reactions of one species from observations on the behaviour of others and, to allow for uncertainties in interpretation, the whole approach to radiological safety has been necessarily conservative. For this reason, there can be no doubt about the need for further information about the effects of radiation on human beings.

A particularly important feature of this volume is the fact that a considerable proportion of the 63 papers contained in it are concerned with human aspects of radiobiology; it is, therefore, a very valuable addition to the literature on the biological effects of radiation. The proceedings are presented in sections—on modes of radiation injury, carcinogenesis and metabolism of bone-seeking isotopes, effects on the reproductive system, mechanisms of radiation injury, protection, recovery, and genetics—and in each, there are several interesting papers. The standard of presentation is so high that it would be impossible to single out any one contribution for special mention. Indeed, the list of authors shows that the cream of international opinion was represented at the conference.

It is obvious that, as a scientific meeting, the Geneva Conference was a notable success. No less important, however, was its contribution to international understanding and goodwill.

A. S. McLEAN

Psychological Tests for Accident Proneness and Industrial Proficiency. By E. G. Chambers. Medical Research Council Memorandum No. 31. (2s.). London: H.M. Stationery Office.

In 1919, the Industrial Fatigue Research Board published a study by Greenwood and Woods, "The Incidence

of Industrial Accidents, with Special Reference to Multiple Accidents". This was closely followed by other contributions, mainly by Greenwood, and the statistical concept of accident proneness was launched. Although there have been later criticisms, it is a tribute to the careful observation and analysis of Greenwood and his colleagues that the idea of inherent individual differences in accident liability was, and continues to be accepted.

After this statistical demonstration, interest in the problem became more psychological, and research was undertaken to discover what personal qualities were associated with accident proneness. The main work in this country was carried out by E. G. Chambers and E. Farmer, as investigators for the Industrial Fatigue (later Health) Research Board. Their reports—Nos. 38, 55, 68, 74, and 84—cover work done from 1927 to 1940. These reports are still essential literature for all seriously concerned with the problems of accidents. They are, unfortunately, all out of print, and must be tracked down zealously in medical school libraries or psychology department libraries.

The present publication is an attempt to remedy this situation; it is a summary of these reports. Inevitably, some detail is lost. The full tables and graphical display of the original reports are omitted, and the description of the psychological measures employed is somewhat brief. But the main conclusions are brought out very clearly, and as a result it is easier to observe the relationship between sensorimotor, aestheto-kinetic, intelligence, mechanical aptitude and ability, and other tests of accident performance and proficiency ratings. Thus the memorandum may well be better suited to those whose interests are general and practical, rather than to those who are more concerned with research details.

The author has carefully and deliberately avoided interpolation of new material, either of direct evidence or interpreting the original data. This is particularly noticeable in discussion of the relation of the test performances to accident experience. Chambers and Farmer were the first to observe that complex tests were better predictors than tests based on simpler psychophysical processes. Later work has followed this example and treated accident proneness more as a behavioural syndrome than as a simple defect. Mr. Chambers has done great service in restoring to general circulation the essentials of the earlier work; perhaps it is not too much to hope that he will also give his account of its later development.

J. WHITFIELD

Textbook of Occupational Therapy with Chief Reference to Psychological Medicine. By Eamon N. M. O'Sullivan. (Pp. x + 319. 21s.) London: H. K. Lewis. 1955.

Work therapy was often a polite and somewhat cynical way of describing the cheap labour used on the chores and odd jobs of the mental hospital kitchen and farm. The surprisingly good results of this rather unscientific "therapy" in so many patients has long ago removed the cynicism and made overdue a proper study of how it works. But it is a difficult step, particularly in mental illness, from demonstrating the useful effects of a particular treatment to understanding the processes involved. Occupational therapy is now universally regarded as one of the mainstays of the in-patient care for mental as well as many other diseases, but its claim to be a science will not be accepted by all. Dr. O'Sullivan's textbook does little to persuade us of its scientific basis, though it is a good practical introduction to the subject for those training to be occupational therapists.

After a brief historical preamble the book becomes a description of the occupational therapy which is arranged for nearly all the patients in Killarney Mental Hospital. There is a brief section dealing with the classification of mental illness and another on "craft analysis" in which an attempt is made to define principles upon which the job may be best suited to the patient and his disease. It is in dealing with this latter problem by generalizations that the occupational therapist is on most dangerous ground and it is here that the main emphasis must be upon discussion with other members of the treatment team, rather than upon classifications or "principles". The last part of the book is a useful and detailed description of various orthodox procedures in occupational therapy such as weaving, woodwork, cane-craft, etc., with analyses of them from practical, therapeutic, and economic points of view. Emphasis is placed throughout upon the "socializing" effect as well as the individual benefits of occupational therapy.

Work is only one small part of the treatments aimed at the controlled reintroduction of a normal social life to the mentally sick, but it was the earliest to be used and is the most widely applied. So far the theoretical framework is almost non-existent and, though Dr. O'Sullivan wisely does not speculate, he could perhaps, have listed for us some of the current hypotheses. We do not really know why doing things helps some people to get better; however, it does, and this book introduces us to the job of the occupational therapist and tells us how to organize a unit in a large mental hospital.

E. MAURICE BACKETT