producing permanent stiffness, even in a healthy joint, by immobilising a limb. Indeed, Prof. Broca shares this fear to some degree and recommends that complete immobilisation of limbs should be practised only during transport of the wounded.

For the recovery of stiffened joints voluntary movements are recommended in preference to passive movements. Indeed, Prof. Broca is of opinion that in many slight cases of stiffness of joints a ten hours' day at manual labour is the very best treatment possible, so long as such exercise is not attended by positive pain. We note, too, that the author, in his introduction, gives the following quotation from Ecclesiastes as being true of orthopaedic practice in France: "There is no remembrance of former things; neither shall there be any remembrance of things that are to come with those that shall come after." We in England are making similar discoveries; we find that many of our discoveries are really re-discoveries.

THE PARASITIC HYPOTHESIS OF TUMOURS.

Tumours: Their Nature and Causation. By Dr. W. D'Este Emery. Pp. xx+146. (London: H. K. Lewis and Co., Ltd., 1918.) Price 5s. net.

DR. EMERY'S book is remarkable in two ways. In the first place, it is a clear and concise statement of the parasitic hypothesis of the causation of new growths—a welcome innovation in a subject around which more dubious writing has been perpetrated than any other in medicine. In the second, it does not contain any original observations. After summarising and discarding the current definitions of "tumour," the author sets up three postulates to which the required parasite should conform—viz. ultramicroscopic size, intracellular or intranuclear habitat, and production of a toxin capable of stimulating growth in the invaded cells. The remainder of the work is devoted to a rapid review of the more prominent features of tumours, showing how they fit in with these assumptions. Benign growths are those with few parasites in each cell, giving weak action of the toxin; in malignant growths the cells are heavily loaded, much toxin is produced, and growth is energetically stimulated. At once we come in contact with the subsidiary assumption that the cells of the body grow only when stimulated. It is at least arguable and probably true that, on the contrary, growth goes on so long as life lasts. The contrast to the form of growth presented by the limited reactions to known toxins is got over by assuming a nicely balanced symbiosis of host-cell and parasite, the parasite not getting out of bounds and killing the cell, and the cell not being sufficiently irritated to kill the parasite.

Sarcoma development in the stroma of carcinomata (spontaneous or propagated) is regarded as a transference of the virus from the carcinoma cells to the connective tissue cells. The stroma of tumours is not, as the author says, merely granu-

lation tissue, unless we admit also that the stroma of the pancreas, the liver, the lung, and the kidney is also granulation tissue. Although derived from the homogeneous, ubiquitous mesenchyme of the embryo, each of these organs has a characteristic stroma, and the same has been demonstrated for quite a number of carcinomata of the mouse and rat. In both cases they appear to be specific reactions of a single tissue to different parenchymata. The peculiarities of the process of sarcoma development, the long contact which is necessary, and the ultimate loss of the property are not touched upon. Perhaps they would involve too many and too intricate subsidiary assumptions.

The chapter dealing with the evidence from the organ-incidence of cancer shows the weakest side of the hypothesis. If we restrict our survey to cancer in man, as Dr. Emery does, the distribution appears rational, but it is otherwise when the tumours of animals are taken into account. Cancer of the mamma and of the uterus are common in man; cancer of the mamma is nearly as common in mice, but carcinoma uteri is very rare. Cancer of the stomach also is rare in mice, but common in the cow, while in this animal cancer of the mamma and of the uterus are both rare. Cancer of the liver is the commonest new growth in the cow and other herbivora. Next in frequency are new growth of the adrenal and carcinoma of the stomach. In the horse carcinoma of the liver is rare, while growths of the adrenal are common. The mouse and rat are closely related animals in structure, habits, and diet. Their new growths have a totally distinct organ and tissue incidence. To harmonise these well-known facts of the natural history of cancer with the hypothesis would require, not three fundamental assumptions, but nearer three hundred.

To be of value a hypothesis must fulfil two conditions. It must embrace without violence the facts of the subject and require a minimum of subsidiary assumptions. It must stimulate inquiry and lead to the extension of knowledge. Whatever shortcomings Dr. Emery's essay may have in the first direction are made up for in the second. It is safe to say that there is scarcely an assumption made of which it is only necessary to ask oneself, "Is this true, and how would you prove it?" to provide a subject for an interesting inquiry. Dr. Emery has rendered a great service to those engaged in the study of cancer. He has put into succinct and intelligible form the vague general impression which hitherto has hovered around the subject under the name of the parasitic hypothesis.

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THE WAR AND THE BAGDAD RAILWAY.
The War and the Bagdad Railway. The Story of Asia Minor and its Relation to the Present Conflict. By Prof. Morris Jastrow, jun. Pp. 160+1 map. (Philadelphia and London: J. B. Lippincott Co., 1917.) Price 6s. net.

EVERYONE has heard of the Bagdad Railway, and that its project for capturing the trade of the East was one of the chief