have been started too late, and that there was lack of continuity in rehabilitation measures. The need is stressed for the creation of special rehabilitation and local vocational guidance centres which should work with, and not form part of, the hospitals.

A. R. THOMPSON

Pre-Employment Disability Evaluation. By William A. Kellogg; Preface by H. L. Herschensohn. (Pp. xv + 155. 80s.) Oxford: Blackwell Scientific Publications; Springfield, Illinois: Charles C. Thomas. 1957.

Pre-employment medical examination is less common in Great Britain than in the U.S.A. Under state compensation laws American employers can face financial loss if a man with some disability is given work for which he is not physically fit and where as a result he suffers further disablement. In such cases employers, with no national health service to fall back on, may be faced with the whole cost of medical treatment, sometimes extending over months or even years; large sums of money can thus be involved, apart entirely from compensation awarded by the courts.

The author of this book has examined medically in great detail some 20,000 applicants for employment in industry. His view is that examination must result in an accurate evaluation of disabilities. Disability must then be related to the man's working capacity, but no objective method is described by which this can be done. It is difficult, for example, to understand the reason for stating that "applicants for work as moulders and die finishers should have a red blood count and haemoglobin"; or that "applicants for key administrative positions should be rejected if their E.C.G., chest radiograph, or blood chemistry" varies "much from the normal".

British readers will be interested to know that where there is no doctor available the American industrial nurse can be made responsible for pre-employment examinations. She can give decisions based on her findings. She may listen to the heart and lungs, and where the signs are "recognized" by her (whatever this may mean) she can reject an applicant. If she finds a positive Romberg test this "would be a cause for rejection", but no reason why is stated. The advice given to a nurse undertaking this work is: "When in doubt, reject".

In the author's experience "the mechanism of making certain that no one is assigned to the wrong type of activity can be controlled by the imposition [by the doctor] of appropriate restrictions". Many of the restrictions listed seem reasonable in general terms but some of them are less realistic: "In plants where the noise registers 90 decibels or more the applicant should be prevented from working if he has a hearing loss of over 25% in one or both ears". "Only applicants with minimal evidence of arthritic conditions should be approved for industrial work". "Where there is doubt [in cardiac cases] the actual working capacity can only be ascertained through the test of actual performance on the job", but this reasonable advice is followed by a statement that in such cases "the advisable policy would be to reject such individuals and refer them to a rehabilitation agency for study and evaluation".

It is our experience in this country that medical examinations before employment can be valuable where there is a proved hazard in the job and where a specified and generally agreed standard of physical fitness is required. So that advice can be accurate and effective the different demands of the job or range of jobs offered to an applicant for work should be made available to the doctor. There is wide variation in the reactions of individual persons to the physical and psychological demands of their occupation, and identical physical lesions may produce differing degrees of disablement. It is well known that many people with severe physical handicaps prove by satisfactory performance that they can contend on equal terms with their healthy fellow workers, for performance is not only related to physical capacity but depends also on attributes such as emotional stability, intelligence, and the response to incentives.

The type of medical examination suggested in the book is prodigious in extent. It must incur much of the doctor's time and be costly to the employer. In America this may be considered well worth-while, but if carried out in this country to any comparable extent it could well retard the development of a satisfactory industrial health service.

DONALD STEWART

Rehabilitation of the Hand. By C. B. Wynn Parry. (Pp. vii + 273 + Index; 101 figures. 45s.) London: Butterworth. 1958.

The hand is intolerant of disuse and the penalty is stiffness of the fingers. This principle must ever be remembered by those who treat its lesions and seldom has its application been better exemplified than at the R.A.F. Rehabilitation Centre at Chessington. This book records its practice.

Perhaps the best section is that on peripheral nerve injuries, though the chapters on the rheumatoid hand and on reconstructive hand surgery are admirable.

The use of lively splints, as one would expect, is rightly stressed and it should be possible for most occupational therapy departments to make them from the instructions given.

A few minor disagreements: early osteo-arthritis is surely one of the common causes of ulnar neuritis produced by lesions of the elbow. We have seldom seen adhesions of the extensor tendons following simple fractures of the metacarpals not caused by crush injuries properly treated, and fixation for three weeks is adequate for most simple metacarpal fractures.

The chapter dealing with resettlement inevitably makes the process look a little more cumbersome than it is. More stress might have been laid on the importance of the hospital surgeon getting in touch with the works doctor at an early date, thus preventing any resettlement problems arising—if the works is of any size. This chapter might well be reprinted as a leaflet and circulated to hospitals in industrial areas and to the teaching hospitals, especially the latter.

One intractable problem is the "compensation case". Here we have to educate the legal profession or give judges medical assessors, when perhaps the scamp will cease to profit more from his injury than the honest man.

The book, which is handsomely produced, should be bought, read, and digested by all those who are responsible for the management of hand injuries and disabilities.

E. A. DEVENISH

Expert Committee on Medical Rehabilitation. First Report. [*Wld Hlh Org. techn. Rep. Ser. No. 158.*] (Pp. 52. 3s. 6d.) London: H.M.S.O.; Geneva: W.H.O. 1958.

The first session of the Expert Committee on Medical Rehabilitation was held in Geneva in the early part of 1958. The members of this Committee were Dr. F. S. Cooksey (England), Dr. G. Harlem (Oslo), Dr. H. H. Kessler (U.S.A.), Dr. M. Maurer (Rumania), Dr. E. Mindus (Sweden), Dr. F. E. de Godoy Moreira (Brazil), Professor J. Parisot (France), and Dr. R. Soeharso (Indonesia), together with representatives from the United Nations, the International Labour Organization, and the World Health Organization Secretariat.

Owing to the large field to be covered and the complexity of the subject, the Committee confined itself to discussing general principles and practices. It was agreed that medical rehabilitation was the fourth place in the whole scheme of health measures applicable to an individual or community, the others being promotion of health and prevention and treatment of disease: later on in their report, however, the point is made that good treatment includes all that is understood by rehabilitation and this is more in accord with present day ideas. As severely disabled people more frequently survive nowadays, due to advances in medical science, rehabilitation problems tend to increase and the many services concerned in the rehabilitation process demand good team work if success is to be attained. Some striking examples are given of how rehabilitation services have reduced the amount of invalidism in some countries and eased the burden of State payments to the disabled. The general aims and principles of rehabilitation are wisely defined but perhaps more stress might have been placed on the need of the patient himself cultivating a right attitude of mind towards recovery.

Particularly valuable sections of the report deal with the coordination of rehabilitation services and the education and training of medical and other persons working in this field. The expansion of the social services in recent years has greatly increased the doctor's responsibility and potential usefulness, and it is essential that medical students should fully understand this, and often have fuller instruction in the principles and practice of rehabilitation; there is also need of better postgraduate education in these matters. The report goes on to outline the help that relatives, employers, and fellow workers should give to those with disabilities, but rightly stresses the doctor's duty to be well informed of rehabilitation techniques, to teach, and to lead the rehabilitation team.

In some appendices to their report the authors discuss the psychological aspects of rehabilitation, rehabilitation in some less developed countries and some special problems of the blind, deaf, and chronically ill, and end with some recommendations for further study and action. They consider that while the techniques for rehabilitating those with orthopaedic and special senses handicaps have been well developed, more attention should now be paid to

medical disabilities such as those due to circulatory, respiratory, and digestive disorders. They urge that thought should be given by the appropriate international organizations to the meaning of words such as "disability" and "impairment" and agreement sought regarding terminology. The extent of the rehabilitation problem should be studied by means of field surveys in individual countries, and where social security systems have been well developed these should be better coordinated with the machinery of rehabilitation. Good collaboration between government departments dealing with this subject on a national level is advocated, and the need is stressed of suitable training for all persons concerned in this work.

T. G. FAULKNER HUDSON

Ageing and Human Skill. By A. T. Welford. (Pp. viii + 300; illustrated. 25s.) Published for the Nuffield Foundation by Oxford University Press, London. 1958.

This book is an account of the research carried out by the Nuffield Unit for Research into Problems of Ageing from 1946 to 1956. It extends and deepens the pioneer work on human performance started by Bartlett and Craik during the last war. Perhaps a better title would have been "Ageing and Performance" because the research has covered a much wider field than that customarily denoted by the term "skill". Perception, problem solving, memory, adaptability, as well as motor skill, are some of the areas in which studies have been carried out.

The bulk of the work is experimental and the experiments are distinguished by the ingenuity with which they have been designed to examine fundamental problems but, at the same time, to preserve some analogy to tasks met outside the laboratory. The strategy of research may be taken as a model of what research should be. Rather general questions are asked first of all and then more precise information is gained by the use of additional controls. Although the investigations explore very different aspects of behaviour, they are unified through their interpretation by information theory concepts. The explanatory power and fruitfulness of this approach to psychological phenomena cannot be fully appreciated until the attempt is made to account for some of the more interesting findings in terms of stimulus-response learning theory.

The author's main conclusion is that changes in performance with age are due not so much to impairment in receptor and effector organs as to failure of central mechanisms to guide and control appropriate action. This failure is discussed in terms of "diminished channel capacity", "lowering of signal to noise ratio", and "lessened short-term storage of information". It is further suggested that the organic correlate of this failure may be found in the decrease in the number of active brain cells associated with increasing age. However, evidence is also adduced to show that older people compensate to some extent by an automatic adjustment of their activity to a level appropriate to their capacity.

The presentation strikes a reasonable balance between the detailed research paper and the semi-popular and inevitably over-simplified summary of results. And this should make the book suitable for industrial medical