Quelques Considérations sur la Propagations des Excitations dans le Système Nerveux. Par M. BENEDIKT (de Vienne). *Extrait du Bulletin de l'Académie de Médecine,* January 4th, 1898.

M. Benedikt in this short lecture aims rather to elucidate the manner in which impulses travel, than to explain the nature of the impulse itself, although with regard to the latter he is by no means silent. The first half is taken up with a discussion of the relation between physiological and pathological impulses and their propagation, and as a preliminary he states what he terms some fundamental laws of biomechanics. These laws are very involved, and difficult to follow, but the main fact one gathers is that there is an intimate co-relation between all processes of evolution, development, and growth, and that pathological impulses broadly follow similar rules, but not entirely. In support he gives several examples.

He pleads very earnestly for the recognition of the fact that there are many grounds for the belief that all nerves are conductors in a double sense, and that they are capable of carrying impulses both upwards and downwards, in the same way that in telegraphy the same wire can carry messages both to and fro. He states that having regard to our present knowledge of the anatomy of the nervous system, we ought rather to be more astonished at the fact of isolation, than at the fact of irradiation of nerve impulses.

The other half is limited to the transmission of morbid impulses. These he divides into two classes; functional, which are similar to physiological ones, and those which are the result of actual anatomical change, such as secondary growths in the brain.

These progress not only by continuity and contiguity, but by incoherent diffusion. These latter he likens to impulses in a state of intoxication. These incoherent impulses propagate themselves widely, not sticking to beaten tracts, but taking unusual paths and thus spread themselves widely in a mysterious sort of manner, the exact mechanism of which is unknown. Further, he states that the passage of these impulses may result in areas of softening and degeneration. Many examples are given in support, and many of the symptoms of cerebral tumour are put down to the same cause; usually explained, however, on the plea of increased intracranial pressure. This latter view he states to be in oppo-

sition to all principles of mechanics. "It is convenient," remarks he, "and it is therefore become common." We are afraid the facts of morbid anatomy do not give him an unqualified support. His views are clearly put, closely reasoned, but are not convincing.

L'Hérédité Normale et Pathologique. Par CH. DEBIERRE. Price 1 fr. 25 c.

This monograph appears as fourth in a series which is designed to keep us up to date in the controversial and novel questions of medicine, surgery, pathology, and biology. The number before us admirably fulfils its purpose. Though perhaps we might expect from such a series that the authors would have difficulty in attaining the purely historical point of view, we cannot complain that Professor Debierre errs after the manner of partisans. He presents us with a fair, lucid, not too critical account of heredity as the subject presents itself in these times.

It would be absurd to criticise in detail a work which is really a review of the question with which it deals. To do so would be to open up argument over every page. It may suffice to say that the author does not beg the questions which he raises, and we may add that on the whole he expounds them from what is now the orthodox point of view.

Heredity is simply defined—the transmission to offspring of the characters and qualities of its ancestors. After a few sentences upon "les modes de l'hérédité," Professor Debierre goes on to discuss, in two sections, physiological and pathological heredity. In the former of these two sections, the transmission of individual variations, male and female contributions to procreated character, the heredity of sex, effects of consanguinity, atavism, the transmission of mental qualities, the origin of species, &c., are touched lightly but with suggestion. As regards psychical transmission, the author, as authors will, seems to fail to appreciate sufficiently the effect of an evolving environment.

In the pathological section a similar range of subjects is discussed—teratology, neuropathy, degeneracy, diathesis and predisposition, neoplasms, infection and immunity, alcoholic and other vicious excesses, &c.

The next section, which is more controversial, deals with the theory of the mechanism of heredity. The processes, so far as known, before and after fertilisation, are admirably