

"(1) That the material universe is infinite in three-dimensional space, and eternal both in the past and the future.

"(2) That the law of gravitation holds good throughout infinite space and time.

"(3) That the luminiferous ether has the same properties throughout space."

The Infra-world, our own universe, and the Supra-world are represented as three links in a chain of indefinite extent.

We learn from the preface that this book contains "an attempt to penetrate the mystery of space and time with the help of the most modern resources of scientific research." Mr. Fournier's success in achieving this object must depend upon what is required of one who penetrates a mystery. Certainly, the relativity of space and time could scarcely be more clearly and forcibly brought home than is done in these pages.

The limits of this notice do not permit a discussion of the author's speculations regarding the interrelation of "personality" in universes of different orders. The chief value of this work undoubtedly consists in the point of view which is here presented—a point of view which is valid for anyone who accepts the author's proof of the existence of universes of the next lower and higher orders to our own, whether he prefer to interpret conscious or subconscious activity in terms of motion, or matter in terms of consciousness.

Though necessarily incapable of verification, these speculations, which are well and clearly expressed, will hardly fail to evoke something more than a passing interest.

F. L. USHER.

CHEMICAL METHODS IN MEDICINE.

The Chemical Investigation of Gastric and Intestinal Diseases by the Aid of Test Meals. By Dr. Vaughan Harley and Dr. Francis W. Goodbody. Pp. viii+261. (London: Edward Arnold, 1906.) Price 8s. 6d. net.

THE continual increase in our knowledge of the physical mechanisms of the body necessitates a corresponding increase in the complexity of the methods which the physician has to employ in his endeavour to locate the seat of disease and to determine its character. Every year the medical man has therefore to start his career with expert knowledge of instruments and methods that were not dreamed of by his predecessors, and every year the extent of his armamentarium is added to by the growth of our knowledge of diseases. Many of these methods which the present-day practitioner has to acquire are physical, such as the use of the thermometer, of the stethoscope, the ophthalmoscope, and the various other instruments which have been devised for throwing light into the cavities of the body.

Until recently his chemical methods were practically limited to the testing of the urine for sugar and for coagulable protein. Disorders of digestion were, and in many cases still are, treated purely

empirically. Yet it cannot be a matter of indifference whether any given derangement of digestion has its primary seat in the stomach, the bowel, or the nervous system, whether it is accompanied with increase or diminution of the acid secretion of the stomach, or whether it is attended by an absolute failure on the part of the alimentary canal to assimilate in proper proportion to the food which is presented to it. It is of no use to label a series of drugs as good for indigestion, to administer them one after another, in default of knowledge on such important points as these. It is to aid the practitioner in his investigation of gastric and intestinal diseases by the latest methods that this book has been written.

Prof. Harley and Dr. Goodbody confine themselves entirely to the chemical methods, and even here are eclectic in treatment, mentioning only the methods which they have found during twelve years' trial of practical value.

It is to be hoped that the publication of this book may help to render more general the application of science to practice in the treatment of this important class of disease, since the book contains records of a number of analyses made by the authors on different patients, which furnish a useful guide to the results which may be expected in practice.

It is impossible to avoid the impression that the increased technical knowledge required for the diagnosis and treatment of disease must tend more and more to specialism along certain lines, and must handicap the private patient as compared with his poorer brother who is treated in a hospital. Without the resources of skilled assistance and a well-equipped laboratory, it is impossible for a busy practitioner to make all the investigations which are necessary to determine the diagnosis and to control the treatment of a number of cases of diseases. It is possible that in future years every consulting physician will regard a hospital for observation, and a private laboratory with skilled assistants, as necessary adjuncts to his consulting-room. At the present time, if the disease be one of doubt or difficulty, the pauper in the hospital has a better chance of enjoying the benefit of the latest discoveries than has the private patient.

We have no doubt that practitioners, whose time is not already entirely absorbed by the round of visits, will find this book of considerable value. It will not have failed of its object if it teaches such men to carry out a proper investigation of the gastric contents in cases of disordered digestion instead of simply guessing at the causation of the disorder. In one or two places the authors are hardly explicit enough for the purposes of those men who are working out the methods by themselves. Thus, on p. 31, no idea is given of what the colour-changes on titration of the gastric juice consist when dimethyl-amido-azo-benzol is used as an indicator, nor is the rationale of Töpfer's method for determining the acidity of gastric juice made sufficiently clear. These and a few other slight drawbacks can easily be amended in a subsequent edition.