Adjustment to physical handicap and illness: a survey of the social psychology of physique and disability. Roger G. Barker, *et al.* New York: Social Science Research Council, 1946. Pp. xi + 372. (Illustrated.) $2.00.

The purpose of this investigation is well stated in the following paragraph from the introductory chapter: "There is a widespread assumption among laymen and social scientists that physique in its social-psychological aspects is of great importance in the motivation of the individual. Among clinical psychologists and psychiatrists there is a great superstructure of theory based upon case studies and clinical experience which assumes that important sources of personal maladjustment lie in the somatopsychological situation of the individual. It is the purpose of this publication to bring together the widely scattered knowledge bearing upon this problem. We propose to raise this question: What is known of the social and psychological significance of physique and in terms of what concepts can the known facts be described and explained?"

The authors do not concern themselves with all the relations between physique and behavior but confine their survey to what is designated as the "somatopsychological problem," *i.e.* the problem of the purely psychological and social significance of physique, or how physique determines behavior. Only those variations in physique considered relevant to the somatopsychological problem are discussed. The criteria of relevancy formulated by the authors are three: (1) The physique must instigate behavior which in turn requires behavioral adjustments not directly induced by the particular physical characteristic in question; (2) the physique must be perceived by the person or others as being of significance for his life career; or (3) the physique must be perceived by the person or others as having social significance in the particular culture.

From a long list of physical variations believed to have somatopsychological significance the authors have excluded age, race, sex, speech defects, and leprosy. This leaves cosmetic defect, muscular strength, motor ability, visual impairments, auditory impairments, tuberculosis, heart disease, diabetes, rheumatism, cancer, orthopedic disability, and acute illness. The authors then undertake to review and interpret the available literature on those topics which represent the more important practical problems as well as the main types of variation in physique, namely, normal variations in physique, orthopedic impairments, tuberculosis, impaired hearing, and acute illness.

Each of the principal chapters attempts to draw out from general analysis those hypotheses and conclusions that appear to be warranted by the available research. Each chapter concludes with one or more "research summaries" of the most important studies bearing upon certain topics considered in the general discussion. One special chapter discusses the employment of the disabled. This is primarily a review of the more general literature on the problem and supplements the discussions of employment presented in the more specialized studies considered in the preceding chapters.

It is a little surprising that only incidental attention is given to visual deficiencies. Seriously limited vision would seem to meet one or more of the authors' criteria of relevancy and to be among the "more important practical problems."

Following the main body of the report are 52 pages of bibliography, divided into two sections. The first includes studies considered in developing the analyses and interpretations of the special topics included in the book itself; the second, bibliographies on physical variations not specifically treated, e.g. visual disability, cardiac disability, diabetes, cosmetic defect, rheumatism, and cancer.

It is obviously impossible to state a brief general conclusion to which this volume leads. It is reasonably clear, however, that the authors have demonstrated the truth of a statement made in the preface, namely, that "the state of our knowledge of these matters (*i.e.* the somatopsychological significance of variations in physique) is little above the level of folklore in many respects . . . ," and that a very large superstructure of practical action in such areas as occupational therapy, industrial employment policies, hospital organization and administration, industrial accident legislation, and vocational rehabilitation has been based upon this limited knowledge. The authors also show that promising and valid techniques are available for the study of problems of great practical and theoretical importance in this field. Both for its bringing together in one place a considerable mass of material and for its suggestive and thought-provoking analysis and interpretation the volume will be extremely useful to any individual or group proposing either to undertake additional studies of the significance of physical variations or to formulate policies and plans for the practical affairs of daily life.

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A psychology of growth. Bert I. Beverly. New York: McGraw-Hill, 1946. Pp. 200. $2.50.

When a physician writes a book on psychology, he is likely to get into difficulties similar to those which would probably be encountered by a psychologist attempting to write a book on medicine. There are many evidences of this in *A psychology of growth.*

The portion of the book dealing with the practical aspects of behavior problems is accurate and valuable, although in this reviewer's opinion far too much emphasis is placed on the pathological conditions. It is, of course, understandable why that emphasis would appear in a book by a physician written for nurses. But the psychology of the author is neither accurate nor up to date and in many cases is inconsistent. At times he writes like a Watsonian behaviorist, at times as a Freudian, and throughout his discussion displays an unusually strong prejudice toward the influences of heredity.

While in general he gives helpful suggestions for dealing with behavior problems, at times he fails to do so. For example, we are told: "In addition to acquiring food, sucking provides an emotional satisfaction. That is the reason why all babies suck their thumbs and they should be allowed to do so." Almost no suggestions are given, however, concerning means of providing such emotional satisfactions that the infant will not suck his thumb, and the question of diet as one cause of the action and the malformation of teeth as one result are apparently not considered important. Again, the reader is warned that there should be skillful supervisors on the playground because "homosexual practices which cause great distress in later life can start with childhood play." However, in the following sentence is the statement: "The supervisor who finds children engaging in sex experiments should not become perturbed because such a reaction can create dis-

turbances in the minds of the youngsters." No suggestion whatever is made as to what the supervisor should do if he discovers homosexual practices, and the reader is left with the implication that a person should not be disturbed concerning a practice which may cause great distress in later life.

As has been suggested above, there are many errors of fact when the writing touches directly the field of psychology. The statement that "two-year-olds are able to distinguish black from white but do not distinguish between colors" indicates a clear lack of information of researches in child psychology. Similarly, the statement in more than one place in the book that abstract thinking does not begin to develop before the age of 12 is clearly out of line with the evidence. Indeed, Beverly misquotes the Stanford revision of the Binet scale in supporting his statement. It is true that on the tests definitions of abstract words are called for at age 12, but the doctor did not look back to see that on Form M there is also such a test at age 10 and on Form L at age 11. Of course, there is all sorts of evidence to show that abstract thinking begins to develop very much earlier than these ages. On the subject of intelligence and intelligence tests there are also many errors. An outstanding example is the statement that the 1908 Binet-Simon tests "consisted of six tests for each year from three to eighteen." This instrument consisted of 5 tests for each year from 3 to 10, a 12-year test, a 15-year test, and a very imperfectly standardized adult test. Still again, very few psychologists working in the field of school subjects will be happy at the statement that "spelling, reading, and writing difficulties are usually innate." There is evidence that this is not the case. Neither does the best evidence agree that "because of their rapid growth adolescents fatigue easily and have poor motor coordination."

Indeed, there are so many inaccurate or misleading statements that it would seem distinctly unwise to recommend this book, despite its many good features, as one which could be used in any class in psychology.

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Human factors in air transport design. Ross A. McFarland. New York: McGraw-Hill, 1946. Pp. xix + 670. (Illustrated.) $6.00.

The main thesis of this book, according to the author, is to demonstrate the importance and need for studying human factors which should be considered in the design and operation of air transports. With remarkable attention to detail and with the aid of numerous tables, graphs, charts, diagrams, and pictures, Dr. McFarland has presented a large portion of the work which has already been done in this field. The presentation is not confined to a discussion of the medical, physiological, and psychological studies which have been made, but also includes detailed discussions of design and engineering features relevant to the human factors involved.

The subject matter has been divided into 10 parts, each with its own chapter, as follows: (1) "High-Altitude Operation and Pressurized Cabins," (2) "The Control of Ventilation, Temperature, and Humidity," (3) "The Control of Insects and Air-borne Diseases," (4) "Carbon Monoxide and Other Noxious Gases," (5) "The Control of Noise in the Cabins of Aircraft," (6) "The Control of Vibration in Air Transport Planes," (7) "Acceleration, Motion, and Flight Performance," (8) "The Cockpit and Control Cabin of Air Transports," (9) "Passenger Accommodations," and (10) "The Prevention of Aircraft Accidents."

This is a book written by an expert in one field (aviation psychology and physiology) for the use of experts in related fields (aeronautical engineering and airline operation). It has an extremely broad scope, and it would be difficult to name many relevant problems which are not included. Yet, because he was writing for engineers, the author evidently felt obliged to present the material in as concrete and specific form as possible. As a result, many research findings assume a more definitive and authoritative form than would be granted them, perhaps, by other biological scientists. Dr. McFarland is careful to point out where inadequacies of this sort exist. Even where generalizations are not wise, the data have been presented in minute detail—a form of presentation which overemphasizes the significance of the findings.

In spite of this practice there is no doubt concerning the value of the book for anyone, including the biological scientist, who is working in this new field. For aeronautical designers and airline operators it should become required reading. As the author points out, "until aircraft can be flown completely automatically, the human element should be considered as an integral component. A truly functional design will be achieved only after it is thoroughly realized that the crewman (and passenger) is as much a part of the plane as any structural or mechanical feature." Too often the problems arising from human factors in design and operation have been settled by "a majority vote of those sitting in judgment" without recourse to experimentation or even systematic observation. Dr. McFarland has offered ample evidence that when research by competent investigators replaces solutions based on opinion, the reward in terms of human safety, efficiency, and comfort is great.

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Indians before Columbus: twenty thousand years of North American history revealed by archaeology. Paul S. Martin, George I. Quimby, and Donald Collier. Chicago: Univ. Chicago Press, 1947. Pp. xxiii + 582. (Illustrated.) $6.00.

Modern archaeology in the United States may be said to have begun about 1912 with Nelson's percentage stratigraphy in the Galisteo Basin, New Mexico. Since that date the authors of *Indians before Columbus* are the first to tackle the job of systematizing the net gains of North American research archaeology over this 35-year period.

At the outset let the reviewer go on record as being in favor of this book. It totals up as a good one. It has no competitors, and in this circumstance it has all the advantages and hazards of being a "first." The book is a sound stocktaking of what professional archaeology has to offer as basic data for America north of Mexico. On the whole, the material presented is as up to date as it was possible to make it.

Indians before Columbus is written, say the authors, for the interested layman and the beginning student and is not intended for a general professional reference. In spite of this, it is a useful book for every archaeologist to own. The three short introductory chapters, which are eminently successful,