

scientists and the need for international agreement. Finally, he outlines his own proposal, namely, research for peace.

He suggests that a World Peace Research Organization should be set up within the United Nations to study how to solve great world problems of the kind that have in the past led to war, including an attack on the problem of preventing the outbreak of a nuclear war by design or by accident. Dr. Pauling visualizes such an organization, after a thorough analysis of the problems involved in an international agreement to stop all testing of nuclear weapons, formulating a system offering the maximum safety and the least risk of violation, and he is prepared to place at the disposal of the organization a staff of some 2,000 specialists within two years, a figure which might rise to 10,000 within a decade, and puts the cost of the proposal as initially some 25 million dollars a year and ultimately 100 million dollars. He argues that if world problems were attacked in this way, imaginatively and with original methods by outstandingly able investigators, there are great possibilities of progress and of discoveries which would make the outbreak of a nuclear war far less likely. Except in its scale the proposal is scarcely novel, as the work of the Institute of Pacific Relations has shown for a quarter of a century.

Dr. Pauling is convinced that such an organization would repay its cost in savings in defence budgets and in other ways, and points out that the sum he contemplates is only a small fraction of the military budget of even one country such as the United States or the U.S.S.R. He does not, however, quite meet the point of urgency that is one of the critical aspects of the situation, nor what is implied in the diversion of such a proportion of the world's limited resources in highly varied scientific man-power to this constructive purpose. If the nations were prepared to take that immediate step, may not some more direct action in regard to disarmament be possible now?

The interest of the book to the scientist lies largely in these last chapters and, while its bibliographical references are rather scanty, it reproduces the Mainau Declaration of Nobel Laureates of July 1955, Schweitzer's declaration of April 1957, and a statement of Einstein's which are convenient for reference. Dr. Pauling does not, of course, ignore the moral aspect, and he argues in conclusion that the use of nuclear weapons is immoral and that morality must now take its proper place in the conduct of world affairs. This, however, is the essence of Mr. Gollancz's book, which presents persuasively, sensitively and with real felicity and sincerity the spiritual and moral issues involved, taking the thesis one step further to argue for unilateral nuclear disarmament. Mr. Gollancz does not shrink from what might be involved in such a step, but no more than Dr. Pauling does he really face some of the real practical difficulties or the moral issue of involving others in the consequences of a unilateral decision.

In this respect, the major contribution comes from Mr. Philip Noel-Baker. Much the longest of the three, his book considers nuclear disarmament as a facet of general disarmament and in the light of the experience gained in the long negotiations for disarmament under the League of Nations. Mr. Noel-Baker is convinced that much of that work is relevant to present problems, and without disguising the need for anxiety and urgent action he takes a hopeful view of the possibilities. The scientist will find much of interest in this lucid, well-documented and authori-

tative survey; not least, a compelling demonstration of the futility of military or defence research. The argument is realistic, without ignoring or despising the moral argument, and although it does no more than outline the broad stages by which disarmament should proceed, it calls just as incisively as Dr. Pauling for bold and large steps, including the abolition of military research, and for the patient and determined pursuit over many years of new policies and reforms based on known facts, which the recently established Institute of Strategic Studies could well help to disseminate. R. BRIGHTMAN

MODERN MIND

The Emergence of the Modern Mind

Edited by Prof. Frederick C. Gruber. (The Martin G. Brumbaugh Lectures in Education.) Pp. 93. (Philadelphia: University of Pennsylvania Press; London: Oxford University Press, 1958.) 20s. net.

THIS book consists of the four Martin G. Brumbaugh lectures given at the University of Pennsylvania in 1957. They are popular lectures, designed mainly for students of education. Prof. Conway Zirkle, writing on "Our Biological Inheritance", paints a lively but gloomy picture of man as the most successful of animals, yet ill-adapted to the cultures he has produced; knowledge has grown too big for us, our work is dull, civilization is a strain from which the human animal sometimes seeks violent escape; perhaps hope is possible when we look back in history and see what catastrophes we have survived or consider what further successful adaptations we may achieve in the next half million years; we may even survive some of our present world-views. Prof. Edel, on "The Greek Image in American Thought", emphasizes the freshness of Greek thought for Western civilization and our need to look back to the Greeks for new ideas. He is scornful of those bolstering up reactionary philosophies by skilful quotation from Plato. The Greeks must be approached in their own spirit of free inquiry; the questions they discussed are the ones we find important; as an example Edel gives a skilful analysis of the underlying assumptions of democracy, looked at in the light of Plato's "Republic".

The other two lectures are less interesting. Prof. Ethel Alpenfels's essay on "The Mind and the Mores", is very slight; she applies the social anthropologist's view of culture to American 'folkways and mores'; but she never makes it clear how far human beings are 'determined' by their cultures and how far they are free individuals capable of independent thought. Prof. Percy Miller's picture of "Nineteenth Century New England and its Descendants" would be of more interest to Americans than to Britons; his references are too off-hand for us to judge the relevance of his criticisms; and although he wants to show us the greatness of Henry Thoreau, he does not tell us enough about his life, work and writings to convince.

It will be noticed that the link between these essays and the title of the book is tenuous, but this is not important. Although there is nothing original in these lectures and the writing is sometimes pretentious or naïve, they are on important topics and would have a stimulating effect if used, for example, in the sixth forms of grammar schools as a basis for discussion. T. H. B. HOLLINS