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MASS ACTION IN CEREBRAL FUNCTION¹

By Professor K. S. LASHLEY

DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF CHICAGO

INTRODUCTION

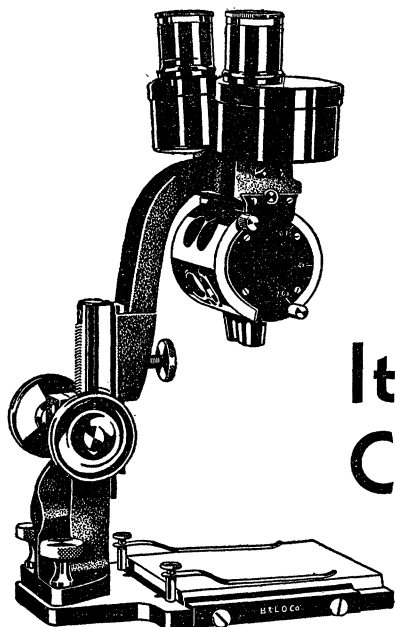
IN the field of neurophysiology no fact is more firmly established than the functional differentiation of various parts of the cerebral cortex. We are removed from Flourens by nearly 75 years of intensive anatomical research which has settled beyond question the histological diversity of the cortical fields and of their connections with subcortical nuclei. A wealth of physiological and clinical evidence accords with the anatomical findings and proves the association of at least the majority of the cortical fields with special functions. No one to-day can seriously believe that the different parts of the cerebral cortex all have the same functions or can entertain for a moment the proposition of Hermann that

because the mind is a unit the brain must also act as a unit.

Yet the problems of localization and of cerebral physiology are far from solved by the demonstration of the anatomical diversity of the cortical fields and of consistent symptoms following the destruction of each. From the practical view of diagnosis there are still problems of the fineness of localization, of the types of functions which are localizable, of the significance of individual variations, and the so-called negative cases.

Symptoms involving purely sensory or motor defects have the most certain diagnostic value: a monoplegia or a limited zone of cutaneous anesthesia are surely indicative of a focal lesion whose position may sometimes be predicted within a few centimeters. But a defect of color vision, a disability in reading, an

¹Lecture delivered before the Harvey Society, New York, November 20, 1930.



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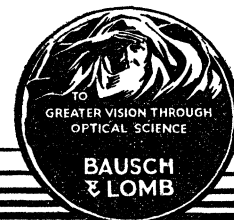
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