

Your Mind and Mine: an Account of Psychology for the Inquiring Layman and the Prospective Student. By Dr. Raymond B. Cattell. Pp. 314. (London, Bombay and Sydney: George G. Harrap and Co., Ltd., 1934.) 7s. 6d. net.

DR. RAYMOND CATTELL, who is psychologist to the Leicester City Education Committee, provides us in "Your Mind and Mine" with a very sensible account of psychological problems of to-day. The book is charmingly written, easy to read, and will appeal to those who have to read without being in possession of technical knowledge. The epoch-making work of Spearman and Burt receives full consideration.

We doubt the wisdom of illustrating stigmata of degeneration, having stated in the text that they are practically as common in the general population as among criminals. A little knowledge is indeed a dangerous thing, and the public are very quick to air their little knowledge on so many occasions.

Physics

Newton and the Origin of Colours: a Study of one of the Earliest Examples of Scientific Method. By Michael Roberts and E. R. Thomas. (Classics of Scientific Method.) Pp. viii + 133 + 8 plates. (London: G. Bell and Sons, Ltd., 1934.) 3s. 6d. net.

It is something of a reproach to physical science that very little has heretofore been accomplished in the matter of historical teaching. Chemistry, to its great benefit, has adopted another course, and systematic lectures on the history of the science have been a commonplace for generations. More than ever to-day, when the foundations of physics are being laid anew, is it necessary to approach our science historically, and thus to realise something of what the builders of the older structure thought of its permanence and its value. To attempt a valuation of some one portion of the whole fascinating story in anything like a compact volume is perhaps even more difficult than to tell the full tale. A full and accurate survey of the documents involved may leave one without a picture, and it is above all essential that the characters should be set against the background of their times, and that those little details—*ce superflu, si nécessaire*—should be sketched in, which make all the difference between the vivid and the dull outlook.

The authors of "Newton and the Origin of Colours" must be held to have succeeded in this by no means easy task. They have told us something of Newton, of his predecessors and contemporaries—of Robert Hooke "of middling stature something crooked, pale faced, and his face but little below, but his head is lardge; his eie full and popping, but not quick; a grey eie". They have given us an outline of the state of optics in 1660, of Newton's contributions to optical science, of the controversies with Hooke and with Linus, and of the developments of optics since Newton. They have accomplished this feat in a well-written octavo of some one hundred and thirty pages. The volume is a notable contribution to an excellent series.

A. F.

Ions, Electrons and Ionizing Radiations. By Prof. J. A. Crowther. Sixth edition. Pp. xi + 340 + 4 plates. (London: Edward Arnold and Co., 1934.) 12s. 6d. net.

THIS is a sixth edition of the well-known textbook so familiar to university students of physics, and in the preface the author explains the reasons for the new edition and the manner in which it differs from its predecessor.

The limitations set on the subject matter are generally indicated in the title, but as Prof. Crowther points out, the very rapid advances within the last few years have necessitated much rewriting and also considerable change in the balance between the older and the newer knowledge. The reader familiar with an older edition will at once recognise such main sections as those on the charge on an ion, photo-electricity, X-rays, and so on. He will also be pleased to note new sections on neutrons, positrons, cosmic radiation, artificial disintegration and structure of the nucleus.

These sections are of course written in the author's usual lucid style, and the selection of subject matter is admirably suited to his chosen scope and object, namely, the introduction of students grounded in physics to the more recent developments.

In consonance with this aim, there has been no attempt to give more than general references at the end of each chapter—a wise provision which makes it easier for the student to follow up selected topics. The book cannot be said to be overloaded with theory—the subjects being treated, on the whole, in that broad manner likely to be acceptable to science students generally.

Certainly the student who works through Prof. Crowther's excellent book will attain to a sound general knowledge of the experimental bases of modern physics.

The Physical Basis of Things. By Prof. John A. Eldridge. (International Series in Physics.) Pp. xiv + 407. (New York and London: McGraw-Hill Book Co., Inc., 1934.) 22s. 6d. net.

THE author has given, in an interesting style, a vivid account of the physics of to-day. As he says, the book is not primarily intended for the specialist in physics but rather to give the student an appreciation of modern physics. The atom takes, of course, the main position, and relativity a subsidiary one. After opening with relativity, a large section on the kinetic theory of matter follows. This is particularly good in showing how the statistical method runs through the whole subject. The quantum theory and its pre-spectrum applications follow. The spectrum is described in more detail than any other phenomenon. This is perhaps justified, but the reader will find that the style of interesting narrative has at this stage become lost in a catalogue of spectrum series, energy levels and electron spin, to be regained, however, when nuclear physics is reached. Here the transformation of atoms is described, along with the discoveries of the deuteron, neutron and positron. In view of the importance of these discoveries, they