

Among matters needing revision or explanation are the following: the second definition of abnormal (p. 9) is a definition of pathological; pathopsychology and psychopathology are not necessarily parts of abnormal psychology (p. 10), they may be its correlates; decreased function (hypo-conditions) are not classified with the absences, increases or perversions (p. 10) but are in a separate group; reference to neurological literature will show that lesion of the primary cortical stations in the post-central convolutions is not accompanied by loss of cutaneous and kinesthetic sensations (p. 24), but by losses of special sensory abilities; the refusal to accept a distinction drawn by Esquirol is not a "theory" (p. 26); logorrhea cannot be a verbal hallucination described as "the escape of thought" (p. 28) and at the same time (p. 97) an "extreme garrulity"; there would appear to be no reason in a psychological text for an appeal to teleology (p. 43); in speaking of *paradoxia sexualis* it is meaningless to say that one form is a "*premature development . . . beyond the age of the child*" (p. 38); it is pedagogically bad, to say the least, to separate two conditions which are conceded to be alike without defining the supposed differences, as in speaking of "lower motor neurone" paralyzes "and peripheral paralyzes" (p. 89); the use of the description "at rest" (p. 91) does not define the conditions in an individual who is trying to maintain his balance on one foot; the invocation of the concept of memory loss to account for functional paralyzes (p. 92) and for the aphasias (p. 95) is very questionable and probably gratuitous in view of the recent publications on the latter subject.

It is advantageous to get the facts clearly presented, and to indicate the possible or probable directions of explanation, but no good purpose is subserved by including meaningless and ill-formed statements. The criticisms are offered as additions and corrections; if space were available more points would be dealt with in the hope that the next edition will far surpass the second.

SHEPHERD IVORY FRANZ

GOVERNMENT HOSPITAL FOR THE INSANE

HENRY H. GODDARD. *Psychology of the Normal and Subnormal*. New York: Dodd, Mead, 1919. Pp. xxiv + 349.

The hypothetical flow of a postulated neurokyme over an imaginary neuron pattern is the keynote of explanation in Goddard's recent book, *The Psychology of the Normal and Subnormal*. The

book is written for "those beginning the study of psychology in Normal Schools and Colleges, teachers who read for themselves, parents who desire to understand their children." It will be interesting and profitable reading for all these people, but that it can serve as an introduction to general psychology is not probable, because it is not systematic, does not cover the whole field of general psychology, is practically silent on the elementary processes, has too much space given to inconsistent hypotheses, and shows practically no knowledge of recent experimentation in general psychology. One of the most frequent references is to James whose psychology was elaborated 32 years ago. There are 55 references, about half are psychological, practically none to original sources in the periodical literature of psychology.

The book begins with a discussion of the nervous system. The plates are good and the descriptions clear. But why should there be such a chapter in a psychology? Until we can *know* what nervous processes underlie conscious processes, and can formulate the laws governing these neural processes, nerve physiology can be of no service to psychology. It is the business of psychology to discover and formulate the laws and principles involved in the relations of stimuli to responses. For practical purposes these relationships are all we need to know. A college student having difficulty with his lesson will get no help from figure 18. A father looking for guidance in training his wayward son will get no assistance from figure 11.

In Chapter II Goddard discusses reflexes, instincts, perceptions and ideas. The discussion is in terms of neuron patterns. The reflexes and instincts depend upon inherited patterns. The author seems to accept the idea that consciousness is due to resistance in the synapse. "May it be," he says, "that two nerve fibers in contact or in close juxtaposition make manifest the energy otherwise imperceptible?" (p. 27). "The consciousness resulting from two or even twenty neurons is too faint to be consciousness, but when thousands are involved, it rises above the threshold" (p. 28). "Consciousness, especially in the higher thought processes is in some unknown way the result of some interference with the free flow of neurokyme" (p. 28). Neural interference gives rise to consciousness, the greater the interference, the greater the consciousness. When we come to Goddard's discussion of attention, we find that height of attention depends upon *ease of flow* of the neurokyme (p. 77). These two theories are inconsistent. In explaining the

conflict of stimuli in attention, we find (p. 79) the following: "There is a ready formed, instinctive pattern to which the stimulus of a loud noise instantly leads, arousing strong activity with its accompanying consciousness. But what becomes of the consciousness existent when the loud noise interrupted us? The answer is, it is eclipsed by the greater consciousness aroused by the stimulus." Thus, astronomy is brought to the aid of psychology! It has been a tradition in psychology now for some time to say that consciousness is due to interference in the flow of neural energy, when the least reflection or experimentation shows that the richest consciousness is in connection with *inherited* neural activity, in which case the flow must be easy and uninterrupted. In a violent emotion, so strongly do the processes involved hold the center or focus of consciousness, that other stimuli for the time can not be effective in arousing focal consciousness.

In chapters 4, 5, 6, 9, and 10, Goddard treats of memory, imagination, association, attention, and other higher processes. In his treatment of memory, in the main he follows Titchener. His explanation of the feeling of familiarity (p. 71) can hardly be satisfactory to the critical reader. We find the useless distinction between association by contiguity and similarity. On page 95, Goddard identifies them, but on pages 99 and 101 we find them to be different again. The author does not seem to see that identity of experience is the basis of all association.

On page 121, we find all important mental processes reduced to unity. "There is no possibility of differentiating (imagination, memory, association, attention) because they are all one and the same thing . . . only different phases of the same mental process" (p. 121). One might as well say that because a ball is both red and round, redness and roundness are one and the same thing, both being characteristics of the same ball.

In chapters nine and ten, thought and reasoning are discussed. "Thought appears when neurokyme in a simple neuron pattern is interrupted under conditions where there are associated neuron patterns into which that neuron energy may flow and lead to action" (p. 164). It is difficult to see in what sense "thought" is used. If *consciousness* is meant, the quoted statement can hardly be true. In the summary, p. 173, we read, "perception, judgment and reasoning are all phases of the thought process." Can it be that perception is due to interference? And can it be that "sensation is the consciousness of a stimulus"? (p. 165).

The psychology of learning is disposed of in a 14-page chapter on habit which shows no knowledge of the recent experimentation in this important field.

In his treatment of emotion, Goddard takes a position essentially the same as that of James. A situation sets into action various glands and other internal organs, by means of the sympathetic system. This activity sends to the cortex a complex stimulation which occasions sensations which are the essential part of feeling and emotion. We are not told whether feeling is another kind of sensation, whether it is a conscious element correlate with sensation, or whether it is an attribute of sensation.

One of the most interesting discussions of Part II concerns mental levels and their determination. In this field the author is at home and speaks from his large experience. The reader here finds helpful treatment of moral training, the relation of intelligence to control of the emotions, the moral imbecile, and various pedagogical applications of the facts discussed.

W. H. PYLE

UNIVERSITY OF MISSOURI

Downey, J. E. *Graphology and the Psychology of Handwriting*. Baltimore: Warwick & York, 1919. Pp. 142.

Dr. Downey has here summarized in compact form the present state of theory and experiment in the field of graphology and the psychology of handwriting. The material is presented in two sections. The first deals with three topics: (1) the basal concepts of graphology; (2) graphological methods, and (3) the graphological elements. The second section discusses some of the author's own experimental work on (1) the analysis of the factors entering into disguised handwriting, (2) the influence of mental and physical condition on handwriting, (3) the comparison of handwriting with other forms of motor expression, and (4) the comparison of graphological with character traits. Several of these studies are here presented for the first time. In the last named study the author discovered several very significant relationships, especially between small writing and interest in detail ($r = + .61$).

The main purpose of the book, as expressed by the author, "is one of orientation, preliminary to an attempt to use graphic activity in tests of temperamental or character traits." On the whole it serves its purpose well, though the person familiar with the tests