

THURSDAY, SEPTEMBER 17, 1903.

## THE WORTH OF EXPERIMENTAL PSYCHOLOGY.

*Experimental Psychology and its Bearing on Culture.*

By George Malcolm Stratton, M.A., Ph.D. Pp. vi + 331. (New York: The Macmillan Company; London: Macmillan and Co., Ltd., 1903.) Price 8s. 6d. net.

THE aim of this well written and interesting book, we are informed, is "to present . . . the character and value of the laboratory psychology, especially as bearing on our moral and philosophical interests. . . . Considerable attention has thus been given to the interpretation of the experimental results—to their more immediate scientific meaning, as well as to what they suggest for life and for speculation." The work, however, contains little that is really relevant to "the bearing of psychology on culture." Such topics as the value and significance of memory, suggestion and illusions, and the relation of psychology to the body and to the soul, ably as they are treated, are hardly synonymous with culture; indeed, from start to finish the object of the book is by no means evident.

It is to be regretted that Prof. Stratton did not confine himself to "the immediate scientific meaning," the range and the worth of psychological laboratory work. Once or twice this task has been already attempted in our language, but it has not yet been satisfactorily performed. The need for such a work has never been greater than now, when the number of psychological laboratories and their workers is multiplying rapidly, while physicists and physiologists are for the most part ignorant of, and hence are prone to ignore and to condemn, the aims and methods of experimental psychology. To this class of readers the present work is not well suited, and will hardly carry conviction. It appeals more to an educated public, which prefers to nibble at the significance of experimental psychology, and to swallow certain inevitable crudities of statement, rather than to digest the subject with proper care. The ground covered by the book is too vast, and departures from purely experimental topics are too often and too far made to allow of a really accurate and critical exposition. For this reason, no doubt, the author has made little attempt to exhibit the various themes of experimental study in their proper perspective. He has been forced to neglect some of the most important advances in purely psychological method, e.g. the work of G. E. Müller and his Göttingen school, and the genetic and comparative sides of experimental psychology; while undue space is given to some trivial experiments in æsthetics that have scant meaning or interest, and a few others are made to bear interpretations which are far from being justified in fact.

"Some recent experiments by Dunlap," says the author (pp. 88, 89), "show that lines, so drawn as to produce an illusion of distance [*i.e.*, the angle-forming lines in the well-known illusion of Müller-Lyer], may influence our estimate of space even when these lines are quite imperceptible."

Reference, however, to the statistical results of the

original paper and to its writer's own convictions shows that this conclusion is by no means so certain. The author uses these and other considerations in his chapters on the evidence for unconscious ideas. He ends with the statement (p. 92) that

"the results are not in favour of unconscious ideas, but rather of certain unconscious materials out of which conscious ideas arise."

One is tempted to ask how he can be sure, if the "materials" are unconscious, that they *are* "materials" and not "ideas." His psychological treatment of poetical rhythm is not convincing, the subject being too complex to tolerate an acrobatic arithmetic which connects all measures with "the pulse-time of attention." Probably the latter bears about the same relation to our appreciation of rhythm as our range of hearing to the enjoyment of a Beethoven symphony. Nor is it the whole truth, albeit the fashion to say (p. 269) that "what goes on in our minds never is really there until it is expressed," and that "in all manner of mental action there is some physical expression."

The chapters on the general character of psychological experiments, on imitation and suggestion, on illusions, and on the spatial perceptions of the blind, are quite ably and entertainingly written. The author's classification of illusions leads to curious results. He groups the illusion, in which a large box is judged lighter than a smaller box of equal weight, in the same class with the two fundamentally different illusions, in which truly isochronous intervals are subjectively resolved into rhythmic series, and in which a space of time filled with sounds is adjudged of different length from an equal but "empty" space of time. This class of illusions is said to arise "from stress of attention"! We are told also (p. 106) that within this class "the symbols themselves do not seem to be misinterpreted, they have been distorted . . . by our mental states." Elsewhere the author admits that *all* illusions "involve a misinterpretation."

But sufficient has been said to give a general notion of the faults and virtues of this book. In broad principles there is little to which the psychologist can take exception. Its style and language appear to be excellently suited to its readers, and the author has an adequately wide grasp of his subject. If he has failed in his task, the reason is because he has attempted too much. For to treat of the problem, which he has set himself, in three hundred or more pages is as impossible as it is to do justice to his bold endeavour within the compass of this review. C. S. MYERS.

## HYDRAULICS.

*Treatise on Hydraulics.* By Mansfield Merriman, Professor of Civil Engineering in Lehigh University. Eighth Edition, Rewritten and Enlarged. Pp. viii + 585. (New York: John Wiley and Sons; London: Chapman and Hall, Ltd., 1903.) Price 21s. net.

THIS book bears the same title, has practically the same number of pages, and is published by the same firms, as a book by Prof. Bcvey, of McGill University, Montreal, which appeared in 1901, and was reviewed in these columns in February last year.