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


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


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.