

The Enterprise and its Environment

A System Theory of Management Organization. By A. K. Rice. Pp. xiv + 364. (London: Tavistock Publications (1959), Ltd., 1963.) 63s. net.

IT is unusual for the outsider to be able to benefit from the experience of a consultant; but then, Mr. Rice is an unusual consultant, and Calico Mills an unusual client. In *The Enterprise and its Environment*, his second book about his nine years' work with the Company, Mr. Rice continues the Tavistock Institute's case-histories of consultant-client relationships. He says that he has been lucky in his client; so are we, in being permitted to read the history of the changes in organization, the analyses that led to them, and the successes and failures of their implementation.

The first half of the book describes the history of reorganizations in the Calico Mills and in Sarabhai Chemicals, which is managed by the same family. In the second half, Mr. Rice discusses the concepts and assumptions about organizations which he used to help in deciding what form of organization was most suitable for his clients at the different stages of change and expansion that they reached. This part of the book also includes a general discussion of the nature of organization and of some of the problems of change. His purpose "has been to try to provide a framework of analysis that is sufficiently abstract to make it possible to examine tasks and organizations irrespective of value systems and other cultural determinants of behaviour". Those who are interested in knowing more about Mr. Rice's methods can read the lengthy working notes in the appendixes.

The framework of analysis is a simple one, and clearly explained, so that readers who are sufficiently interested could try to apply it to the examination of their own organizations. Mr. Rice sees the organization as an open system, which must be analysed in relation to its environment. He stresses the importance of distinguishing the primary task, or occasionally tasks, of an organization, and of being alert to changes that may necessitate a re-definition of it.

The book is also worth reading for the thought-provoking comments scattered throughout it; those tempted to skim should, therefore, resist the temptation. An illustration of these comments is his suggestion that differences between the kinds of leadership required at different levels mean that, except in very stable conditions, it is unlikely that promotion from within will produce enough adequate leaders. Those who may have been deterred by the language of some other Tavistock Institute publications should try again; this one is easier going. The book is admirably printed, but the spacious and attractive layout makes it look much longer than it is.

ROSEMARY STEWART

Kempe's Engineers Year Book

Vol. 1. Pp. xiv + 1324. Vol. 2. Pp. viii + 1394. (London: Morgan Brothers (Publishers), Ltd., 1964.) 92s. 6d.

KEMPE'S *Engineers Year Book* is revised annually. It is a valuable source of data for engineers, containing, as it does, mathematical tables and formulae, tables of properties of materials, steam, steel sections and details of standard manufactured components, together with summaries of British Standards and Codes of Practice. Otherwise its contents are concerned with abbreviated theory relevant to the numerous branches of engineering from public health engineering to electrical engineering, and descriptive matter of engineering works and equipment.

Additions which have been made this year include those concerned with modern industrial and marine gas turbines; gas reforming processes and interchangeability of gases; navigation aids and fog signals; catchment areas and dams; details of piles and piling; pre-stressed concrete methods; chemical cleaning of machine tools, details of

copper and nickel alloys; multiple lift systems and escalator dimensions; and taxation allowances as set out in the Finance Bill of 1963.

While the work as a whole conforms to a high standard, it is surely time that the sections on thermodynamics, theory of structures and design of steel structures were brought up to date. For example, in the section on thermodynamics the reader is referred to *Thermodynamics for Engineers* by Ewing and *The Properties of Steam* by Callendar for fuller information. While these books are classics, both have been superseded for practical purposes by modern works such as *Engineering Thermodynamics*, by Rogers and Mayhew. Then, in the sections on theory and design of steel structures, there is no information whatever on the plastic theory and its use for providing a design criterion based on the ultimate load-carrying capacity of rigidly jointed frameworks. The section on reinforced and pre-stressed concrete does, incidentally, include information on the so-called load factor method which corresponds closely to the plastic theory of design of steel structures.

Nevertheless, the new edition of *Kempe's Engineers Year Book* will be welcomed by practising engineers and the engineering industry generally. T. M. CHARLTON

Directory of Learning

The World of Learning 1963-64. Fourteenth edition. Pp. xvi + 1424. (London: Europa Publications, Ltd., 1963.) 140s.

THE fourteenth edition of *The World of Learning* continues the traditions of its predecessors. Since its inauguration, this directory has established itself as an indispensable guide to universities, colleges, learned societies, libraries, museums, art galleries and research institutes throughout the world.

The opening section is devoted to international organizations. This commences with Unesco, giving its origins, aims, functions and organization as well as an account of its recent activities and future plans. Then follow details of the International Council of Scientific Unions, the International Council for Philosophy and Humanistic Studies and other international organizations according to the discipline concerned. The section which follows deals with the organization of science, country by country. All in all, 155 countries are included: this is the major part of the directory and occupies 1,300 pages.

Under each country information is supplied first of the learned societies and professional associations: details of the background, councils and members are given for the major academies and societies. The research institutes are then listed according to the field of work concerned, and here addresses, names of directors and, in some cases, executive members are included as also for the libraries, museums and art galleries that follow. Universities are extensively dealt with alphabetically, information being given of addresses, senates, governing bodies, deans of faculties and professors. Most recent statistics are given of the number of teachers and students and also the library holding and, where applicable, publications. Colleges of university standing are likewise treated, so also are schools of art and music.

Except for private compilations and such publications as *Index Generalis*, *The World of Learning* is unchallenged in its field. Unfortunately it is a hard taskmaster, for though its coverage of the world of learning is from the point of view of places fully comprehensive—the information is easily accessible by means of the index of institutions—it is not so for people. To find the whereabouts of a specific scientist is an arduous job unless one has some idea of where he might be, for there is no author index. With the modern techniques available of indexing, this lacuna could be filled without great expense to the publishers. Certainly it would make *The World of Learning* an even more valuable directory than it is now.