pital and employer but his job is described as 'often difficult as there is room for a better appreciation of the problems of the disabled person in industry'. One would like to think that these difficulties are not as serious as is suggested, at least in those industries with a medical service, and that the Industrial Medical Officer can play a more positive role.

In this section also, significant increases in the remuneration available to the disabled and in the number of Government Training Centres and Industrial Rehabilitation Units have been overlooked. A textbook is probably not the best place in which to include this type of detail which is so liable to change. It might be preferable to give a general description and indicate where up-to-date information is obtainable.

This minor comment detracts in no way from the excellence of this work. There will be no need to recommend it to those who, like the reviewer, found the first edition such a valuable addition to the literature. It should be studied by all who in any way have an interest in the treatment, rehabilitation, and resettlement of patients with hand disability.

J. D. CAMERON

A Handbook of Industrial Toxicology. By D. C. Trainor. (Pp. 153; 45s.) Sydney and London: Angus and Robertson. 1966.

This book, which is the first on industrial toxicology to be published in Australia, is chiefly for use in New South Wales. It is written by a surgeon who took up his present office of Senior Medical Officer in the Department of Occupational Health, New South Wales, eight years ago. There are two excellent chapters which form a good introduction to cover the subjects of modern pesticides and dust diseases. Each chapter in the book is divided into a lay section followed by a medical one, which has the advantage that the layman will undoubtedly read the medical section and this is important for many of the warnings are only given in the medical sections. Certain items of information are important, such as that silver solder may contain a high proportion of cadmium (p. 26), but certain items are lacking, for example, there is no mention of the brownness of these cadmium fumes, which is their main warning characteristic.

The usefulness of the book is diminished by its departing from the excellent tradition, probably started by Alice Hamilton, of always quoting the references to any statement or disastrous occurrence. Mr. Trainor simply gives a list of references at the end of each chapter without any indication in the text which author supports which statement; for example, on page 107, he reports that a man who welded in a fat residue tank died from pulmonary oedema because of the fumes of acrolein. It is impossible by reading the references at the end of the chapter to decide which paper reported this incident.

In this book there are several controversial statements, for example on page 57, . . . 'Carbon monoxide is not known to have any toxic action *per se*'. He is almost certainly here alluding to the chronic poisoning, but in his own words on page 18 ' . . . irrevocability of the spoken word and the spent arrow is sometimes merciless-

ly demonstrated in the law courts when an ill-considered opinion or report disintegrates, and its author sweats profusely under the searing head of skilled cross-examination.'

It is an interesting book to read but cannot be recommended to the uninitiated because not only are there controversial statements in it, but the emphasis is attuned obviously to the conditions of work in New South Wales rather than in Great Britain.

J. R. GLOVER

Lifting in Industry. (Pp. 26; illustrated; 2s. 6d.) The Chartered Society of Physiotherapy, Tavistock House (South), Tavistock Square, London, W.C.1. 1967.

This pamphlet covers the field of 'Lifting in Industry' extremely well. It is the result of many years' work of a committee which included doctors and physiotherapists from industry. The illustrations are good and practical. The pamphlet does not attempt to suggest how these methods of lifting should be introduced into the factory and there are various ways of doing this, from the employment of a full-time physiotherapist in the larger works to the training of instructors in the training division of the medium-sized works. The method of a lifting demonstration for one half day by a lecturer from outside may serve to excite an interest in the subject but it is questionable whether a permanent impression is left in the works.

This pamphlet has been adopted by RoSPA for its training courses for instructors in lifting and manual handling in Birmingham and Cardiff and can be thoroughly recommended as the best reference guide on the subject. It is a pity that no acknowledgement or reference is given to T. McClurg Anderson, of Glasgow, whose pioneer work and book, *Human Kinetics*, forms the basis of the methods given in this pamphlet.

J. R. GLOVER

Thorium: Its Industrial Hygiene Aspects. By R. E. Albert. (Pp. 222; illustrated; 56s.) New York and London: Academic Press. 1966.

This book is one of a series planned by the American Industrial Hygiene Association and sponsored by the United States Atomic Energy Commission.

In a preface Dr. Albert points out that thorium is unusual in that the radiological health hazards encountered in industry are not caused by ^{232}Th , which is the long-lived parent isotope of the naturally occurring radioactive decay series and constitutes virtually the entire mass of natural thorium. It is from a variety of elements present in the decay chain of ^{232}Th that the hazards arise, these involving nearly every type of radiological health protection problem met with in the atomic energy industry.

For many years after its discovery in 1828 thorium had no industrial application, but the introduction in 1885 of the Welsbach gas mantle incorporating thorium nitrate led to a rapidly increased production of thorium, this diminishing later with the development of the electric light bulb. Up to 1950 over 90% of the reported industrial consumption of thorium was for gas mantles,

but since then other uses for the element have been found, as in magnesium and nickel alloys to impart temperature-resistant qualities, in optical lenses, and in tungsten alloys for welding electrodes and electrical filaments.

Thorium is now expected to become an important nuclear fuel. The reserves of uranium-235, although ample for current needs, are insufficient to support a major nuclear power industry, but nuclear fuel reserves can be greatly enlarged by the artificial production of the reactor fuels ^{239}Pu and ^{233}U , into the last of which ^{232}Th can be converted by neutron bombardment.

This book includes chapters on the physical, chemical, and radioactive properties of thorium and its industrial processing, its chemical and radiological toxicity, the metabolism of the principal isotopes in the ^{232}Th decay chain, and the nature of thorium hazards in industry with their measurement and control. References to published work number nearly 300 in all and are conveniently grouped at the end of each chapter.

T. G. FAULKNER HUDSON

The Occupational Medical Foundation and Institute of Occupational Health, Helsinki—Annual Report 1965. By Leo Noro. (Pp. 37; price not stated.)

Work—Environment—Health. Volume 2, No. 1/1966. Edited by Leo Noro and Thelma Aro. (Pp. 81; price not stated.) Helsinki: Institute of Occupational Health. 1966.

Fifteen years ago in 1951, the Finnish Institute of Occupational Health was set up in Helsinki. It had the widest terms of reference and from the outset worked on the broadest of interpretations of the term 'occupational health'. Such an approach was fitting for the particular circumstances existing in Finland. During these 15 years the Institute has grown and its influence has been widely felt throughout that country. It has trained staff, published basic textbooks, and carried out investigations on some of the local occupational health problems.

Throughout the period the staff has grown, income and expenditure have risen sharply, and fundamental research has been undertaken. A detailed list is given in this issue of some 800 papers which have been published in the last 15 years. These papers indicate well the wide interests of the Institute and include general occupational medicine with 54 papers on dermatological subjects, general physiology as well as that with an occupational slant, psychology including 'traffic psychology', industrial hygiene, and rehabilitation.

Professor Noro, who has provided much of the driving force necessary to effect this progress, now plans to improve the application of the new knowledge into working practice. This he realizes requires an extended and somewhat different organization which he plans to set up.

R. E. LANE

Medical Service and Medical Research. Annual Report 1965. (Pp. 50; price not stated.) London: National Coal Board. 1966.

This small booklet is an extremely good and succinct summary of one of our largest occupational health services.

Pre-employment examinations of entrants to the industry still yield 11.2% of juveniles and 17.7% of adults who are unfit for employment under all mining conditions, thus demonstrating its arduous nature. Periodic medical examinations of young persons made statutory in 1964 produces a very small number who need alternative work and one must doubt if these examinations are really justified.

The 38,614 consultations made voluntarily by mine workers and non-industrial workers endorse the advisory nature of the service. A pneumoconiosis prevalence of 12.9% at collieries surveyed in 1959/60 fell to 11.2% in the same collieries in 1964/65. The reduction was present in all age groups and, although the populations are not exactly the same, it is concluded that the pneumoconiosis hazard is slowly being brought under control. New cases diagnosed by the Pneumoconiosis Medical Panels, thought now to be a more accurate index of incidence, fell to the lowest levels since the war (1,007). Of the other prescribed diseases, there has been little change in the spells of benefit rate over the past 15 years for dermatitis, although beat diseases, which are twice as common, show a reduction of almost a quarter over the same period.

There is a very useful summary of the research work carried out by the Medical Service on occupational deafness, back-stress, pneumoconiosis, and work in hot and humid atmospheres. All the research work appears to have some direct bearing on the problems within the industry.

There is a short supplement on the first-aid service within the industry, indicating that there is one box carrier with first-aid material to every 17 men employed underground—a remarkable achievement.

O. P. EDMUNDS

Medicine and Government. By Lord Brain. Tavistock Pamphlet No. 15. (Pp. 22; 7s. 6d.) London: Tavistock Publications. 1967.

This 20-page pamphlet is the text of the Tavistock Lecture which was to have been delivered by the late Lord Brain in October 1966, but illness prevented him from doing so. This Lecture is the fourth of a series inaugurated by the Council of the Tavistock Institute of Human Relations. To those who loved Russell Brain it will be a lifelong reminder of two of the many facets of his life—the literary man and the elder statesman of medicine.

The lecture begins with a historical development: 'the relationship between medicine and government is of great antiquity'. With the skill of the literary artist, much thought is given in a few words. In 1965 Brain was appointed Royal Commissioner to survey the medical services of Newfoundland, which gave him the opportunity to look at the British National Health Service from the outside. Having been deeply involved in the National Health Service in many leading capacities since its formation, he recognized this opportunity and distilled his meditations into the Tavistock Lecture.