

the various forms of differences; Lagrangian interpolation, differentiation and integration; and Newtonian divided differences and their consequences respectively: curiously, operational methods are relegated to Chapter 6 as though by afterthought.

The next two chapters contain a good summary of the methods which can be used to solve one-point boundary-value ordinary differential equations, and these are followed by Chapter 9 on polynomial equations and Chapter 10 on curve fitting by the methods of least squares. Simultaneous linear equations, matrices and the relaxation method then receive a chapter each, and these lead to Chapter 14 on two-point boundary-value problems, latent roots, and integral equations. Finally, there are two chapters, on two-dimensional interpolation and on partial differential equations respectively, and the book ends with four appendixes containing formulae.

The book is lavishly provided with worked examples which will be useful to student and teacher alike, and the only place where detail is, perhaps, insufficient is in the section on the relaxation method. Only the high price will prevent the book from adorning the shelves of all serious numerical analysts, and this must be weighed against its considerable size. I end on a note of criticism of the publishers: the format is (to quote a colleague) "execrable" and the narrow margins surely cannot be justified on any grounds of paper economy at the present time.

A. D. BOOTH

COMMONWEALTH INDUSTRIAL CONFERENCE

His Royal Highness the Duke of Edinburgh's Study Conference on the Human Problems of Industrial Communities Within the Commonwealth and Empire, Oxford, 9-27 July, 1956

Vol. 1: Report and Proceedings. Pp. xii+338+7 plates. Vol. 2: Background Papers; Appendixes; and Index. Pp. xv+339. (London and New York: Oxford University Press, 1957.) 42s. net the set of two volumes.

THESE two volumes constitute a complete record of the proceedings of the Conference (see *Nature*, 178, 341; 1956). Their principal contents are the addresses given at the Conference, the reports of the study groups into which the Conference membership was divided, each of which spent a week studying particular problems in one of the main industrial areas of Britain, and the background papers which were distributed to members to stimulate thought on some of the more important issues.

The background papers are, from a reader's point of view, the most valuable element. They provide a fairly comprehensive and often stimulating introduction to the problems of particular territories, ranging from Australasia through Malaya, India, East and West Africa to Britain itself; the remaining nine are more general and include contributions on political life (by Sir Ivor Jennings), the will to work (Prof. C. A. Mace), and values in an industrial society (Prof. D. W. Harding). The sixteen addresses given at the Conference, mainly by industrialists and trade unionists, are of a fairly general nature, and cover such topics as industrial structure, developments in management, work motivations, industry and the

community, and the multi-racial society. They are useful, but do not always reach the high standard set by many of the background papers.

Considered as a contribution to knowledge, the two volumes provide little that is new to the professional social scientist, nor perhaps is this to be expected in a conference concerned primarily with practical problems. It is, however, legitimate to ask whether existing knowledge has been brought to bear to the fullest extent. Prince Philip, in his presidential address, urged the participants to take into account the "great amount of work already done", and Sir John Maud in his address particularly mentioned the indispensable contribution of the social scientist. Despite these exhortations, it is difficult to avoid the conclusion that the organizers were not particularly successful in making this contribution available to the Conference. So far as one can see, not a single professional social scientist addressed the Conference, although a number of background papers were contributed by sociologists. It would not be difficult to list several recent researches, and in particular those sponsored by the Joint Department of Scientific and Industrial Research and Medical Research Council Committee on Human Relations, which are directly relevant to the problems discussed but which were apparently passed over.

What impact will the Conference have made? Prince Philip was again realistic when he commented that it could only scratch the surface, and Sir Philip Morris in his summing up urged the members to recognize that study in a conference is necessarily practical and superficial, and that its full fruit could be ripened only by continual effort. Will it so ripen? It is difficult to avoid pessimism. Conferences all too frequently have a stimulating but transient effect on busy practitioners. Experience suggests that rapid progress in any field demands two conditions—the systematic study of problems, and an effective link between students and practitioners. The Conference fruits will ripen only if social research into industrial problems is steadily extended, and if practitioners have regular opportunities to study developing knowledge and ideas. Indeed, the best sequel to the Conference would be an extension of present arrangements for practitioners both in Britain and overseas to spend, preferably in small groups, a period of study leave at one or other of the few universities in Britain which are so far equipped to receive them.

W. H. SCOTT

MODEL BUILDING FOR ECONOMISTS

Mathematical Economics

By Prof. R. G. D. Allen. Pp. xvi+768. (London: Macmillan and Co., Ltd.; New York: St. Martin's Press, Inc., 1956.) 63s. net.

ECONOMISTS, in their interpretation of the present, mainly rely on the historical approach and on reasoning by analogy with the past; but this frequently involves considering the interplay of several influences. As a means of avoiding false reasoning and of simplifying and shortening logical arguments, economists have made increasing use of the abstract 'model'. This model represents the real situation in an ideal State, with most of the com-