

cations of thermodynamics to homogeneous and heterogeneous chemical systems are considered at length.

From the point of view of the teacher who decides to use the new method, it would have been better to arrange the book so that the possibilities of classical thermodynamics were more fully exploited before the introduction of the Nernst heat theorem. Also the eighteen numerical applications would be better in the main text, and considerably increased.

*The History of British Civilization.* By Dr. Esmé Wingfield-Stratford. Second edition, revised. Pp. xix + 1332. (London: George Routledge and Sons, Ltd., 1930.) 15s. net.

It is very satisfactory to see that Dr. Wingfield-Stratford's work, reviewed in NATURE of June 8, 1929, p. 863, has already reached a second edition in one volume. The price of the first edition in two volumes was the only obstacle to the wide popularity of the book; the price of the second removes that difficulty, for no one can 'boggle' at 15s. for 1300 large and well-printed pages.

The book is certainly a godsend, for repeated trials on the average intelligent person have convinced us that it has just the elements needed for success—a very wide reading on the part of the author, a generous and impartial spirit, a lively style, a strong personal interest, and a burning enthusiasm for his country. It is not an elementary history for schools, it is not a scientific history, based on documents and adding to our knowledge, but it is a real book, adding to our interest and bringing together, from a new and personal point of view, a multitude of facts and personalities of which most people have some vague and often disconnected knowledge.

When one considers the vast importance of the subject and its growing complexity, this is great service to the public, and one should be duly grateful to Dr. Wingfield-Stratford for having done it so zealously. It may be confidently expected that this book will attain to late editions, and, if so, he may find opportunities to make good some of the defects we pointed out in an earlier notice. This edition is practically a reprint of the first.

F. S. M.

*Hindu Exogamy.* By S. V. Karandikar. (University of Bombay Publication.) Pp. xv + 308. (Bombay: D. B. Taraporevala, Sons and Co., 1929.) 6 rupees.

IN attempting to formulate a theory of Hindu exogamy, Mr. Karandikar has attacked a subject of considerable intricacy, and if his book is difficult the fault is not to be attributed to the author. He seeks to extract the evidence for exogamy from the earliest Sanskrit literature and to trace its history and development through the later documents, while at the same time comparing or contrasting it with the practice in Indian culture. Owing to the general dissociation of the study of Sanskrit literature from anthropological studies, the subject is not one which hitherto has been attacked on these

lines. It would appear that among the Aryan invaders, exogamy was not practised. Indeed, the union of close kin was encouraged. The present exogamy of the Indo-Aryans is derived from the *gotra*—sept or clan—a word which occurs a few times only in the Rig-Veda. On the other hand, there appears to have been a form of *sapinda* exogamy based upon the generations on both the father's and the mother's side. Mr. Karandikar has traced the development of these forms of exogamy from early times and shows how, by a process of admixture and borrowing as between Aryan and Dravidian stocks, the forms of exogamy as at present practised in India have come about. He concludes with some considerations of the eugenic aspect of the practice on the population of India.

*Bandenspektren auf experimenteller Grundlage.* Von Dr. Richard Ruedy. (Sammlung Vieweg, Hefte 101-102.) Pp. vi + 124. (Braunschweig: Friedr. Vieweg und Sohn A.-G., 1930.) 9-60 gold marks.

THIS famous series of monographs has now added to its number an excellent little volume on band spectra by Dr. Richard Ruedy of Toronto. This appears at a time when rapid progress is being made both on the theoretical side by Hund, Mulliken, and others, and on the experimental side by a large number of workers in many countries. The foundations of the subject are, however, sufficiently well established to justify a volume of this scope, and it should prove a trustworthy and valuable introduction to the whole subject of electronic band spectra, especially for those who have not previously had any specialised acquaintance with the subject.

This book to some extent covers the same ground as Mecke's article in the "Handbuch der Physik", vol. 21, but there is ample scope for several presentations of the subject by men who can write authoritatively. Dr. Ruedy has managed to compress into moderate space a very lucid and attractively arranged account of the basis of this difficult subject.

*Physikalische Beiträge zur Radium-emanations-therapie.* Von Heinrich Mache und Stefan Meyer. (Abhandlungen aus dem Gesamtgebiete der Hygiene, herausgegeben von Prof. Dr. R. Grassberger, Heft 5.) Pp. 32. (Leipzig und Wien: Franz Deuticke, 1929.) 2-40 gold marks.

It is commonly supposed that thermal waters possessing radioactive emanations exert therapeutic action due to the emanations, but definite data concerning this are difficult to find. The authors of the two papers contained in this memoir give the results of investigations on the entrance into the body of the radioactive emanations of the Gastein thermal waters by bathing, by drinking, and by breathing air containing them. By drinking and by breathing, the emanations rapidly enter the blood, but are quickly eliminated, though it is questionable if the emanations can enter through the skin by bathing. Quantitative data are given of the amount of the emanations found in the blood and of the rates of accumulation and elimination of the emanations.