

teachers would agree with the author's attempt to summarise the achievements of science, and some of them might charge him with an assumption of omniscience. He took the risk, and all we can say is that we think he justifies himself.

So the first half of Dr. Dotterer's book leaves us with a somewhat bewildering bunch of 'perplexities', each of which presents a problem in philosophy. Some of them are philosophical 'chestnuts', such as the issue between realism and nominalism. Among the other problems are the criterion of truth, the problem of being, determinism and its opposite, the authority of values, and the belief in progress.

Dr. Dotterer has written primarily for students of philosophy, but he has aimed at producing something more than a text-book, and in our judgment he has succeeded. To make philosophical discussions clear to the general reader is not an easy task, but it is here accomplished. The author writes lucidly and forcibly, and his criticism is always marked by modesty and sanity. The general reader—and for the present purpose the student of science may be so described—will find this book a most useful introduction to the abstruse but ever alluring problems of metaphysical speculation.

Bacteriology in Medicine.

The Principles of Bacteriology and Immunology.

By Prof. W. W. C. Topley and Dr. G. S. Wilson.

In 2 volumes. Vol. 1. Pp. xvi + 587 + xvi.

Vol. 2. Pp. viii + 589-1300 + xx. (London: Edward Arnold and Co., 1929.) 50s. net.

THE authors of this book say, "We have attempted on the basis of our personal experience in post-graduate and undergraduate teaching to provide a text-book which will be of service to those students of medicine and biology who wish to make a serious study of bacteriology, and its application to the problems of infection and resistance". This very desirable end has led them, we think wisely, to divide the book into two volumes, so as to treat in the first place the biological aspects of bacteria, and after that has been dealt with to pass to the subject of infection and the application of bacteriology to medicine and hygiene.

Vol. 1 is divided into two parts; the first of these deals with general bacteriology, and after giving a short, but interesting, historical outline, the authors proceed to the biological and physiological characteristics of bacteria—their

growth and resistance to physical and chemical agents, serum reactions, bacterial variation, classification, and, finally, they give some practical details and a well-written chapter on the Twort d'Herelle phenomena.

Though all these chapters bear evidence of wide reading and good critical judgment, we would specially praise the one on serum reactions and antigenic structure of bacteria. This somewhat difficult and, at present, rather confused subject has been made clear to any intelligent reader, and the views of the various writers on this subject are given with great fairness. The chapter on bacterial variation is also a very valuable one, and disinfection is treated very fully.

The authors have thought it necessary to adopt the American classification. This we feel is still crude and unsatisfactory, and we regret its adoption, though possibly if we had been the authors we would have been forced to do as they have done.

Part 2 of the first volume concerns itself with the description of the various bacterial species. This is well written, and the illustrations are, on the whole, very satisfactory. We welcome the absence of detailed descriptions of technique which load up uselessly so many text-books on bacteriology. Why writers on bacteriology should give half a dozen or more different methods for staining a special bacterium has always been beyond our conception, and it is a joy to find a book where this is not done, and where the authors have deliberately omitted these.

Vol. 2 deals with bacteriology in its application to medicine and hygiene. Part 1 deals with infection and resistance, and in a work of this kind for which Prof. Topley has done so much one naturally expects a great deal. We have not been disappointed. The facts are very clearly put, and the critical work is of a high order. Part 2 is very well done, and medical men dealing with any of the bacterial diseases will find valuable information on almost every page.

We congratulate the authors on the production of an extremely valuable text-book, one which should find a place not only in every bacteriological and pathological laboratory but also on the bookshelf of every medical man. The task must have been a very difficult one, for one must recognise that bacteriological literature is, at present, somewhat chaotic. The authors must have read widely, but the strongest feature is the independence shown in departing from the usual text-book routine.

J. M. BEATTIE.