

ficant, even if Britain could scarcely expect to provide even 200 of the 1,000 student places. Apart, however, from the possibilities in regard to research, particularly in interdisciplinary fields, the institute might make a valuable contribution to the provision of the teaching staff, which promises to be the real bottleneck in university expansion. Further, it is possible that, if the flexibility which the working group desiderates so firmly can be achieved in practice, a lead might well be given to the solution of the problems which arise when research teams established around some distinguished scientist in a research institute or to share some highly expensive equipment lose their leader or find the field diminishes in importance. Viewed purely from this point of view of experiment in dealing with the major problems of research to-day, the proposal deserves serious consideration and if the other members of the North Atlantic Treaty Organization are prepared to join in establishing such an institute, there should be no hesitation on the part of the British Government in making its proportionate contribution to the capital and recurrent expenditure involved.

A NEW OXFORD DICTIONARY

Oxford Illustrated Dictionary

Text edited by J. Coulson, Prof. C. T. Carr, Lucy Hutchinson and Dorothy Eagle. Pp. xvi+974. (Oxford: Clarendon Press, 1962.) 50s.

THE latest dictionary from the Clarendon Press is a break with tradition; however, as the preface points out, this is a well-planned break and as such represents the culmination of more than twenty years work. The *Oxford Illustrated Dictionary* extends to nearly 1,000 pages and contains more than 30,000 separate entries with more than 600 supporting drawings. Although it is the first of the Oxford English Dictionaries to make use of illustrations, it is not this that has revolutionized the Oxford Dictionary system, for from its own definitions this latest publication cannot truly be classified as either a dictionary or an encyclopædia. On one hand, it goes much farther than the traditional idea of a dictionary, and on the other it is not sufficiently extensive in its definitions to be used just as an encyclopædia. All in all, it represents an intermediate stage between the two.

The fact that a printing house steeped in tradition, as is the Clarendon Press so far as its dictionaries are concerned, should feel that there is a need for such a work is a consequence of the ever-increasing strides of science and technology. No longer is it sufficient to have a lexicon that deals solely with words, their use, spelling, significance, etc.; instead such a work must be supplemented by definitions of 'things'. The preface states that "the vocabulary has been chosen with an eye to the needs of one who may require either type of information. Information about words, however, is more often sought by the average user of a reference book than information about things and the vocabulary has therefore been based on that of the *Concise Oxford Dictionary* . . .".

Special consideration has indeed been given to many terms in everyday use which would normally

be excluded from an ordinary dictionary because of their technical and scientific character. For example, the entry for 'bacterium' carefully defines the organism, outlines the occurrence and activities of this kind of organism and, by illustration, indicates the differences between the coccus and the bacillus forms, giving as examples *Staphylococcus*, *Streptococcus*, *B. anthracis*, *B. typhosus* and *Spirilla*. Generally the entries for zoological and botanical types are under the common name; but details of the classification and common species are also supplied, and in some cases information concerning physiology and origin is also included. Treatment of the chemical elements is extensive, and details are given of the atomic number, atomic weight, common isotopes, occurrence and the more generally known compounds of that element. Included in the appendixes are lists of the chemical elements and also British, American and Continental weights and measures.

Even though the present pace of development in science and technology is likely to make it impossible for any general reference book to be completely up to date, such terms as 'fall-out', 'radiocarbon dating', 'computer', 'rocketry', 'sputnik' appear, but not 'laser', 'maser', 'chromatography' or 'Van Allen belt'. However, it is good to be reminded that the Leyden jar was invented at the University of Leyden in 1745 "for storing electric charge, consisting of a glass jar coated inside and outside with tinfoil, the electric energy being stored in the glass dielectric (non-conducting substance) between the tinfoil electrodes"; that Birkbeck College was "... formerly the Birkbeck Mechanics' Institution, founded 1824 by Dr. George Birkbeck (1776-1841), a physician and professor of natural philosophy"; that Uranus is "The 7th of the major planets, farthest from the sun except Neptune and Pluto; discovered in 1781 by Sir W. Herschel . . .". From these examples it can be seen that the *Oxford Illustrated Dictionary* goes much farther than dealing with words and things. In fact it also deals with famous people, the names of important places and events—the Clarendon Press is to be congratulated for extending the services of the *Dictionary* to such ends. It is inevitable that there should be some omissions, but it is to be regretted that, among the scientists, while Dalton, Fleming, Banting, Ross, Curie, Bohr, Raman, Rayleigh and Röntgen (to mention but a few) have been included, Leeuwenhoek, Rutherford and Thomson (J. J.) have been omitted.

The *Oxford Illustrated Dictionary* goes far to meet a need that has developed during the past half-century and still remains within the financial reach of the average individual. The layman has now only himself to blame if he remains ill-informed of the trends in world science, for whereas before he could cry out that he could not understand the language of the scientist, he now at least has a means to help him interpret it. At 50s. the *Oxford Illustrated Dictionary* should find a place on all shelves of reference books.

CONCRETE

Concrete

Properties and Manufacture. By T. N. W. Akroyd. Pp. vii+336. (London and New York: Pergamon Press, 1962.) 50s. net.

THERE is no doubt whatever that concrete holds a very high rank among building materials. In the past concrete was regarded as a useful but