ON SOME OF THE NEWER ASPECTS OF THE PATHOLOGY OF INSANITY.

BY W. LLOYD ANDRIEZEN, M.D.LOND.

Pathologist and Assistant Medical Officer, West Riding Asylum.

INTRODUCTORY.

THE study of the central nervous system, its origin, and the evolution of its structure and functions, and their correlation to the actual life of the organism is interesting to every student of Nature, and not merely to the neurologist or the alienist. Between the latter two classes of workers a gap has hitherto existed : the neurologist pure and simple, mainly restricting himself to the study of "nervous diseases" and their elucidation, based on general researches in neurology and having no distinct relation apparently to insanity, has lived and worked in a world by himself : the alienist in a more isolated, and also more easy-going fashion, having mainly to deal with so-called "mental disease," the phenomena of which he naturally supposed could be unravelled by metaphysical and psychological speculation, went further out of touch with the neurologist, and contributed to further widen the gap between these two.

The recent growth of a more scientific spirit of inquiry in psychology after the methods and spirit of Darwin, and the more recent and important neurological discoveries since 1870, have slowly tended to bring more and more together these two branches of study. The gradual recognition of the inadequacy in the methods of the older metaphysico-

psychological writers, and the increased interest in the study of the brain and nervous organs themselves by various physiological and pathological methods, and the further feeling that an attempt should be made to correlate these with the actual activities of life, growth, and conduct of the individual—all these are slowly working towards the desired result.

Under the old *régime*, which is not yet dead, insanity cannot be said to have fared well or worthily. For even so recently as half a century ago it had been looked upon with aversion and horror, as a thing apart in the domain of medicine, a thing horrible and analogous to demoniacal possession (as, *e.g.*, epilepsy, which was called *morbus sacer*, the holy disease, by the ancients), and its early treatment by exorcism, holy water, stripes and chains, immersion, and other methods, were the natural outcome of ignorance and superstition till Philippe Pinal in France, and after him William Tuke in England, inaugurated the beginnings of a more gentle and humane system in the treatment of the insane.

But little progress could be said to have been made in the study of insanity and its treatment, till physicians came to look at it in precisely the same way as they did ordinary disease; to study mind as a brain function which is found in nearly all animals in varying degrees; which in man arises from small beginnings like any other function, then gradually develops and attains the acme of its complexity and activity in adult life, and finally fails and disappears with the decay of old age—in a word, as distinctly correlated with the anatomico-physiological development, growth, and decay of the brain and nervous system.

Later discoveries in physiology pointed more strongly to the same conclusion, especially since the representations of certain bodily functions (higher sensations and perceptions, muscular movements, and complex acts of conduct) came to be located in the brain, and their intimate association with one another, and with mental activity shown to exist. Biological studies in the development and life histories of nervous systems throughout the animal kingdom, the sociological study of heredity as influencing mental like other

disease, have all contributed to show that the insanities, like other variations in the organism, are subject to natural selection, and may be perpetuated in the race through favouring causes; that in this way hereditary qualities and potentialities for evil or good leave their seams and tracts in the organisation of the human brain, rendering it potent under suitable stresses of the environment to issue in insanity, vice, and crime. This aspect of the problem I have discussed elsewhere.¹

The most reasonable hope, therefore, of obtaining knowledge seemed to lie in our investigation of the insanities, not merely as so many complexes of psychical symptoms—the short and easy method of the symptomatologist and speculator—but in their relation to the known and growing facts of neurology, both neuro-physiology, neuro-histology, and embryology, as applied to the further study of the brain, including its evolution and dissolution in man and animals. Such work has only been possible since the last quarter of a century.

Bases for Study.

Four great factors have contributed to the building up of such a foundation on which alone the scientific study of the insanities can be really based, and these may be passed in review in chronological order.

The first and earliest, the doctrine of the localisation of function in the cerebral cortex of animals and man, beginning with the researches of *Broca* before 1870, and of *Fritsch* and *Hitzig* in 1870, has opened up a new world in the obscure region of brain function; and its further development and cultivation at the hands of *Ferrier*, *Munk*, *Horsley*, and *Schäfer*, has yielded results of the utmost promise in the successful diagnosis and treatment of many gross diseases of the brain with which must ever be associated the names of *Hughlings Jackson*, *Horsley*, *MacEwen*, and others too numerous to mention.

¹ "On Insanity and Race Decay" (discussion opened at the annual meeting of the Medico-Psychological Association of Great Britain and Ireland, in Dublin, June 18, 1894).