poles apart from the ordered routine of the landsman, who can have no inkling of its distance from his way of life; but, rough and uncomfortable as the life of a fisherman may be, the ceaseless struggle against the unending hostility of the elements and the ever-changing beauty, probably seldom consciously appreciated, of their infinite variety bring a primitive satisfaction that drives men to sea again and again in spite of all sea-born vows to swallow the anchor for good.

The last two chapters discuss the possibility of farming the sea, and the future of fisheries and man. The artificial cultivation of fresh-water fishes has a long history and a bright future, but no more than the first tentative experiments have yet been made in cultivating marine fishes—the artificial rearing of fry, the transplantation of young fish to rich feeding grounds, and the fertilization of semi-enclosed areas of the sea. One wonders whether pouring the untreated sewage of much of northern Europe into the North Sea can have had any effect in making it one of the finest fishing grounds of the world, or whether the suggested ploughing of the bottom to stimulate the production of the benthos which forms the diet of so many food fishes could increase the harvest. The human population explosion results in an ever-increasing demand for food protein; Dr. Ommanney speculates about the possibilities of satisfying the demand with the products of the sea, and on the effects of the radioactive wastes that we dump into the depths in 'leak proof' containers when inevitably they do leak. "There seems to be no limit to what man may achieve with his technology and his formidable know-how. . . . Nevertheless, the abuse of his own know-how threatens his very existence and already casts a lengthening shadow which reaches even to the uttermost depths of the sea."

Dr. Ommanney's book will be enjoyed equally by the professional biologist and by the layman for whom it is primarily intended. It is well illustrated with coloured and monochrome photographic plates and with numerous line drawings of excellent quality. There are, however, several howlers that a more careful final revision might have avoided; the Weberian ossicles have certainly not become the hearing bones of the ear of higher animals (p. 45), the claspers of elasmobranchs are not, as Agassiz mistakenly supposed, "pressed together so that their grooved inner faces form a tube along which the sperm flows" but are inserted singly into the female passage (p. 73); no carefully measured Basking shark has reached "a length of 40 feet", 30 ft. is nearer the mark (p. 79); the marine lancelet *Branchiostoma* is not the same creature as the "sand lance", which is the sand eel *Ammodytes* (p. 197), and Fig. 19 purporting to show gill rakers is a failure. These regrettable lapses form the few shadows that contrast with the brilliance of the rest of the book.

L. HARRISON MATTHEWS

PURPOSE AND MEANING OF A UNIVERSITY

The Modern University

By Prof. G. L. Brook. Pp. 192. (London: André Deutsch, 1965.) 25s. net.

PROF. G. L. BROOK, Smith professor of English language and medieval English literature in the University of Manchester and a Pro-Vice-Chancellor, has written an account of university problems to-day similar to that of 'Bruce Truscott' some twenty years ago. There is the same ease of expression but more authority as well as balance about the whole book. It is a little disappointing, therefore, that the production of such an admirable book should fall considerably short of what was possible in the midst of the War at a third of the price.

Prof. Brook's opening chapter gives a brief discussion of the purpose of a university, and this, together with the

following chapter on entrance requirements, and an appendix on the organization of a modern university, should make plain to prospective students, and their parents, much that sometimes perplexes them. In the succeeding chapters he writes on students and on lectures and tutorials with a refreshing sanity and humour, as well as with balance; his remarks could be disconcerting to the extremist. In general, however, the most valuable chapters in the book are those which deal with books, with professors and lecturers and with academic freedom. The first will be welcomed by those urging more generous provision for university libraries. Librarians should be encouraged by the clear understanding shown of their difficulties and also of the problem of book-buying by students. The second corrects a misleading impression conveyed by 'Bruce Truscott' and should assist in giving a clearer understanding outside the university of the problems involved in the relations between research and teaching. Together with the final chapter on expansion, it brings down to earth some of the wilder statements and arguments of those who seek to determine university expansion by service to political doctrine rather than by reference to public needs and the real nature or purpose of a university.

For the chapter on academic freedom alone *The Modern University* would be welcome. Prof. Brook's exposition of the issues, including those aspects arising from the relations of university teachers with one another and the amount of freedom that students should enjoy, could scarcely be improved. He sees the danger at present as so real that our universities will do well to keep the very considerable freedom they have, and he believes that the chief threat comes from well-disposed persons, genuinely interested in education but who value other things more highly. The threat from outside is largely the result of the success of universities, and Prof. Brook shows clearly how the ear-marked grant can act in this way. The greatest single external threat to academic freedom to-day is the dependence on the State for so large a proportion of the university's income. The greatest internal threat is indifference among university teachers, or the practice of 'taking it for granted'; here he includes the fact that the scholar is reluctant to take his or her share in administration. Nor does he believe that the University Grants Committee will by itself suffice. For the defence of academic freedom it is necessary to convince public opinion that the State ought not to exercise the power it possesses. He adds that accordingly maintenance of a high standard of administrative efficiency under academic control is a most important safeguard of academic freedom, that many important decisions in university affairs should not rest entirely in the hands of one man, and that students, as well as teachers, have rights to be safeguarded.

Prof. Brook closes this chapter on a note of responsibility addressed particularly to the university teacher. That is the keynote of his final chapter, which includes many frank but uncomfortable words for student as well as teacher and administrator. He brings a timely pragmatic point of view to bear on the whole problem of expansion, arguing that the important question is whether potential students can profit by a university education sufficient to justify the considerable expenditure of time and money involved. He reminds us of the limits set to expansion by the availability of university teachers of the right calibre, and that the number of students who could profit from some other form of higher education is very much larger than the number of those whose proper place is in a university. He has constructive suggestions for breaking down existing barriers between school and university teaching. The whole tone of the book is a complete answer to those who accuse the university of being conservative, out of date and unwilling to face modern opportunities. Prof. Brook is to be congratulated on a most readable and timely book. R. BRIGHTMAN