SCIENCE

SCIENTIFIC BOOKS

PSYCHOLOGY

Psychology: A Factual Textbook. By E. G. BORING, H. S. LANGFELD, H. P. WELD and Collaborators. xviii + 555 pp. John Wiley and Sons, New York, 1935.

DESPITE their yearning, since the middle nineteenth century, to make psychology look like physics and physiology, the psychologists have remained irrepressibly critical and philosophical, even in the presence of their undergraduate students. E. B. Titchener, some twenty-five years ago, and John B. Watson, a decade later, succeeded in writing thoroughly dogmatic text-books, but neither was able to set a style. Both of these authors achieved consistency by omitting material embarrassing to their own views on fundamental questions, and the majority of teachers have been unwilling to employ such arbitrary tactics. The persistent popularity of such a human and variegated work as Professor Woodworth's text is clear evidence that teachers of psychology still prefer a certain amount of confusion to any strictly doctrinaire treatment of their subject.

The editors of the present book are unwilling to admit, however, that a straightforward and non-philosophical treatment of the elements of psychology must necessarily be dogmatic. "Experimental psychology," they say, "has reached the stage of maturity. There is a vast amount of well-substantiated fact which forms the foundation of the science" and which "should be presented to the young student of psychology in terms free from the bias of metaphysical presuppositions or of psychological systems." Their aim, in short, "has been to present such a factual text as one would expect from a science." They have sought "to achieve, not a handbook encumbered with a mass of detailed information, dates, the names of investigators and the titles of monographs, but a generalized statement of fundamental facts in so far as generalization is possible at this time."

The gist of their method is to let current psychology tell its own story through the pens of nineteen active investigators. The book is by no means a recitation of disconnected facts, but the theories and hypotheses considered are those which are presumably open to experimental and factual settlement.

The success with which the book fulfills its aim is remarkable. The editors and authors have produced a continuity and lucidity which one rarely associates with collections of chapters by different writers. One gets the impression from the progression of the chapters and from the skilful employment of cross-references that the various contributors kept constantly in mind the larger story into which their individual chapters were to fit.

The general design of the work may be judged from the chapter titles: The Nature of Psychology, The Response Mechanism, Psychological Measurement, Vision, Audition, Taste and Smell, Somesthesis, Intensity, The Perception of Spatial Relations, Temporal Perception, The Perception of Movement, Perceiving, Learning, Imagery, Pleasantness and Unpleasantness, Emotion, Action, Thought, Personality.

The editors, themselves, feel that inequalities in the actual attainments of research within the various areas of psychology may have created an uneven balance among the several chapters of their book. Out of a total of 535 pages, about 90 are devoted to perception. The discussion of the measurement of intelligence, on the other hand, is compressed into seven pages. I find it difficult to believe that investigation in the field of perception has progressed more than twelve times as far as in the measurement of intelligence, but I am not sure that the editors have any need to apologize. I happen to believe that the topics of work and fatigue (which are omitted in this text) contain much more that is definite in the way of both method and conclusion than do other topics which are dealt with at considerable length. But this proves nothing; it simply raises the question whether the editors in their allotment of space were able to use as their basic criterion the actual progress attained in the various lines of experimental inquiry. They have probably put through a better book by following their own sense of the important rather than the statistics of titles in the journals or a mail vote of the American Psychological Association.

In short, the text before us is a solid but clear statement of the elementary facts and methods of psychology as these appear to a group of fair and able men who, though biased by the traditions of what is known as "experimental" psychology, have yet succeeded in producing a work that is essentially up-to-date and catholic.

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LIMNOLOGY

Limnology. By PAUL S. WELCH, professor of zoology, University of Michigan. McGraw-Hill Book Company, 1935, pp. xiv + 471. Price, \$5.00.

ALTHOUGH limnology is a youthful science, research has been very active in this field during the past three decades, and this has resulted in a voluminous and