

tailed consideration than is here given to it, or might have been illustrated by concrete examples. Criticism of Dr. Strong should, however, accept his own view of the peculiar difficulties of his task: "This task appears to me difficult because, while much is said nowadays of the importance of a scientific conception of history, I do not think there is anything like the same agreement about the character of scientific history as exists in the case of most other sciences."

"The course as delivered in Oxford was received with great satisfaction." So we are told. There can be little doubt of it. One can readily believe that the audience remained in generous attendance to the end. But it is hard to believe that they were much enlightened on the method of science.

FREDERICK J. E. WOODBRIDGE.

COLUMBIA UNIVERSITY.

Essay on the Creative Imagination. TH. RIBOT. Translated from the French by ALBERT H. N. BARON, Fellow in Clark University. Chicago: The Open Court Publishing Co.; London: Kegan Paul, Trench, Trübner & Co. 1906. Pp. xix + 370.

Mr. Baron has done us a service of some value in rendering into English M. Ribot's monograph on the creative imagination. The translation sticks somewhat closely to the original idiom, but this is a virtue rather than a fault. The book is neatly gotten up, well printed, with a good index. It forms a valuable addition to the psychological literature on imagination, and it is to be hoped that some of the other French monographs on kindred topics will receive a similarly respectable English dress. It is strange that some of the recent French monographs on attention, will, etc., should have been prepared in English, and then been done into French. This, however, is by the way.

I shall by no means attempt to give an adequate account of the contents of the book. As it has been translated into English, it is accessible to any one choosing to look up the subject further. In the following remarks I shall try rather to call attention to the striking features which are in evidence.

As the title indicates, the subject is restricted to 'Creative Imagination.' No discussion in full of memory or association is to be expected. But imagination as it is usually understood is treated in full. As M. Ribot insists, creative imagination is something more than reproductive imagination, or memory. "In imaginative creation we have several co-operating images, with combinations, coordination, arrangement, grouping" (p. 8). After having defined the subject, M. Ribot proceeds to discuss imagination under the following heads: Analysis of the Imagination, Development of the Imagination, Types of Imagination, Conclusion and Appendices.

Analysis.—As regards its intellectual aspects, imagination presupposes a negative operation, dissociation, and a positive operation, association. In the process of dissolution images may become incomplete, schematic, or they may remain more or less complete. In the association of such

images, the laws of contiguity (or continuity) and similarity operate, each having a specific method of its own. As a special form of resemblance, analogy is most in evidence in the processes of creative imagination. As regards the emotional factor, "all forms of creative imagination imply elements of feeling. . . . All invention presupposes a want, a craving, a tendency, an unsatisfied impulse, often a state of gestation full of discomfort" (p. 32). This impulse then takes a more or less definite form under guidance of a series of images. An unconscious factor exists in what is usually termed 'inspiration.' By association, mediate or otherwise, some form, complex or series of images is evolved, and flashes upon consciousness. But M. Ribot insists that such a state can not follow from any mental vacuum, but is rather the result of long and profound mental activity.

Development.—In the second section of the book development of creative imagination is taken up in a treatment of imagination (1) in animals, (2) in the child, (3) in primitive man and myth creation, and (4) in the higher forms of invention. A good idea of M. Ribot's full discussion of these topics may be had by reading carefully Chapters I. to IV. of the second part of the book.

Types.—The chief types of creative imagination M. Ribot finds in the plastic imagination, the diffuent imagination, the mystic imagination, the scientific imagination, the practical-mechanical imagination, the commercial imagination, and the utopian imagination. M. Ribot uses the term 'plastic' in a manner somewhat different from that of Professor Baldwin. M. Ribot considers plastic imagination that which makes use of clear images well defined in space, and guided by objective associations. It is used chiefly in arts dealing with form, as in poetry, myths and mechanical inventions. The diffuent imagination makes use of vague images loosely connected by association. It is manifested in reverie, romantic dreaming, religious conceptions, literature and the fine arts. The mystic imagination is concerned chiefly with symbols, and exists in religion and metaphysics. The scientific imagination is most exacting since it must represent 'not only the elements of the past and the present, but in addition construct a picture of the future according to probable inductions and deductions' (p. 238). In addition a rigorous use of reason is necessary to give method to chains of images. "It is the imagination that invents, that provides the rational faculties with their materials, with the position and even the solution of their problems. Reason is only a means for control and proof; it transforms the work of imagination into acceptable, logical results" (p. 243). The practical and mechanical imagination gives rise to invention, the commercial imagination deals with schematic images, while the utopian is concerned with social and ethical problems.

Almost too sketchily have I given some of the features of the book. I have omitted almost entirely any mention of M. Ribot's excellent treatment of invention, of the organic conditions of imagination, of the principle of unity, and of the appendices and conclusion.

Underlying the entire discussion of imagination are the following

sound principles, as emphasized by the author: (1) In invention and creative imagination there is no general faculty. Only specific genius is possible as shown in stated instances. (2) Special conditions determine to a great extent the progress possible, and the validity of imaginative creations. (3) Imagination is not a power *in abstracto*, but is simply the interplay of material peripherally acquired, because of emotional impulsion.

As I have said above, it is impossible in this review to do more than suggest the method of treatment pursued by the author. The full explanation is to be found in the book itself, which is now accessible to all through the translation of Mr. Baron.

FELIX ARNOLD.

NEW YORK CITY.

JOURNALS AND NEW BOOKS

THE AMERICAN JOURNAL OF PSYCHOLOGY. July, 1906, Vol. XVII, No. 3. *The Psychology of Organic Movements* (pp. 293-305): I. MADISON BENTLEY. - A critical survey of the recent tendencies in psychology to emphasize the motor side of consciousness, and a warning against the danger of making some aspect of it, *e. g.*, attention, the vague all-explaining entity that the conception of soul formerly was. *The Habits, Instincts and Mental Power of Spiders, Genera Argiope and Epeira* (pp. 306-357): JAMES P. PORTER. - The main point brought out by this study is the variability of the instincts of spiders. This is probably the basis for the development of new species, and possibly the starting-point for the development of intelligent action. *A Study of the Affective Qualities. I. The Tridimensional Theory of Feeling* (pp. 358-393): SAMUEL PERKINS HAYES. - The experiments made give no evidence for the tridimensional theory of feeling advanced by Wundt, but support the dual theory in its traditional form. *Accuracy in Handwriting as Related to School Intelligence and Sex* (pp. 394-405): ARNOLD L. GESELL. - Accuracy in handwriting is found to vary directly as school intelligence, and hence forms a very convenient test in the elementary schools. *The Effect of Music on Thoracic Breathing* (pp. 406-414): EUGENIA FOSTER and E. A. McC. GAMBLE. - Music (1) tends to make breathing faster and shallower; (2) has no effect on the regularity of breathing; (3) no pronounced differences shown between the effects of loud and soft and major and minor music. *Psychological Literature. Book Notes.*

Davidson, Thomas. *The Philosophy of Goethe's Faust*. Six lectures delivered in the winter of 1896 at Cambridge, Mass. Edited by Charles M. Bakewell. Boston: Ginn & Co. 1906. Pp. iv + 158. \$0.60 net.

Fournier, E. E. *The Electron Theory*. London: Longmans, Green & Co. 1906. 5s.

Hobhouse, L. T. *Morals in Evolution*. Two volumes. London: Chapman & Hall. 1906. 21s.