

gramming, PERT and even faster conventional accounting techniques. Several computer-based management information systems are now being sold commercially. The success of such systems largely depends upon the presentation and analysis of the basic information provided. Bodington looks forward to accurate economic modelling as the major planning tool. He hopes that a wide dissemination of information from such models will permit a decentralised power structure, although the political mechanism for achieving this is not discussed.

A surprising omission, in view of the lengthy discussion of modelling methods, is that of the world models of Forrester and Meadows. The significance of such models could be greatly increased if their reliability could be improved. But it does not seem likely that economic systems can be predicted with any accuracy (as the wide fluctuations in the basic commodity markets tends to show).

The book is well produced, although some of the formula and computer material is not correctly set. The subject matter is well presented, and since it is one of the first books in this area, it makes a useful addition to a library. I hope, however, that more penetrating analyses of the impact of computers will soon be available.

B. A. WICHMANN

Archaeologists entertain

Archaeological Theory and Practice. Edited by D. E. Strong. Pp. xiv+308. (Seminar: London and New York, August 1973.) £5.50.

THIS book is a *Festschrift* offered by his colleagues on the staff of the Institute of Archaeology in London to its director, Professor W. F. Grimes, after his seventeen years of service in that position. It is not, therefore, a survey of the theoretical structure of archaeology, as its title might imply, but an agreeable and wide ranging anthology, reflecting the considerable scope of interests of the staff of the institute, from Roman London (where much of Grimes's own work was carried out) to islands in southeast Asia, and from Acheulian hand axes to mediaeval technology. A particularly welcome feature is the inclusion of articles on photogrammetry and photographic techniques by staff in the Departments of Archaeological Photography and Archaeological Drawing and Survey.

Among the themes underlying this wide breadth of interest, a concern for environmental archaeology is perhaps the most prominent. Two further contributions are of very wide methodological interest. Professor J. D. Evans, Grimes's successor as director, writes

lucidly on his system of sherd analysis and sherd counts which he has used on the pottery from neolithic Knossos in Crete to very good effect, putting his findings on a firm quantitative basis. And M. H. Newcomer and F. R. Hodson describe a method here termed "constellation analysis", which permits the elegant comparison of different classifications of a given body of material, each classification being based on different criteria. A quantitative comparison is thus afforded of the results obtained from several independent approaches to the same set of data. In the example discussed the method has been applied to Newcomer's data on the burins from the upper palaeolithic levels at Ksar Akil in the Lebanon.

The human, almost anecdotal, interest of two contributions in particular catches the interest, for they are both at the same time contributions to scholarship. W. M. Bray, in "A page of *Punch*", reproduces a poem entitled "Monkey-ana". This is a lampoon, published in 1861, of the participants in the great British Association debate held in Oxford the previous year, when Huxley clashed so memorably with Bishop Wilberforce. In his discussion Bray brings out both the warmth in the scholarly world of the evolution controversy and, in an illuminating way, the extent to which the debate was reflected in the popular press as a whole.

The second of these delightful disquisitions is by the editor of the volume, Professor D. E. Strong, whose sad and sudden death in Turkey was reported shortly after the publication of this book. Professor Strong always accompanied his wealth of scholarship in Roman archaeology with a very modern wit, and in "Roman museums" he considers the Romans as connoisseurs and collectors of ancient art with a very contemporary awareness. The parallel with the pretensions and preoccupations of our own times is never explicitly drawn, but lingers engagingly below the surface. As scholarly as it is entertaining, this is a splendidly original and human contribution to a varied and wide ranging book.

COLIN RENFREW

Maths of Ch'in Chiu-shao

Chinese Mathematics in the Thirteenth Century: The Shu-shu chiu-chang of Ch'in Chiu-shao. By Ulrich Libbrecht. Pp. xxxi+555. (MIT: Cambridge, Mass., and London, 1973.) £11.25.

"ORIENTAL mathematics may be an interesting curiosity, but Greek mathematics is the real thing" (G. H. Hardy, 1940). Hardy's words were written before Needham's *Science and Civilisation in China*. The book under review is an

instalment of the volumes of detailed work needed before a successor to Needham, or at least a development of his mathematical section, can be attempted. But I don't think that either Needham or Libbrecht would have persuaded Hardy to change his views. The Greeks, lacking a decent notation for computation, developed mathematical ideas in a geometrical context. The ancient Chinese, having developed a notation of decimal place-values which allowed them to compute pretty efficiently and competently, developed their mathematics in a practical (though I know of nobody as practical as Archimedes) and pedestrian manner.

Perhaps changes here since Hardy's

In memoriam



GRAFTON ELLIOT SMITH (1871-1937) was a man of many parts; he was first and foremost an anatomist with a speciality for comparative neurology; later in life he became a determined and outspoken contributor to debates on man's physical and cultural evolution. These and the other interests of this extraordinary scientist, were reflected in the contributions to a symposium organised in November 1972 in commemoration of the centenary of Elliot Smith's birth by the Anatomical Society and the Zoological Society of London.

In the proceedings just published (*The Concepts of Human Evolution* (Symp. zool. Soc. Lond. No. 33) edit. by Lord Zuckerman (Academic: London, January 1974) £10.30; \$29.00), Lord Zuckerman—one of the small group of anatomists alive today who both knew and worked with Elliot Smith—introduces the man; there follows a medley of other relevant contributions and the volume ends with a thought-provoking and controversial session on "Elliot Smith, Egypt and Diffusionism".