

affording information as to work already done upon subjects in regard to which investigation is contemplated, and by assisting in the matter of literature references. *d.* By suggesting subjects of research. *e.* By providing sets of microscopic specimens illustrating normal histology and typical lesions, for the associated asylums. *f.* By visiting the associated asylums for the purpose of advising as to pathological work. It is recognised that the histological methods required for the study of the nervous system are now so complicated and special that no young graduate can do effective pathological work without special experience and special training. Assistant Medical Officers cannot, as a rule, devote the long time and undivided attention required for modern pathological investigations. A skilled referee is also needed to explain the true meaning of facts observed. It is not intended that pathological research shall be discouraged in the various asylums. On the contrary, it is thought that this scheme will stimulate such research, and guide it into right lines. The present time is exceptionally favourable for such a movement, as Dr. Ford Robertson is willing to take up this important work, and his recent researches commend him as a competent and trustworthy authority. It seems but just, as well as expedient, that the man who exclusively devotes himself to the pathology of mental diseases should look for promotion as well as the assistant medical officer who devotes himself to treatment. No doubt the movement thus initiated will rapidly gather in strength and momentum, and we wish it every success.

Independent Criticism upon Histological Appearances in the Brains of the Insane.

It is a trite observation that in these days nothing is sacred. The remorseless spirit of scepticism hovers over an expiring century, a merciless "Zeitgeist." It was not to be supposed that the all-pervading scepticism, having brooded over the more momentous questions of the hour, would leave untouched those which, while undeniably of great consequence, still are of less general interest. Amongst these is the question of the pathology of insanity. It must be allowed that criticism has neither tarried long nor chosen its moment inopportunely. For it is still but re-

cently that attempts have been made to establish a histological basis for the insanities. It is only now that the superstructure begins to expose itself to the shafts of the critic. The author of a critical paper, bearing upon this subject, in the 4th volume of the *Edinburgh Hospital Reports*,* may therefore be said to take the field betimes. The article is concerned with the inquiry as to how far the microscopical changes found in the brains of the insane are to be correlated with the mental disorder; and is likewise a contribution towards the formation of a reference-standard of the average appearances to be observed in brains of persons dying from general diseases, and who have never been insane. In an examination of the brains in fifty such cases—the cells alone, however, are dealt with in this paper—by the fresh method of Bevan Lewis, it was exceptional to find appearances in accordance with preconceived notions of health. The conditions noted were, in fact, the same, not only in kind (especially pigmentary changes and vacuolation) but also in intensity and in frequency of occurrence, as those met with in insanity, with the exception of general paralysis. It is argued that the most natural explanation of these cell-changes is that they are secondary to disease elsewhere, especially kidney disease. And we are reminded that chronic nephritis is abnormally frequent amongst the insane. Further, that disease in organs other than the brain may well account for minute changes in the cerebral tissues in cases of insanity, and it does not follow that such changes are to be correlated with the mental symptoms.

Contributions of this nature—extra-asylum experiences, by which he may orientate himself—cannot fail to be of great service to the asylum pathologist. On behalf of the latter it may be affirmed that he has awaited with interest such outside criticism. In order to furnish the alienist with adequate histological criteria, it is necessary that comprehensive microscopical investigations of the brain in sane persons should be made by all available methods, dealing not only with cells but with all the cerebral tissues. We require, in the first place, to learn whether the histological changes found in the brains of the insane are more intense and more frequent than are any similar changes which may occur in the brains of the sane. Should such comparatively gross changes as vacuolation and pigmentation of cells

* R. Hutchison, "Degenerative Changes in the Brain-Cells of the Non-Insane."

(changes similar in kind to those occurring in insane brains) be shown to occur quite commonly outside of mental disorder, the demonstration would scarcely excite surprise. Even with respect to such changes the inquiry would be raised as to where, precisely, in what parts of the cerebral hemisphere, and in what cells or layers of cells they occur. But we shall be concerned with much more than these more obvious changes of cells, which are probably only end-changes. We shall expect *pari passu* with improvements in methods, comparative investigations in sane and insane, regarding the intimate structure of the nerve-cell and the state of cell processes; the condition of the neuroglia, especially the spider-cells; the state and disposition of blood- and lymph-channels. And, leaving mere structure, the question of chemical composition will need a place in the comparative investigation, an assertion for which we need no better argument than the recent work upon the chemical composition of the brain by Gutnikov.* And what are we to say of bacteriological investigation? Taking two brains, the one of a sane person dead of chronic nephritis, the other of a case of acute delirious mania, of puerperal insanity, or—we make bold to add—of general paralysis, dying after a series of “congestive” seizures, the pathologist may say “both show pigmentary degeneration, vacuoles; the only difference is a condition of ‘cloudy swelling’ of the cells of the lunatic’s brain, a congestion of vessels, and a diffused staining of neuroglia in the latter.” But until such cases receive proper bacteriological investigation we shall not to-day be content to believe that the “only difference” has been demonstrated.

Housing the Insane.

The supplement to the 50th Report of the Commissioners in Lunacy contains the plans of six new asylums, providing accommodation for nearly five thousand five hundred insane persons—London County building at Bexley Heath for 2,000, Lancashire for 2,000 (chronics) at Winwick, Stafford for 600 at Chedderton, West Sussex for 600 near Chichester, and Middlesborough for 250.

The multiplication of asylums is so rapid, their cost so great, and their import so threatening that the question

* *Allgem. Zeitschr. f. Psychiatrie*, 53 B., 2 H., 1896.