

Part III.—Epitome of Current Literature.

1. Neurology.

The Functions of the Prefrontal Lobes in Relation to Anatomical Data [*Le Funzioni dei Lobi Prefrontali in Rapporto ai Dati Architettonici*]. (*Rev. di Patol. Nerv. e Ment.*, Sept., 1911.) Roncoroni, L.

In this careful and elaborate article, it is Prof. Roncoroni's aim to ascertain what conclusions can be drawn concerning the functions of the frontal region of the brain when the new anatomical data are brought into relation with clinical data and experimental data. The most various and divergent opinions have been put forth concerning the functions of this region from the now exploded view that it is the special seat of intelligence, to the view of Sciammana that it is the centre for organic innervation. Clinical evidence by itself has thrown no light on the matter, and Roncoroni divides into nine groups the widely divergent evidence furnished by clinical observation. Some cases have shown no psychic lesion; in others the symptoms were clearly due to general cerebral pressure; in others they were epileptoid; in others simple disturbance of memory and judgment; and so on. These discordant results are not difficult to account for; it is seldom possible to be sure that the pathological process is really limited, and in the case of tumour, for instance, no conclusion can be safely drawn until histological examination of the whole cortex has shown that there are no diffused lesions. Traumatic lesions furnish the most satisfactory evidence. In such a case, studied by the author, the lesion was limited to the left prefrontal lobe. At the outset motor aphasia appeared, but only lasted a few days. There was no apparent change in intelligence, emotional tone, moral feelings, or attention. The patient was, however, torpid. Partial verbal amnesia appeared. There was no difficulty in articulation. Errors in arithmetic were constantly made. There was also deficiency of facial expression. No psychic blindness, verbal blindness, or verbal deafness.

The results of experiment, also, when taken alone, are highly unsatisfactory. The removal of even the total hemispheres may have apparently little effect; there are great divergences in results even within the same species, and it is impossible to ascertain directly what the sensations of animals are.

As regards anatomical data, Roncoroni follows the modern tendency in regarding fissures and convolutions as comparatively unimportant as compared to areas characterised by similarity of structure. He describes his own studies of the frontal lobes, the results not altogether agreeing with those of Brodmann and Vogt, but he admits the discrepancy may be merely individual or due to difference of method. If, however, anatomical structure corresponds to function, we must believe that the prefrontal region has no definitely motor or sensory functions, but that the frontal lobe is, however, closely connected with the other cortical zones and subcortical ganglia,

As the author regards the matter, the psychic phenomenon can only be scientifically considered as resembling a reflex, with afferent, efferent, and intermediate phases. Many centres and many paths in the most varied parts of the nervous system must take part in this reflex psychic arc, which must be enormously more complex than a spinal arc, and it is impossible to admit those theories which would assign to intelligence, memory, will, consciousness, etc., a limited seat in the frontal lobes. The psychic arc must be regarded as including a whole series of paths and centres. So far as any definite statement can be made as to the prefrontal lobes, Roncoroni would say that they are concerned with "the elementary functions of that part of the reflex psychic arc which corresponds to the associations which are on the threshold of a conscious act."

HAVELOCK ELLIS.

Histological and Experimental Researches on the Choroid Plexuses
[*Ricerche istologiche sperimentali sui plessi coroidi*]. (*Riv. Sper. di Fren.*, vol. xxxvii, fasc. 1 and 2.) Pelizzi, G. B.

In a publication of over 100 pages, Pelizzi gives an account of his investigations of the histology of the choroid plexuses. Frogs, birds, and various mammals furnished the material, but for purposes of experiment rabbits and then dogs, cavies and frogs were preferred. Due note is taken of the work of other authors. The main conclusions arrived at are as follows: Throughout the vertebrate series the choroid plexuses present essentially analogous features in their histology. In all species the nuclei of the cells contain nucleoli, granules and chromatinic filaments, and clearer roundish spaces of the karyoplasm free from chromatinic substance. The cell-protoplasm contains globoplastic granules, initial globes, and globes in course of secretion. For a long period of foetal life the choroid plexuses in bird and mammals are furnished with a large number of granular embryonal cells. In the human foetus these reach an enormous proportion and size. They consist of an accumulation of fatty droplets, with also some droplets of fatty acid disposed round the nucleus. This fat and fatty acid present special microchemical reactions. Small droplets of a fat which reacts like the neutral droplets of the granular cells are found irregularly scattered in the protoplasm of the choroid epithelium in course of formation. These granular cells and fatty droplets in the protoplasm begin to disappear before birth, and are entirely absent after the first stages of extra-uterine life; *pari passu*, the epithelial protoplasm assumes definite histological characters. The hypothesis might well be advanced that these elements are constructive cells destined for the formation of a part of the choroid epithelial protoplasm, and hence of the lipoid wall of the secretory globules formed from that part of the protoplasm. This lipoid wall, dissolved in the cerebro-spinal fluid, might then exercise a myelogenic action after the fashion suggested by Wlassak and Merzbacher in the case of the embryonic granular cells of the central nervous system. The granular cells of the plexus have probably a hæmatogenous origin.

The epithelial cells contain globules with a lipoid wall. These contain, dissolved in their plasma, a substance which presents microchemical reactions analogous to the nuclear and globoplastic granu-