BOOK REVIEWS

The Later Working Life in the Building Industry. A Study of 320 Ageing Maintenance Workers. By F. Le Gros Clark. (Pp. 21. no charge.) London: Nuffield Foundation. 1954.

The author was given access to the "dead files" of the maintenance section of London County Council's Housing Department; from these he extracted the records of 320 men "whose careers (in that Department) were more or less traceable from the age of 60 onwards". The group comprised 100 painters, 100 other tradesmen, and 120 labourers. The ages at which these men left the L.C.C. maintenance section were used to estimate wastage rates from age 60 onwards and from evidence contained in the records wastage was attributed to such factors as ill-health.

In his background information the author states that the L.C.C. was a tolerant authority which in the post-war years "was not at all rigid in its policy of discharge of men who reached the pensionable age". He emphasizes that the men were all on maintenance jobs in which the chance of retention for an older worker was probably higher than on the constructional side of the building industry.

As to his method of study, Mr. Le Gros Clark unfortunately fails to describe fully the nature of the records from which he has derived his data. The procedure in use when a man leaves is not described and it is therefore doubtful how much weight can be attached to the recorded reasons for leaving. The apparently common occurrence of such expressions as "age" in the records suggests that the precise circumstances of leaving were often either not examined or not noted by those responsible for completing the records, presumably because they did not consider it relevant to do so. Hogben and Cross (1954) have recently discussed this kind of situation and stressed that unless records call for information on precise points, the value of what information they do contain must be in doubt.

In all such studies as this there is inevitable difficulty in establishing comparability between men reaching the same age at different points in time. Mr. Le Gros Clark has taken age 60 as the starting point of his 320 men but he does not give the actual year dates of their leaving nor does he do more than refer broadly to their length of service with London County Council. Even in the short period of years over which the men presumably left, employer attitudes to older men might have changed and it is well known that length of service is taken into account when making decisions about retirement.

With these possible sources of error in mind some comment may now be made on the findings. The

author emphasizes that the smallness of his sample makes conclusions tentative. He postulates from the data that, if the 320 men are regarded as coming into view at age 60, between 70 and 75% "could be expected to reach the age of 66 in a reasonable state of working efficiency" (with reference to the particular occupations under study); at age 70 about 30% of the original 320 men were still in the labour force. The total wastage rate was about the same in tradesmen and labourers. In the discussion of wastage rates at different ages the report stresses the fact that those who are still at work over 70 are quite exceptional physically. The fascination of extremes has not misled this author.

In the report frequent reference is made to the numbers of men leaving on account of "age". This is a most unsatisfying reason for retirement unless it is accompanied by some pointer to the particular effects of ageing which have reduced mental and physical efficiency. If we are to seek the truth about such an important social and personal event as retiring, precise information about reasons and circumstances should replace vague expressions like "age". What we want are measures of age in terms of ability.

The contribution of ill-health to wastage was cautiously computed by the author from statements on the records. It was evident that disability took a heavy toll in the late 60s, there being few light jobs available in the industry. Perhaps the most interesting and important finding was that 17% of the 320 men left within one to three months of their return to work after a spell of sickness absence. This kind of event has been observed by other investigators and merits intensive study. Mr. Le Gros Clark suggests that "rehabilitation" might reduce this proportion but he does not indicate what forms of rehabilitation he has in mind.

Despite the limitations imposed on the data by uncertainties about the records on which the study is based, this report has real value in that it replaces impressions by numerical information. Breaking new ground is usually difficult; we should be grateful to the author for laying bare promising points for further investigation, and we can look forward to reports on the future studies which he is to make for the Nuffield Foundation.

I. M. RICHARDSON

Symposium on Fatigue. Edited by W. F. Floyd and A. T. Welford. Vol. I. (Pp. viii + 196; 47 plates. 24s.) London: H. K. Lewis. 1953.

This volume consists of 20 papers which are most of those read at a meeting of the Ergonomics Research Society in March, 1952. The society numbers amongst

its members research workers in the fields of several biological and mechanical sciences and it was the former who contributed to the symposium, which was the second held by the society.

Half of the papers are by psychologists and the volume properly opens with a challenging definition of fatigue by Sir Frederic Bartlett :

" Fatigue is a term used to cover all those determinable changes in the expression of an activity which can be traced to the continuing exercise of that activity under its normal operational conditions, and which can be shown to lead, either immediately or after delay, to deterioration in the expression of that activity, or, more simply, to results within the activity that are not wanted."

Although no other contributor attempts to define the term, almost all of them in fact use it in a sense compatible with this definition. It is this clarity of view and the penetrating exposition of psychological criteria of fatigue which follow from it that make the subsequent chapters seem relatively pedestrian. In fact they are not, but are confined mainly to descriptions of experimental anatomical, physiological, and psychological researches for the most part new, and never before so accessibly presented.

The diversity of disciplines is reflected in the wide range of topics covered, from tropical fatigue as a result of months of residence in tropical areas, to detailed changes in performance resulting from only one minute of psychologically exacting work. Because of the relative ease of objective measurement, it is clear that the physiologists are considerably in advance of the psychologists in this field. In particular many psychologists in this country will for the first time make the acquaintance of the work of E. H. Christensen, whose factory studies are models of applied physiology of interest to all concerned with problems of fatigue in industry. It is evident from this volume that physiologists have passed the stage of the development of techniques, and, when the activity is such that their techniques are applicable, we may expect a rapidly growing body of knowledge aimed at the alleviation of physical fatigue. The many different angles from which " psychological " fatigue is discussed indicate all too clearly that psychologists are still groping for something to measure and for something with which to measure.

Yet the value of this book is that it does bring together a variety of approaches and abundant and fascinating experimental data, and a word of thanks must go to the society for making it generally available.

R. CONRAD

Symposium on Human Factors in Equipment Design. The Ergonomics Research Society Proceedings, Volume II. Edited by W. F. Floyd and A. T. Welford. (Pp. 132 ; 17 figures. 21s.) London : H. K. Lewis. 1954.

The type of physiology which the medical student is usually taught does, in fact, bear some relationship to real life in so far as he learns something of the response of the human being to changes in the environment ; but in most of our medical schools he is still taught far too

much of the minutiae of the anatomy of death, and psychology he is usually not taught at all.

In the last few years, notwithstanding its queer name, the Ergonomics Research Society has succeeded in bringing together anatomists, physiologists, and psychologists, in relating their three sciences to the practical problems of equipment design, and, in so doing, has given a fillip to a fused form of human biology. As a result of the last war, all three armed forces are very active in this field and have strong links with the Medical Research Council and the universities. In this, the Services are at least a generation ahead of most of private industry, whose idea of applied biology tends to be limited to first aid, the treatment of petty trauma, and pre-employment examinations.

The Ergonomics Research Society has now produced a second distinctively slim blue volume (the first was on fatigue), which is a collection of the best of the papers read at a symposium on the human factors in equipment design held in the University of Birmingham in 1951. It is a good selection of the papers read. There are 15 of them, and four are by visiting Scandinavian speakers at the symposium. The field covered includes the size and strength of the human body, its relationship (tinged either with pleasure or pain) to the chair on which it sits, the effect of climate, problems in the reading and understanding of indicator dials, and the general layout of equipment. Each paper is well documented with a reference list, and there are six good half-tone plates and many excellent diagrams.

This is an interesting and nicely turned out volume which is well worth a place on the industrial medical officer's shelf, and is much more readable than the medical tomes and official reports between which it may well be sandwiched. Moreover, it is well worth lending to the managing director himself to tell him, in an interesting way, what is going on in a field about which he may not yet have heard.

R. C. BROWNE

Mental Health and Human Relations in Industry. Edited by Thomas M. Ling ; Foreword by The Rt. Hon. Lord Horder. (Pp. xvi + 268 ; 11 figures. 21s.) London : H. K. Lewis. 1954.

The Social Psychology of Industry. By J. A. C. Brown. (Pp. 310. 2s. 6d.) London : Penguin Books Ltd.

Most of our time is spent either at home with our families, at work, or among the friends and acquaintances of our leisure. In each environment it is probably the people and our relationships with them which matter most to us and which, of all the aspects of our day-to-day existence, are most likely to affect our mental health. The psychiatrists have for the most part concentrated upon the family as a source of the satisfactions and provocations which affect the growing personality. Until recently the working and recreational groups have had scant attention from them as aetiological agents in mental illness, and have been considered, if at all, only in terms of therapy. Of these two groups the more critical and the more likely to cause trouble to the individual is the human environment at work.