

the melancholiac and the centripetal convergently radiating mode in the persecuted is well worked out. "There is a profound difference between the litany of the melancholiac and the romance of the persecuted." Magnan's fanciful division of insanity of degeneration from chronic delirium and fanciful description of the latter affection find no support from Séglas. He does not think that logic has much to do with the formation of insane delusion. "It is very difficult to admit in view of the complete identification of the patient with his insane conceptions that the latter are only the result of abstract reasoning. To bring about such ineradicable conviction they must have roots much deeper in the essential nature of the individual personality; they must attach themselves to an entirely earlier system of intellectual and emotional states." As indeed reason never persuaded any sane man of anything he did not choose to believe, how are we to imagine that it would have more power with lunatics? even though the litigious paranoiac is the most "logical" of all creatures.

Two chapters of great practical value are devoted to a description of the morphological examination of lunatics and idiots. The author does not allow anthropological hobbies to run away with him, nor does he generalise on isolated facts.

A consideration of some senile phenomena, of exalted and persecutory obsessions, of delusions of defence, of abasia and astasia, and of certain hysterical troubles, complete the work, which we can heartily recommend to our readers as a book of high ability and great clinical value.

PART III.—PSYCHOLOGICAL RETROSPECT.

AMERICAN RETROSPECT.

By C. Hubert Bond, M.D., B.Sc.

Sclerosis of the Cornu Ammonis in Epilepsy.—Dr. W. L. Worcester (*Journ. Nerv. and Ment. Disease*, April and May, 1897) details his experience as to the frequency with which this lesion is found when systematically searched for, and discusses its relation to the pathology of epilepsy. He prefaces his own observations by a summary of previous ones, dating from those of

Meynert in 1868. From these it would appear that the preponderance of authority is in favour of the view that the lesion in question is a result rather than a cause of the convulsions observed during life. Worcester's experience is based upon the appearances presented by the brains of forty-three epileptics, which he examined at the Arkansas and Danvers Asylums. In only nineteen of these was there an absence of any gross cerebral lesion. The one under consideration, namely, sclerosis of the cornu ammonis, was present on one or both sides in twenty cases, in eleven of which no other abnormality was found; while in nine it was accompanied by other and more extensive lesions which he believed had a common origin with it; and this association appeared to him to throw light on the nature of the connection between it and convulsions. Of these associated abnormalities the most frequent he found to be microgyria of an entire hemisphere. The histological characters of the diseased cornu ammonis seemed to have been remarkably uniform, and consisted of a general sclerosis, involving destruction of the neurons having their origin in the stratum pyramidale and nucleus fasciæ dentatæ. Such a condition the writer failed to note in a series of over a hundred and fifty brains of insane patients, save in those of epileptics. Exception, however, must be made to this generalisation, for the case of a patient dying subsequently to the printing of this monograph. It was that of a general paralytic in whom there was no history of epilepsy, nor had he suffered at all from convulsions; yet after death changes were noted identical with those above described. Still, the frequency of this condition in epileptics and its great rarity in those not subject to this disease, would seem to place it beyond the pale of mere coincidence. The question is whether the epilepsy causes the anatomical changes or they the epilepsy. The chief reason why the former view is held by the majority appears to be due, rather to the improbability of this convolution, from anything that is known, having any special relation to epilepsy, than to any definite theory as to the way in which epilepsy could bring about such changes in a single convolution. The writer himself would rather lean to the supposition that the condition of the cornu ammonis is the cause of the convulsions. In support of this view, he cites the fact that it is known that a cicatrix of the cortex may act as a focus of irritation, and gives references of evidence proving that irritation of the temporal lobe may excite convulsions. He does not wish it to be understood that he believes in this convolution having any special prerogative in this respect, but rather that a scar in any part of the cortex may have such an effect. Neither, also, would he assert that all epilepsies originate in any part of the cerebral cortex, for the certainty that epileptiform convulsions may be due to peripheral irritations and to toxæmic conditions is too clear.

Tactile Amnesia and Mind Blindness.—Such a case is recorded

(*Journ. Nerv. and Ment. Disease*, May, 1897) by Dr. C. W. Burr as occurring in an apparently healthy woman of sixty years of age. Her mother and one brother had died of some paralysis, and her father in a fit. The onset of the affection was sudden, for, while the patient was sitting at supper, her vision began to fail and decreased so rapidly that at the end of two days she could not distinguish objects at all. A numbness of the upper lip and slight frontal headache were also at the same time complained of, but these rapidly passed off. Spontaneous speech was normal; she understood all that was said to her and replied coherently, but she appeared to be dull and apathetic, and exhibited a certain amount of congenital stupidity. Examination of her eyes failed to elicit any cause for the poor vision complained of. As a matter of fact, however, she could see well enough to walk and avoid obstacles, though there was a slight impairment noticeable in her gait. She could also tell when an object was placed before her, but entirely failed to recognise what it was, its shape, or its colour. For instance, in answer to a question as to whether a pair of scissors, placed in her hand, were a knife, she replied, "Yes, because it feels sharp"; and again, she was entirely unable to recognise a watch placed in her hand, but immediately it was held to her ear she said "It is a watch; I hear it tick." She could button her clothes, but if handed a loose button did not know what it was. Touch, pain and temperature senses appeared to be normal in the arms, legs, and face, and she could localise sensations correctly, her failure being the ability to identify by touch even familiar objects. Taste, smell and hearing were also normal. The writer adds some remarks upon the extreme rarity of the loss of tactile perception, as manifested in this case. Her condition, he says, seems to be a memory loss, a partial amnesia. There is the possibility, however, that her trouble may be in grouping together the many sensations received from one object by touch; the making of them into one whole, rather than in the loss of old mental images with which the new are in health compared. Burr would assume that there is some definite area of the brain concerned with tactile mental images, but that its location is as yet questionable.

The Aim of Modern Education.—This is the title of a forcible and commendable article (*Appleton's Popular Science Monthly*, Aug. 1896), from the pen of Dr. Hanford Henderson, a perusal of which would well repay those engaged in the cares of education. A school, he says, is a tool, and his contention is, that the present methods adopted in the majority of them are not basal enough—they tend towards the solving of minor riddles, leaving the question of the sort of men and women we wish to produce too much untouched. The success of the teacher should be measured by "the fulness of life that he opens to the children," and gauged in this way, many, he fears, would be found wanting. The lines in

which their methods are guided are, in his opinion, not psychological; they are too cramped and narrow, and instead of appealing to and encouraging the emotional side of life, their aim is rather one of inhibition. Children, he says, are "reservoirs of feeling, bits of concrete sentiment, bundles of desires," all of which the endeavour of our schools is too often to crush out. This emotional life leads to action, and it is this self-activity that is the cornerstone to the success of the kindergarten system. Thus, instead of the thwarting and incessant cry of "Don't"! what is required is the encouragement of these emotions and desires and their guidance into the most wholesome channels, so that the activity may spend itself along the most hopeful lines. What the teacher should most dread is the child devoid of feeling and desire, the quiet little mouse whom some would hold up as a pattern; it is the troublesome child, full of action and desire, that is really the most promising. As to the teachers themselves, they should be selected not for mere knowledge alone, they must neither be bookworms, artisans, nor fragments of any sort whatever, but earnest men and women, the "very flower of the race, to whom nature and circumstances have been kind, who have caught sight of the vision of the complete life, and who would make this vision prevail."

The Phenomena of Inhibition.—In a most suggestive paper (*State Hosp. Bulletin*, April, 1897) Dr. Onuf puts forth a tentative explanation of some of the phenomena of inhibition on a histophysiological basis, including a hypothesis concerning the functions of the pyramidal tracts. He expresses his belief in Joseph Fränkel's recently stated views upon absence of the knee-jerk, in which he maintains that the simple spinal reflex arc is not alone sufficient for the production of the knee-jerk. A second arc is required, consisting in a set of vertical ascending and descending cerebellar neurons, which connect the simple transverse spinal reflex arc with the cerebellum. Also that clinical facts enforce the conclusion that the cerebellum exhibits a tonic influence upon the motor anterior horn cell, which is in response to, and maintained by means of, those pathways which convey the sensory impressions from the muscles, tendons and joints to the cerebellum. Many physiological facts can only be explained on the supposition of some inhibitory nerve apparatus; such a mechanism is ascribed to the fibres forming part of the pyramidal tracts. But, although the theory of inhibition has frequently been applied to explain, for instance, the exaggeration of the knee-jerks in lateral sclerosis, no one, Onuf believes, has attempted to give an idea what manner of connections must be postulated either for excitation of a given neuron or to facilitate inhibition of the action of such a neuron. The theory he wishes to offer is, in his own words, thus:—"For the excitation of a nerve cell, the nerve current has to pass in the direction from the cell-body or its protoplasmatic processes toward the nervous process; for the

inhibition of the cell, the current has to pass in the opposite direction, that is from the nerve process, or its collaterals, back to the cell-body. In other words, to produce excitation of a given cell, the current must enter this cell from the surface of its cell-body or of its dendrites; but in order to inhibit or moderate the action of the cell, the nerve current has to enter the cell from its nerve process or collaterals thereof." Diagrams are appended which make this easier to grasp, and he maintains that the connections there portrayed have to a large extent been proven: the objection, that might be made concerning the peripheral ramus of the T-shaped fibre of the spinal ganglion cell, could be met by the results of investigations on invertebrates, which go to show that it is actually not a nerve process, but the homologue of a protoplasmatic process. Thus the fibres, conducting the tonic innervation from the cerebellum upon the motor anterior horn cells, should so end that their arborisations cling to the *protoplasmatic processes* or to the cell-body of the motor anterior horn cells; and the terminations of the cortico-spinal pyramidal fibres come in close contact with those of a *collateral of the nerve process* of the motor anterior horn cell. Onuf would indeed say that the pyramidal fibres have chiefly an inhibitory, moderating action upon the peripheral motor neuron; at any rate the investigations of others, he says, show there probably must be at least one other motor pathway besides the pyramidal tract—thus, he would compare the function of the latter to that of a rheostat in the application of the galvanic current. In testing the knee-jerk, the peripheral motor neuron, then, is acted upon from three directions:—From (*a*) the peripheral sensory nerve fibre, probably through a collateral thereof; (*b*) the cerebellum; and (*c*) the cortico-spinal fibres, which have an inhibitory action and thus counteract (*a*) and (*b*). Assuming this to be true, interruption of the cortico-spinal pyramidal fibres would give rise to exaggerated knee-jerks, by loss of the inhibitory influence; while interruption of the cerebello-spinal motor tract would result in absolute loss of the reflex, because the sensory stimulus coming from the tendon will be entirely counterbalanced by the inhibitory action of the pyramidal fibres.

GERMAN RETROSPECT.

By WILLIAM W. IRELAND, M.D.

The Effect of Poisons on Nerve Cells.—Nissl gave a demonstration of the result of his researches to the meeting of German alienists, held at Heidelberg, 18th September (*Centralblatt für Nervenheilkunde*, October, 1896). He thinks it useless to discuss the question how far the nerve cell which we see under the microscope resembles that in the living organism; but he aims at having a pattern or