The book contains 161 pages of text. The mathematics are relegated to a further seventy pages of notes, and the arrangement of these is rather tiresome, for the majority of the notes are simply references to original papers, and there is nothing in the text to distinguish between these and the mathematical calculations.

The order of treatment of subjects is mainly historical, and radiation therefore comes first. This is probably the best arrangement possible at present, though when the theory has been reduced to a classical form it is to be presumed that such a complex question will fall into a much later position. There follows a short discussion on the necessity of breaking away from ordinary mechanics, and then a description of Einstein's hypothesis of light quanta, and the ingenious deductions he makes from the fluctuations in radiant energy. The fourth chapter gives an account of the quantum theory in relation to the physics of solids—such questions as specific heats and Born's work on the dynamics of crystals. The next chapter deals with gases, where the theory is not quite so satisfactory. The rest of the book is mainly occupied with the Bohr theory. It includes all the more recent ideas, such as the correspondence principle, and also a certain amount about atom models.

There is little to criticise in such a fair account of the whole theory, but we may venture to say that the author is perhaps inclined to favour Planck's second hypothesis rather more than would the general consensus of present opinion. That hypothesis seems to give rather better agreement with experiment in the theory of gases, but neither of Planck's hypotheses has yet been made to cover the facts in a really convincing manner. On the other hand, the second hypothesis is quite foreign to the principles of spectrum theory, which agree exceedingly accurately with experiment. Apart from this, anyone wishing to get a just view of the quantum theory cannot do better than read the book.

Our Bookshelf.

Taboo and Genetics: A Study of the Biological, Sociological, and Psychological Foundation of the Family. By Dr. M. M. Knight, Dr. Iva L. Peters, and Dr. Phyllis Blanchard. Pp. xv+255. (London: Kegan Paul and Co., Ltd.; New York: Moffat, Yard, and Co., 1921.) 10*s.* 6*d.* net.

THIS survey of the institutions connected with sexual life and the family falls into three sections. In the biological section Dr. M. M. Knight gives a lucid summary of recent work on sex, drawing the conclusion that the difference between the sexes is quantitative rather than qualitative. In the second section Dr. Iva Peters surveys the ethnological evidence for the taboo of women, and concludes that the modern form of monogamous marriage is essentially a survival of a compromise between man's erotic desires and his fears of woman's *mana*, which has produced an "ideal woman," a type out of harmony with modern developments. This is perhaps the least satisfactory of the three sections. By dwelling too exclusively on taboo and its results it ignores equally important factors in the various social complexes which influence the institution of the family. Dr. Phyllis Blanchard, in dealing with the psychological side of the question, has provided the most stimulating section of the book. By a skilful analysis she places before her readers the chief elements which are responsible for disharmony in modern marriage and the causes which, partly through the increased social activities and individualism of women, are bringing about the exclusion of a large body of the female population from participation in carrying on the race.

Sulphur and Sulphur Derivatives. By Dr. H. A. Auden. (Pitman's Common Commodities and Industries.) Pp. xviii+101. (London: Sir Isaac Pitman and Sons, Ltd., n.d.) 3*s.* net.

DR. AUDEN gives a very readable and accurate account of the manufacture and uses of sulphur and its derivatives, especially sulphuric acid, and his book should prove useful to students and general readers. Although two illustrations of the Gill furnace are given, its mode of operation (which cannot be seen from the illustrations) is not mentioned. The changes observed on heating sulphur are not quite correctly described (p. 5). Moreover, the statement (p. 29) that "almost the whole supply of ammonium sulphate is at present derived from the distillation of coal" refers only to English practice; in more progressive countries very large quantities are produced from atmospheric nitrogen. Although the earlier history of the contact process is given, the real commercial process (p. 61) is not ascribed to any particular inventor—the work of the Badische Co. would seem worthy of mention, and diagrams of the apparatus would also be useful.

Examples in Optics. Compiled by Dr. T. J. I'A. Bromwich. Pp. 16. (Cambridge: Bowes and Bowes, 1921.) 2*s.* net.

DR. BROMWICH has collected sixty questions in optics for use in class-room at St. John's College, Cambridge, and has given references to eighty-four Tripos questions set between 1910 and 1921. The examples printed in the pamphlet cover a fairly wide range, and have evidently been selected by an experienced teacher. In many cases the questions have a direct practical application, or point towards a method of making some important optical measurement. Special attention may be directed to the examples connected with the cardinal points of a system of lenses or refracting surfaces, which should prove a useful supplement to practical work in the laboratory.

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