

knowledge did not justify him in laying stress on any conclusions founded on it, but, on the other hand, it may be said that the very imperfection of the data furnishes a strong reason for doing all that is possible to stimulate interest in it. The author, however, does not profess to speak on his own authority in this department of his subject, and this may account for the small amount of space he devotes to it. The atrophic and inflammatory theories of the morbid process are succinctly and impartially described, and so far as they go the description is satisfactory.

Under the heading of Etiology the various causes are divided into predisposing, individual, and accessory. Under the last the influence of syphilis on its production is discussed, and his verdict is practically one of "Not proven." Hougberg's* recent statistics are fully quoted. The special symptoms are then considered under various headings, and after a short description of the course and duration, an important chapter follows on the import of the diseased process. In it he discusses the various theories which have been advanced to explain the nature of the disease, but is unable to say that any one is wholly satisfactory. It is possible, indeed it is practically certain, that there are various forms of the morbid process, as there are in Bright's disease for example, and order will arise out of the present unsatisfactory state only when the pathological facts are placed on a rational basis, as has been done in the disease mentioned. It is to be hoped that the recent activity in pathological work in asylums may lead to some such fruitful result. A short review of the diagnosis, differential diagnosis, prognosis, and treatment brings this interesting work to a close. Praise is due to the extensive and complete literary references which are appended.

Emile Zola. Par EDOUARD TOULOUSE. Paris: Société d'Éditions Scientifiques, 1896. Pp. 285. Price, fr. 3.50.

Dr. Toulouse of Sainte-Anne, whose excellent work, *Les Causes de la Folie*, we reviewed last year, has in the present volume brilliantly commenced a work of much greater originality and one beset with many difficulties. On the title page we read that this book, which contains a general introduction, as well as a detailed study of the famous

* *Allg. Zeit. f. Psych.*, Vol. 1., p. 546.

novelist, is the first of a series which will embody a "Medico-psychological investigation into the relations between intellectual superiority and neuropathic conditions." Among the distinguished persons who have lent their *corpora vitia* for the purposes of the inquiry are Rodin, Puvis de Chavannes, Dalou, Berthelot, Saint-Saens, Alphonse Daudet and Lemaitre—that is to say, nearly all the chief contemporary personages in French art, literature, and science, though it must be added that not all of these have given permission for the publication of the results. In our own country—partly, it may be, from excess of artistic vanity on the one side, from lack of initiation on the medico-psychological side, from some fear of ridicule on both sides—such a scheme would probably be hopeless. Therefore Dr. Toulouse's skill and courage deserve all due recognition; he has certainly opened up the path by which alone we can reach any reliable knowledge of the nature of genius, and now that he has taken the first step there will be many to follow who before feared to venture.

After some hundred pages of general introduction, in which the nature of the problem is stated with commendable caution and the methods of procedure discussed, we are introduced to the novelist who by his glorification of medical and psychological science was doubtless considered worthy of priority at the hands of an alienist.

Dr. Toulouse has been singularly fortunate in the assistance he has received in carrying out his task. It is evident, from the elaborate and fatiguing experiments here recorded, that M. Zola himself has placed a very large amount of time, trouble and complacency at the investigator's service; he has also read the proofs of the book and sanctioned its publication. But Dr. Toulouse has, in addition, obtained the assistance of a large number of eminent scientific men for special parts of the task: Manouvrier for the anthropology of the head, Bertillon for the general anatomical characters, Galton for the finger prints, Sauvinau for vision, Passy for sense of smell, Henry for dynamometric pressure, Bloch for cutaneous sensibility, Bonnier for hearing, Robin and Monfet, independently, for examination of urine, Philippe for reaction time, Crépieux-Jamin for handwriting, etc.; while the subject's doctors (Robin and Huchard), by permission of their patient, have been of very great assistance, as also has his dentist (Galippe). It is evident at the outset that the author has very skilfully fortified his position.

The method Dr. Toulouse has decided to adopt closely resembles that usually followed in taking down a case; it seemed to him the simplest plan, and the best to follow in a work intended for medical readers. The first chapter is therefore devoted to the family history, in which the chief points brought out are the racial mixture (Italian, Greek, and French), the disparity of 23 years in age of parents (to which the author attributes no importance, as the father was only 44 at his son's birth), and the gouty and neurotic temperament of the mother, who was throughout life subject to convulsive attacks, apparently of hysterical nature, and was very emotional. In the next chapter, dealing with the personal history, we learn that the novelist was delicate from infancy, that the acquisition of speech was difficult, and is not indeed even now without some defects, while during early boyhood he remained pale and slender, afterwards becoming robust with a marked tendency to obesity, which he is now only able to keep in abeyance by strict temperance and constant attention to diet. Puberty appeared in the fourteenth year, and the sexual instinct, we are told, has always been accompanied by "a certain timidity." After an adolescence during which he suffered greatly from poverty, at the age of twenty the novelist became subject to severe neuralgias in intestines, bladder, and thorax; and to some extent he still suffers in this way, especially from what Huchard has diagnosed as "false angina pectoris in a nervous subject." Micturition also is necessary at very frequent intervals, and digestion is only kept in a fairly satisfactory state by regimen. The general anatomical condition is, however, regular and robust, and there are no stigmata of degenerescence. There have always been involuntary tremors of the hands, exaggerated during voluntary action, so that in lifting a full glass it is frequently spilt.

Cutaneous sensibility is highly developed, somewhat more so on the right side; sensibility to pain is also excessive. Myopia has existed since the age of 16. Colour vision is very good. There is a tendency to spontaneous luminous sensations in the gloom of evening. There are similar faint hallucinations of the sense of hearing. The sense of smell plays a large part in Zola's life as in his books; it is not *quantitatively* developed to an unusual extent, but he is very observant of odours, and has an excellent memory for them. In this respect he resembles perfumers; every

object to him has its own odour. The sense of taste is normal.

It is impossible to summarise all the tests here recorded, but there is interest in referring to certain morbid obsessions of which (like Dr. Johnson, and, it seems, George Borrow) M. Zola has been the victim for many years, ever since he was 30. He suffers from morbid doubts, and also from arithmomania. He counts the lamp posts, the stairs, the numbers on the doors, and especially the numbers of cabs, which he adds up, each figure being regarded as a unity. Before going to bed, also, he feels compelled to touch the same piece of furniture, or open the same drawer, a certain number of times. He is also superstitious about certain figures, and if the number of a cab, when added up, comes to one of these figures he will not take it; for a long time the multiples of 3 seemed best to him; now he is reassured by the multiples of 7. Sometimes at night he opens his eyes seven times to assure himself that he is not about to die. M. Zola recognises the absurdity of these *manies*, as he himself calls them, but finds it a satisfaction to give way to them; it must be noted, however, that with an effort of will he can resist them without any great struggle or suffering.

In summing up, Dr. Toulouse remarks that M. Zola is certainly free from all gross forms of nervous and mental disease. "His physical and psychic constitution is in fact full of strength and harmony," though the nervous system is in some respects hyperæsthetic and from this point of view, to use a vague current word, unbalanced. Even the morbid impulses are parasites not affecting the intellectual personality, and the author remarks that he has rarely seen such fine mental stability even in a healthy subject. There is a strong will and power of intense attention, great educability, a remarkable absence of suggestibility (so that it was impossible to deceive him in the tests), clear conceptions, sure judgment, orderly methods of work, and a singular power of utilising all his intellectual means.

"At the same time," Dr. Toulouse observes, "it cannot be denied that M. Zola is a neuropath, that is to say a man whose nervous system is painful." He is inclined to attribute this to constant intellectual labour affecting a nervous system predisposed by heredity.

The book is well illustrated by photographs, some specially taken for the purpose (including photographs of the hands),

representation of the visual fields, reproductions of the handwriting, and numerous diagrams illustrating the results of the tests employed.

Psychologische Arbeiten. Herausgegeben von EMIL KRAEPELIN. Bd. i., Heft. 4. Leipzig: Engelmann. 1896. Price, mk. 5.

The previous parts of this important series of studies have already been summarised in the Journal. Its importance lies in the fact that Professor Kraepelin (closely followed by Dr. Cowles, in America) has been the first from the psychiatric side to recognise the intimate bearing of experimental psychology on the alienist's work. It is easy to criticise such work, to point out the difficulties of investigation, the absence sometimes of any obvious relation between experiments on normal persons and the alienist's immediate practical work, which must be carried out in accordance with the method of "small profits and quick returns." Much the same objections were, until lately, brought against the Germans when they first set up well-equipped laboratories in their manufactories and installed chemists to work at what they would. But the immense success which has followed that policy has now justified the Germans in the eyes of the whole world. It is a German who has carried this same policy into the asylum, and we shall probably have to admit that Professor Kraepelin is right, and that here also progress in pure science makes for progress in applied science. It is an astonishing and unaccountable fact that in English asylums, where the anatomical study of the dead brain is well established, the exact study of the living brain is often almost ignored; and it is satisfactory to note that one of the chief investigations in the present volume is by an English worker, Dr. W. H. R. Rivers.

Whatever may be thought of the results obtained, it can scarcely be questioned that the subjects dealt with in this volume—the action of bromides, the influence of alcohol on work, and the relation of fatigue and repair—are practical subjects not wholly without interest for the alienist. The first and longest is an elaborate study of the psychic action of bromides by Arnold Loewald, who desired to investigate the nature of the action of bromides in epilepsy and neurasthenia. Bromide of sodium was exclusively used, seldom in