certainly as grace of movement is lost when the effort becomes manifest, so true culture is wanting when the assertion of it is present.

With a too subjective life followed idea of being misunderstood, and perhaps some idea about notoriety was an active agent also. "Voices," moral perversion due to sexual abuse may also have played a part.

An interesting case of attempted mutilation of the genital organs in a female will be found reported by Dr. Howden in the Clinical Notes and Cases.

Guiteau.

We had intended to comment upon the psychology of Guiteau, but defer doing so until we are in possession of more particulars. The papers sent to us, reporting medical evidence given at the trial, are imperfect, and the "American Journal of Insanity," which it is expected will contain a full report, has been delayed in consequence beyond the time of publication.

PART II.—REVIEWS.

A Treatise on the Diseases of the Nervous System. By JAMES Ross, M.D., M.R.C.P. Lond., Assistant Physician to the Manchester Royal Infirmary, &c. *Illustrated with Lithographs, Photographs, and Two Hundred and Eighty Woodcuts.* Two Vols. London: Churchill.

Rarely indeed does a work so excellent in every way come under the notice of the reviewer; and it is with feelings of pleasure that we proceed to give some idea of the character and scope of this new treatise on Diseases of the Nervous System.

The work is a large one, and is designed to be comprehensive. It consists of two volumes, containing between them nearly sixteen hundred pages. It treats of all diseases of the nervous system except insanity.

It presents several noteworthy features. The arrangement, the illustrations, the matter, and the style, are all such as to deserve a few detailed remarks.

The first portion of the work, to the extent of about two hundred and eighty pages, is devoted to the general pathology

of the nervous system; the remainder, constituting the bulk of the treatise, deals with the special pathology. Under the first heading a brief and concise general account of the nervous system is given, the anatomical and physiological details being reserved as prefaces to the separate sections dealing with the diseases of each particular structure. Etiology, Symptomatology, Morbid Anatomy and Physiology, Diagnosis, Prognosis, and Treatment, are also dealt with in a general way. The account of general symptomatology is especially good; the modes of detecting or eliciting the symptoms and their significance are given with great fulness and clearness.

In the second portion of the work, that dealing with the special pathology of the nervous system, the simple in all cases is made to precede the complex. The subjects for example treated in order are the Diseases of the Peripheral Nerves, of the Sympathetic System, of the Spinal Cord and Medulla Oblongata, of the Encephalon, and finally of the Encephalo-Spinal System. Prefixed to each part is a most admirable and detailed account of the structure and functions of the portion of the nervous system with which the section deals.

Having now obtained an idea of the plan and scope of the treatise, we may go on to say a few words about the matter it sets forth. In this respect there is one quality that especially characterises it. Anatomy and physiology are not a dead letter; details of structure and of function are not, as they so often are, merely dry statements without any fruitful connection with the practice of medicine. On the contrary, anatomy and physiology yield their treasures to some purpose; and stand in such vital union with the principles of practical medicine as to form a consistent, intelligible, and comprehensive whole. The facts of development, too, have been made to shed light on many of the dark places of nervous pathology.

One of the most pregnant doctrines in the whole of this suggestive work is one which, although dimly and in part recognised before now, has not hitherto received the clear statement, the full and lucid exposition, and the prominent place assigned to it by Dr. Ross. The doctrine in question is based on the distinction between the fundamental and the accessory portions of the nervous system; or rather it may be said to be the distinction itself, with the consequences flowing from it. "Structure being the correlative of function,

the multiplicity and complexity of movement which distinguish man from the lower animals must be accompanied by a corresponding degree of intricacy and variety in the structural arrangements of his nervous system. The main movements which distinguish man from the lower animals are those concerned in attaining and maintaining the erect posture, the varied movements of the hands as organs of prehension, the movements of voice and articulation concerned in speech, and those which are active in the production of facial expression. All these movements must therefore be represented in the human nervous system by structural arrangements, superadded to those in common with the highest of the lower animals. Indeed, all the complex movements first mentioned are acquired considerably after the birth of the human infant, and we may consequently expect that the structural arrangements corresponding to them either do not exist at birth, or exist only in an embryonic condition. The portions of the nervous system which man possesses in common with the lower animals, and which are well developed in the human embryo at nine months, I shall call the *fundamental* part; and the portions which have been superadded in the course of evolution, which differentiate the nervous system of man from that of the highest of the lower animals, and which are either absent in the human embryo, or exist only in an embryonic condition, I shall call the *accessory* part of the nervous system." The full development of this law cannot, of course, be set forth here. It will suffice to say a few words to show how fruitful of good result is the application of this principle. Starting then from the fact that the later-acquired functions belong to the later-acquired structures, we have the earlier-acquired or fundamental functions as a residuum to be connected with the fundamental nervous structure. The median group of small cells in the cord is found to be the structural representative of the later-acquired and more special movements in the limbs. Moreover, these cells are absent from those portions of the cord which do not supply nerves to limbs; they are not found in the upper cervical or in the dorsal region. In like manner the functions of the various other groups of cells in the cord are worked out with ingenuity and with a high degree of probability.

Pregnant corollaries of the doctrine of fundamental and accessory portions of the nervous system are the Law of Evolution and the Law of Dissolution. The Law of Evolu-

tion enunciates the progressive integration both of structure and function, advancing from the simple to the complex, from the general to the special. "The nervous system of man at first resembles the nervous system of all other vertebrates; but as development proceeds, the nervous system of man becomes gradually differentiated from that of an ever-increasing number of the lower animals, while still maintaining a general likeness to the nervous system of the higher animals up to the time of birth." The Law of Dissolution is simply that "the accessory portion, from the late period of its development, is less stable than the fundamental portion, and that its necessarily frail structure will render it more liable to suffer both from accident and the inroads of disease." The reasons why the recent cells offer less resistance than the older ones to morbid influences are not difficult to understand. Not merely are the recent cells of smaller size even in the adult, but their cell-wall is thinner. In addition it is remarked that a large cell presents in proportion to its mass a smaller absorbing surface than a small one does. The smaller cells therefore possess a higher degree of nutritive activity. But this quality gives rise to great instability with "increased readiness to give out energy or to multiply, the latter process, of course, involving the disorganization of a highly organized tissue." One other circumstance of importance is noted, which further explains the comparative facility with which the recent cells succumb to disease. "It has been pointed out that the later-formed cells of the anterior horns grow close to the arteries, while the earlier-developed cells are pushed in the course of development away from them. When, therefore, rapid exudation takes place from the vessels, whether it consist of a fluid and granular exudation, or of migration of white blood corpuscles, the cells in the neighbourhood of these vessels will suffer sooner and in greater degree than those more remote." These principles are illustrated in detail, and with great fulness, in various parts of the work; and without carefully looking through the cases and the microscopic appearances of the morbid structures, we cannot possibly form a just idea of the confirmatory evidence on every doctrine advanced, or of the skill and ingenuity with which the facts are marshalled in such order as to exhibit their bearing almost at a glance.

From what has been said it may be gathered that diagnosis is one of the strong points of the book. In regard to

diagnosis, nervous diseases offer a particularly fascinating study. Each special function points to a special structure; and each variety of disordered function points to a different kind of morbid process. As, through experimental research and the study of development, our acquaintance with the functions of the nervous system extends, the symptoms of nervous diseases cease to be the mere meaningless symbols of an unknown language; they become, like Egyptian hieroglyphics to Oriental scholars, merely another alphabet of an already acquired tongue. Not in any other department of medicine have the symptoms so precise and so definite a meaning as in diseases of the nervous system. Notwithstanding the obscurity that still hangs over many of them, they present as a class features that enable us to fix more accurately the seat, and to infer more correctly the nature, of the lesion than is the case in most other diseases. Dr. Ross's work leaves little to be desired in point of facilitating the recognition of the affections it deals with.

The sections on treatment, too, are carefully written, and represent the well-weighed experience of a scientific physician. The author always makes apparent the rational principles on which his course of procedure is based.

The illustrations are copious, and are well executed. The style is simple and intelligible, and bears the impress of a thoughtful mind.

In reviewing this work we really have nothing but praise to bestow on it. It is one of which the profession in England may justly feel proud.

Die Progressive Paralyse der Irren: Eine Monographie.—Von Dr. E. Mendel. Berlin, 1880.

This is an octavo volume of 350 pages. The author has, with praiseworthy diligence, studied the different phases of General Paralysis by every means available to modern science, and enriched his knowledge with extensive reading. Nothing shows in a more striking way the restless activity of modern research than the rows of references at the foot of almost every page to periodicals in German, French, Italian, and English recording an endless number of observations on a single disease.

A monograph like this from its very size gives a certain indistinctness of outline. After we get over the preliminary