the *Acta Radiologica Supplement* of 1944 by Caspersson and Santesson on the protein metabolism of tumors, this statement must evoke a wry smile. However, this book does mention the tumor material of the 1944 book under the heading of "disturbed systems for protein metabolism," after having described the undisturbed systems in normal metazoan cells. It covers the subject of protein synthesis in a general sense by including a description of the process in bacteria and in viruses. Dr. Caspersson's diagrams showing protein reproduction, and virus reproduction, are thought-provoking and help enormously, along with the generous number of graphs and photographs, to supplement the sketchy text.

By virtue of its brevity this is a stimulating book in that it sets forth ideas in concise form about the mystery of the everyday creation of cells. Although incomplete, these ideas are important now; for there is a great need of new concepts about the fundamental mechanism of cell reproduction. The newcomer to the subject of microspectrometry of cells will find here a quick introduction and survey of the subject. The expert will hope that this book may become the starting point for a more detailed "treatise" on living matter.

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The Cerebral Cortex of Man: A Clinical Study of Localization of Function. Wilder Penfield and Theodore Rasmussen. New York: Macmillan, 1950. 248 pp. $6.50.

Penfield and his associates have given us a series of important papers and monographs concerning cerebral function, and this study is another important contribution. It covers some old ground by presenting evidence concerning epileptic attacks and cortical ablation in different areas of the cortex and in describing some effects of electrical stimulation of the cortex in conscious human patients. It is the first time, however, that we have a relatively complete account of stimulation-work for a wide variety of cortical areas. It is this fact, and the conclusions that come out of it, that make this monograph truly valuable.

The Cerebral Cortex of Man describes the many observations that have been made during brain surgery of the perceptions, memories, and thoughts evoked in patients by electrical stimulation of different cortical points. The method confirms and elaborates what we already know about the position and organization of the primary somatic and motor areas. When these areas are stimulated, patients give simple movements or report primitive sensations. The monograph further tells, however, of the existence of a second motor area at the foot of the central sulcus along the rostral border of the lateral fissure. And it reveals that there is a supplementary motor area in the dorsal and medial part of the frontal lobe just in front of the classical motor points for the feet and toes.

The monograph also throws some light on the mechanisms of aphasia. It describes the prompt arrest of speech when either the supplementary motor area or the sensorimotor regions representing speech are stimulated. More important is the fact that an aphasic arrest may be produced by stimulating three different areas: a frontal area approximately the same as Broca's classical area, a parietal area at the posterior end of the lateral fissure, and a temporal area in the occipitotemporal region.

Extremely interesting to neurologists and psychologists alike are observations that complex perceptions and memories can be elicited by stimulating some of the "association" areas of the cortex. Stimulating the secondary sensory areas evokes complex sensations or perceptions, and stimulating the temporal lobe produces relatively complex sequences of memory.

Penfield and Rasmussen put forth some interesting interpretations of their data. Among them is the idea that memory patterns are localized primarily in the temporal lobe and that the elaboration of thought is a function of the frontal lobe. They also argue that the center for the integration of consciousness and complex processes is not in the cerebral cortex but in the diencephalon, and they have good evidence to bolster this notion.

This is not the place to give further details of this monograph. Suffice it to say that this is an extremely important contribution, because it presents new and convincing evidence about cortical function and new hypotheses about the physiological mechanisms of perception, memory, thought, and consciousness.

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Scientific Book Register

The Anatomy of the Gorilla. The Henry Cushier Raven memorial volume; a collaborative work of The American Museum of Natural History and Columbia University. William King Gregory, Ed. New York: Columbia Univ. Press, 1950. 259 pp. $15.00.

Dementia Praecox or the Group of Schizophrenias. Eugen Bleuler; translated by Joseph Zinkin. New York: International Universities Press, 1950. 548 pp. $7.50.

Chemistry and Biology of Proteins. Felix Haurowitz. New York: Academic Press, 1950. 374 pp. $5.50.

The Climate near the Ground. Rudolf Geiger. Translated from 2nd ed. of "Das Klima der Bodennahen Luftschicht" by Milroy N. Stewart *et al.* Cambridge, Mass.: Harvard Univ. Press, 1950. (For the Blue Hill Meteorological Observatory.) 482 pp. $5.00.

The Primeval Atom: An Essay on Cosmogony. Georges Lemaître; trans. by Betty H. and Serge A. Korff. New York: Van Nostrand, 1950. 186 pp. $3.00.

Cell and Psyche: The Biology of Purpose. Edmund W. Sinnott. Chapel Hill, N. C.: Univ. North Carolina Press, 1950. 121 pp. $2.00.

German-English Technical and Engineering Dictionary. Louis de Vries. New York: McGraw-Hill, 1950. 928 pp. $20.00.