

section upon pachymeningitis externa and interna are painfully alike; the etiological consideration of these affections being especially tiresome, and there is the sameness which is so highly characteristic of German literature. The nomenclature is bewildering in the extreme. Pachymeningitis externa, pachymeningitis interna, leptomeningitis infantum, tubercular meningitis, basilar meningitis with great ventricular effusion, spontaneous purulent meningitis of the convexity, traumatic meningitis, metastatic meningitis, meningitis of the convexity, convexity meningitis of unknown origin, are a few of the forms mentioned, which, we think, might be condensed under three or four headings; and it is impossible, without great labour and an unwarranted expenditure of time, to discover what one really desires to find out in this badly arranged collection of matter.

Hitzig's articles upon atrophy of the brain conclude the book; and that upon general paralysis of the insane is especially good in its description of pathological changes. The bibliography of the subject is quite extensive, but one cannot help noticing the absence of English names from the list.

The defect of the volume before us seems to be the verbose character of all the articles, and it is necessary to read many dry uninteresting pages before one is reached which contains the information of which we are in search.

A. McL. H.

ART. XXXII.—*Clinical and Physiological Researches on the Nervous System.*

No. 1. *On the Localization of Movements in the Brain.* By J. HUGHLINGS JACKSON, M.D., F.R.C.P., etc. 8vo. pp. xlvii., 37. London: J. & A. Churchill, 1875.

THE present essay first appeared in the *Lancet* in 1873. It is now the intention of the author to collect certain of his fugitive contributions to neurology, that have been published during the last few years in the *Lancet*, *Medical Times and Gazette*, *London Hospital Reports*, *Royal London Ophthalmic Hospital Reports*, etc., and issue them in uniform style, with preface, annotations, and appendix, to bring them to date and make them fully in accord with more recent observations. The others of the series, announced as preparing, are "On Tumors of the Brain and Optic Neuritis," "On Syphilitic Affections of the Nervous System," "Affections of Sight in Diseases of the Nervous System," and "The Physiology and Pathology of Language."

The views of Dr. Hughlings Jackson on the localization of movements in the brain are sufficiently familiar to our readers to warrant the omission of an extended notice of this reprint, the preface to which is rather more extensive than the original article.

The general principle underlying this clinical study may be briefly stated to be that paralysis and convulsion are not only symptoms of disease, but supply evidence bearing on the localization of movements and impressions in the brain, which, from this point of view, becomes the study of the effects of "destroying lesions" and of the effects of "discharging lesions." So that these symptoms represent experiments on the human brain made by disease, and their phenomena may be considered as imperfectly imitating and supplementing the investigations upon inferior animals made by the hand of the physiologist.

Some of the conclusions of the author may be very briefly summarized as follows:—

Molecular motion is the *sub-stratum* of all mental processes, including sensation and memory.

All the muscles of the body are represented both in the cerebrum and cerebellum, though in different order; the convolutions of the hemispheres, being the highest centres, potentially embrace all the lower, and hence represent the entire body, including heart, bloodvessels, and viscera.

The two cerebral hemispheres correspond in function, although movements of the two sides of the body are represented in different order in each side of the brain; in other words, convolutions similarly situated will not necessarily coincide in function.

In most people the left side of the brain is the leading (motor) side—the side of the so-called ‘will,’ and the right is the automatic (motor) side; . . . but the right may be the leading side for perception—educated sensations.

In general terms the anterior portion of each hemisphere is more largely motor; while the posterior, inferentially, principally serves the sensory aspect.

The brochure is dedicated to Hitzig and Ferrier, whose experiments are repeatedly referred to. A delicate question of priority may be considered as being raised by the statement that the author, “for more than ten years, and before the experiments of Hitzig and Ferrier were made, held that convolutions contain nervous arrangements representing movements.” The labors of these gentlemen, however, are mentioned in the highest terms, and declared to be of inestimable value for the furtherance of clinical medicine, comparative anatomy, and physiology.

One point of practical importance to medical writers is brought forward in the form of a suggestion or outline of the manner in which convulsions should be observed and described.

“After noting the part in which the fit begins, we have to observe how the spasm spreads (the ‘march of the fit’), and this for two purposes. We have not only to learn how much of the body is involved in the spasm, but also to note the order in which the several parts involved are affected. For example, we have not only to report of a case that the spasm ‘affected the whole of one side of the body,’ but also that ‘the spasm began in the hand, spread up the arm, next took the face, and then passed down the leg.’ We have to note not only the range of a fit, but the order of development of movements, one after another, in that range. Or, speaking now of the nerve centres, we have to study convulsion not only to learn what particular movements are represented in a nervous centre (anatomical localization), but also to learn the particular order in which those movements are therein represented (physiological localization).”

Did space permit, a number of other interesting topics might be referred to, such as aphasia and the physiology of language, that we would gladly discuss; suffice it to say, that the name of the author may be accepted as sufficient guarantee for the quality and character of the work.

F. W.

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ART. XXXIII.—*A Course of Practical Histology: being an Introduction to the Use of the Microscope.* By EDWARD ALBERT SCHÄFER, Assistant Professor of Physiology in University College, London. 12mo. pp. 304. Philadelphia: Henry C. Lea, 1877.

This is a small octavo volume of about 300 pages, illustrated by engravings on wood, and is a very complete and thorough guide to the study of practical histology. The author shows himself to be entirely “au courant” with the latest additions to microscopic work, and the directions for preparing the different specimens are full and clear. The book contains an introductory, twenty-one chapters