BOOK REVIEW


This brief monograph, 91 pages of text, is a valuable addition to neurological literature. It is the first completely reported and documented study of the cytoarchitecture of the cerebral cortex of the macaque monkey. It consists, primarily, of a discussion and illustrations of the various areas of the cerebral neocortex. The 62 plates, reproduced by the colotype process, illustrate the microscopic appearance of these areas and are truly remarkable examples of the printer’s art. They are clear and sharp and have all of the value of photomicrographs as compared to half-tones.

In addition to this atlas and related descriptive text, the monograph contains brief discussions of brain growth and weight and of the fissural pattern of the cerebral cortex of the monkey. Following the description of the cytoarchitectural areas the authors developed a “brain map,” which is illustrated by a colored frontispiece. This map is discussed and either correlated with or compared with the maps and observations of others, notably Brodmann, who has studied the brain of the monkey. In this section, as well as elsewhere in the monograph, the authors have pointed out that the “쿠어스하르프” borders which the Vogts stated formed the boundaries of the various cytoarchitectonic areas are, for the most part, not demonstrable. They note that most of the areas merge gradually into those about them. This is a much needed, constructive alteration in the general concept of cerebral architecture. The authors have also pointed out that physiological areas do not necessarily coincide with demonstrable cytoarchitectural areas and that physiological differences are often present unassociated with any distinctive cytoarchitectural pattern. Physiological differences may, of course, rest upon variations in the intracortical connections or in the efferent and afferent connections of the various cortical areas, rather than upon differences in the arrangement of the neuronal elements of the cortex. The authors are fully aware of this and the last chapter is devoted to a summary of present knowledge of the efferent and afferent connections of the various areas which they have defined.

The complexity of the cerebral cortex has confused many observers and has apparently not completely spared the present experienced investigators. Although they have stated in the text (p. 31) that they can find no areas worthy of being distinguished by the individual designation of Area FDE, they have devoted two plates (XIV and XV) to an area so designated. The same is true of area FDL (Pl. XIX) and area FDC (Pl. XX). Area FG, illustrated by plate XXIII does not seem even to be mentioned in the text (p. 32). On the other hand, although the authors apparently recognize an area OB or OBg such an area is not designated in the plate XLIX which illustrates it. What is meant by Area FAB (p. 35) is not clear; possibly FBA is meant. Since, however, the location of each plate is indicated in figures 4–7 no serious confusion results.

One might wish that such important areas as TC and PB on the lateral surface were more clearly indicated on the colored map which serves as a frontispiece. Although a correlation of the authors’ findings and alphabetically designated areas with Brodmann’s map and numerically designated areas is inherent in Chapter VI (pp. 57–79), many readers, particularly those not intimately familiar with such studies, will rightfully wish for a more concise, even tabular statement of such a comparison. Lastly, it appears to this reviewer that an intensely detailed, highly specialized scientific study such as this, which must of necessity serve in many instances as a reference work, suffers materially from the lack of an index.

Obviously these criticisms are all minor and any deficiencies in the book which they may represent are trivial as compared with the excellence and value of this study.

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