

medium of suggestion. But experience has proved that transactions of this kind do not occur, and if they did an expert physician could easily detect the falsehood suggested.

At the end of the book Dr. Pardo gives some observations on exceptional memory and retrograde amnesia, but he is not yet able to draw largely from experience. His book is a praiseworthy contribution to the subject, showing thought and diligence and an elegant style. We are pleased to learn that the author purposes giving his attention to psychiatry and expect to hear more of him.

WILLIAM W. IRELAND.

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*Hirnanatomie und Psychologie* [*Brain Anatomy and Psychology*]. Von Prof. Dr. L. EDINGER. Berlin: 1900. Octavo, pp. 25.

In this pamphlet, a reprint from the *Berliner klinischer Wochenschrift*, Dr. Edinger considers the question: In what relation do the mental faculties stand to the anatomical arrangements in the brain? He wishes to change the maxim of Du Bois-Raymond *ignoramus et ignorabimus* into the more hopeful one of *ignoramus sed non ignorabimus*. We cannot say that with all his knowledge and all his readings, which are extensive, the professor has been able to lift a single fold of the mantle which shrouds the inner operation of mind from the investigator with the scalpel and the microscope. He hopes to gain some light by a comparison of the less complicated nervous system of the lower animals with their simpler nervous or mental manifestations, but here we can only make guesses by comparing our own sensations, consciousness, and actions, with the external actions of these creatures, and in some cases, though we recognise mental action, as in the ant, we perceive that it must be of a different character. Some naturalists are very averse to acknowledge anything approaching to sensation, or higher up to reason in lower organisms, unless after proofs extremely difficult to furnish. Naturally those who regard sensation and mind as evolved by very minute degrees from organisms rising in structure are more ready than the older observer to recognise the first obscure glimpses of sensation, consciousness, and reasoning. It is like watching a man whom we know to be approaching. At first he seems a mere speck, then the head, and then the limbs are descried, and our first indistinct apprehensions are helped by our anticipating knowledge. Dr. Edinger reviews with much satisfaction what has been done since the days of Flourens in the allocation of special functions in the brain and spinal cord. He thinks that our acquaintance with the latter structure is well nigh complete. He is disposed to regard many processes in the lower animals, often set down to sensation and mental effort, as reflex, the result of unconscious machinery. To support this he cites some curious observations from recent observers, none of which seem to me to prove more than was done by Marshall Hall. We know from experience that in the human organism there are reflex actions apart from sensation, and that there are others accompanied by sensation upon which we may direct our consciousness. In the case of annelids referred to by Dr. Edinger, the movements of the severed tail

seem to me of a different character from the remaining trunk with the head. Movements may go on for a while in the former part, and later on may be excited by applied irritations; but in an active annelid the movements of the portion which carries the head are of a quite different character. The creature puts out its slender antennæ to feel its way; it whips it round solid objects; it advances or retracts apparently from the information thus gained; if it turns, the lower segments are curled round, obeying an impulse from some centre which orders, regulates, and inhibits movements. All this makes me agree with Darwin in thinking that worms have sensation and even a feeble degree of intelligence.

We certainly know that mental processes in the higher animals are connected with the brain and some with particular regions of the brain, but the researches of anatomists and physiologists have brought us little farther in explaining the process.

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*Beitrag zur Pathologie der Ganglienzelle* [Contribution to the Pathology of the Ganglionic Cell]. Von Dr. OTTO JULIUSBURGER und Dr. ERNST MEYER.

In this pamphlet, a reprint from the *Monatsschrift für Psychiatrie und Neurologie*, the authors give the result of their examinations of the nervous centres of twenty-eight insane patients who died in the Asylum of Herzberge. These were principally cases of general paralysis and other forms of dementia, senile and alcoholic. The results are given in a tabular form.

The attention of these two pathologists was mainly directed to the great cells of the anterior columns of the spinal axis and of the central convolutions of the brain.

Nissl has described the ganglionic cells as of varied appearance especially characterised by the differences in the coloured substance. One part of the motor cell is readily coloured (chromatophile), whereas another portion remains uncoloured. This uncoloured portion is said by some histologists to be composed of fibrils, which are connected with the axis-cylinders and the dendrites. The chromatophile element is made up of granules. To the groups of granules the authors give the name of *granula*. They found that the ganglionic cells, instead of presenting a polygonal radiating form, were rounded, and that the processes were less apparent or wanting. The larger *granula* had disappeared and only small isolated granules could be described. The alterations in the anterior columns of the spinal cord were of the same character. Drs. Juliusburger and Meyer regard the alterations in the amount of the granular matter in the ganglion cells as the result of diminished nutrition. They are inclined to think that the change is not permanent, and that the cells may recover their normal structure.

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