describing its functions and principal syndromes. The cerebrum, midbrain, cerebellum, and spinal cord are dealt with on similar lines. The book is profusely illustrated, and for this purpose not only has judicious selection been made from other works, but the authors have included numerous photographic reproductions of preparations made in their own laboratories. Of these latter the Pal-stained serial sections of the brain-stem are particularly good, and the plan of appending to each section its serial number deserves commendation.

In those parts of the book which are concerned with neuro-physiology one is somewhat surprised to find incorporated as fact such hypotheses as those of Ramsay Hunt as to the functions of the globus pallidus, while subjects of such general clinical importance as decerebrate rigidity, muscle tonus, and the significance of the extensor plantar reflex are neglected. To this last phenomenon the reviewer has been unable to find any reference in the book. It is not mentioned under syndromes due to lesions of the internal capsule, nor is it to be discovered as the result of search in the index under 'reflexes'. Only on p. 816 the 'toe-extension sign of Babinski' is described as an abnormal associated act occurring when the patient is in a recumbent position and flexes the leg and thigh sharply. The omission of an account of the universally accepted sign of Babinski appears curious in a work which deals so widely with clinical phenomena, and in which prominence is given to many functional tests of less widely recognized value.

On the whole, however, the chapters on the various anatomical syndromes are well illustrated by condensed clinical case reports and pathological sections.

On the anatomical side this book as a work of reference fills a gap in English neurological literature. The chapters upon function are less even, and will require revision in later editions.

C. P. S.


The importance and value of this little book are out of all proportion to its size. Within the limits of about 300 pages it summarizes the facts and results of a truly colossal scientific enterprise, viz., the measurement of the intelligence of a large proportion of the American Army during the years 1917 and 1918. Various committees appointed by the American Psychological Association, and the Committee for Psychology of the National Research Council, made a combined attack on the problem in the early months of 1917, and later in the year a Division of Psychology was organized within the Medical Department of the army "for the administration of mental tests to enlisted men and commissioned officers" in accordance with the plans that these committees had drawn up. The objects of the mental testing were threefold: (1) To eliminate the mentally incompetent; (2) To classify men according to their mental ability; and
(8) To aid in the selection of candidates for positions of responsibility. The final outcome exceeded initial expectations, and it was found possible to assign to every soldier an 'intelligence rating' on the basis of systematic psychological examination.

Mental tests were devised, or selected from those already in use in applied psychology, of such a nature that they fulfilled the following conditions: (1) Each test should be adaptable for group use for the examining of large numbers rapidly. (2) It should have a high degree of validity as a measure of intelligence. (3) The range of intelligence measured by the tests should be wide; that is, the test should be made difficult enough to measure the higher levels of intelligence and at the same time be an adequate measure of the extremely low levels that would probably be found in the army. (4) As far as possible, it should be arranged for objectivity of scoring and the elimination of personal judgement concerning correct answers; thus the results of scoring in one camp would be strictly comparable with those obtained in another. (5) The test should be so arranged that the scoring could be done rapidly and with the least chance of error. Also, this arrangement should be so simple that relatively inexpert assistance could be used in scoring the large number of papers. (6) There must be either different forms or alternative tests of equal difficulty to prevent coaching. (7) It was necessary also to obtain clues which would enable examiners to detect malingering in connection with the examination. (8) Cheating must also be avoided. (9) The test must be made as completely independent of schooling and educational advantages as possible. (10) The arrangement should be such as to allow a minimum of writing in recording answers. (11) The tests must consist of material which would arouse interest in the subjects. (12) The different tests used should be arranged to yield an accurate measure of intelligence in a reasonably short time (pp. 2, 3).

After much preliminary experimentation and sifting of tests, two series were chosen, named respectively alpha and beta.

The alpha examination was for men who could read and write English fairly well (literates), and consisted of eight tests, as follows: (1) directions or commands test, (2) arithmetical problems, (3) practical judgement, (4) synonym-autonym, (5) disarranged sentences, (6) number series completion, (7) analogies, (8) general information.

The beta examination was for men who were unable to read and write English well (illiterates), including foreigners, and consisted of seven tests, as follows: (1) maze test, (2) cube analysis, (3) $x$ to $0$ series, (4) digit-symbol, (5) number checking, (6) pictorial completion, (7) geometrical construction.

The results of these measurements were found to be reliable and constant, and were expressed in a scale of eight letter grades, viz., A (very superior), B (superior), C+ (high average), C (average), C− (low average), D (inferior), D− (very inferior), E (unfit for military service).

Besides these group tests, individual examination was carried out in many cases by the well-known Stanford-Binet tests, and also by what are termed point-scale and performance-scale examinations.
Apart from quotations of reliability coefficients, correlation coefficients, and percentage deviations, there is no discussion of the mathematical and statistical aspects of the investigation. Yet it is here that many pitfalls await the non-mathematically minded.

Nevertheless, the ultimate outcome of the investigation appears to have been eminently satisfactory, and by the time of the armistice over a million and a half of men had been given their 'intellectual rating' in this way, and the verdict of psychology had been confirmed in the very great majority of the cases by the test of experience.

Apart from the Stanford-Binet tests, which are not described, full instructions are given on the nature and mode of application of the tests, and numerous tables summarize the results in many groups tested.

The book is a compilation, and is too condensed to make easy reading, but all who are interested in this most important branch of applied psychology, the measuring of the mind, will find it most helpful and instructive.

**WILLIAM BROWN.**

**Psychology and Psychotherapy.** By **WILLIAM BROWN, M.A., M.D. Oxon., D.Sc. Lond.** Pp. 196. 1921. London: Edward Arnold, 8s. 6d.

This book is divided into five parts. The first deals with the concept of dissociation which is the underlying factor in the production of psychoneuroses. The author traces the developments of Janet’s work through the theories of Freud and Jung, laying special stress on abreaction, or the freeing of 'pent-up' emotion. The varieties of dissociation and the related symptom-complexes are enumerated.

In the second part he criticizes Freud’s theories, finding much to commend, but, like most English observers, parting from him on the universality of sex. The theories of emotion are clearly enunciated, and McDougall’s treatment finds most favour.

In the third part he describes the various methods of psychotherapy, including his own methods of combining hypnosis and analysis for the purpose of autognosis or teaching the patient to know the workings of his mind.

The fourth part is devoted to a consideration of the psychoneuroses of war, of which the author had a large experience both in France and at home. He describes his methods of treatment by persuasion in the most recent cases, and by restoring forgotten memories with hallucinatory vividness under light hypnosis in the more chronic forms. Several cases are quoted which illustrate the various forms of the neuroses met with, and show how the author applies his therapy.

In the fifth part he discusses the vexed question of relationship of body and mind. As is the case in most discussions on this subject, the author proves to his own satisfaction the futility of all theories except the one to which he gives allegiance, in this case Bergson’s theory of interaction.
Mental Tests in the American Army

William Brown

*J Neurol Psychopathol* 1921 s1-2: 98-100
doi: 10.1136/jnnp.s1-2.5.98

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