

since to the less important association of eye and ear an entire chapter is given. The consideration of migraine and hysteria leaves much to be desired. The colored pictures of the fundus are rather sketchy. The index is not as complete as it should be to permit rapid reference, nor is the paragraphing well marked. The work of the publisher is excellent as regards paper and type. The unusual breadth of page gives a sense of solidity to the text which is hardly restful.

In spite of these faults and certain minor errors in the spelling of proper names, the book is a creditable one and with its very excellent companion volume will no doubt prove a useful addition to medical literature.

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SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Comparative Neurology and Psychology for September is devoted almost entirely to psychological papers. Mr. Charles Scott Berry first gives the results of an investigation of 'The Imitative Tendency of White Rats,' made at the Harvard Psychological Laboratory. One animal was taught various tricks alone and then observations were made to determine how far others would learn the tricks from him by imitation. He concludes that voluntary imitation (Morgan's usage) of a certain type does exist in white rats; and though this is not of as high degree as that discovered by Kinnaman in his experiments with monkeys, it is not different in kind. The next two papers are fragments selected from a large mass of MSS. by the late C. L. Herrick left unfinished at the time of his death. In 'Applications of Dynamic Theory to Physiological Problems,' Dr. Herrick applied in a concrete way to the problems of heredity and vitalism the conception of 'dynamic monism' which he had begun to develop in the philosophical journals. This is followed by a brief note on 'Imitation and Volition,' suggested by one of Professor Mark Baldwin's discussions. In the editorial column, under the title, 'Objective Nomenclature, Comparative Psychology and Animal

Behavior,' Dr. Yerkes critically reviews the work of the objective school, and the methodological problems involved are discussed from a somewhat different standpoint by Dr. Bawden. Book reviews complete the number.

The Journal of Nervous and Mental Disease for October opens with an article by Drs. Mills and Weisenburg presenting the following propositions: (1) that the cortical representation of cutaneous and muscular sensibility is independent of motor representation, that it surrounds the motor zone; and that it is subdivided into a mosaic of centers, each center or group of centers being anatomically and functionally correlated to a motor center or centers; (2) that every muscle or group of muscles producing a movement or movements which are represented by separate centers in the cortex is topographically related to a segment of the skin which has also a definite cortical center, this center being correlated anatomically and functionally with the motor center; (3) that stereognostic representation like that of cutaneous and muscular sensibility and of movements has also its independent cortical area and is subdivided after the manner of the motor and sensory areas. This is followed by a continuation of a paper by Dr. Amberg, begun in the September issue, giving the histories of a number of cases of ear affections and mental disturbances.

DISCUSSION AND CORRESPONDENCE.

ON THE DOPPLER EFFECT.

IN a recent number of *SCIENCE* (Vol. XXIV., p. 250) there appeared an article by Dr. Paul R. Heyl suggesting a plan for increasing the Doppler effect by observing a rapidly moving image instead of a moving source, the motion being magnified by placing the source just outside of the focus of a converging mirror. If, however, we consider that the wave-length of the separate rays (or, if preferred, of the elementary pencils) is independent of their point of intersection—in other words, of the position of the image—it appears that the only modification of wave-length observed in an instrument at rest relatively to the mirror will be due to the m-