tive methods for the study of complex mental processes. The measurement of intelligence is a case in point. As Lord Brain points out, it is far from clear what the conventional intelligence tests are measuring or what interpretation should be placed on the results. There is, he suggests, a great need for fruitful hypotheses to direct genuine experimental attack on the problem of mental ability. This need is perhaps even greater in the sphere of emotion and temperament. Nevertheless, Lord Brain does not contest the value of psychological enquiry, even where woefully inexact. He has even a good word for Freud.

But experimental psychology can scarcely compass man in his relations with society. Here Lord Brain accepts the claim of the social sciences to study man scientifically, but is under no illusions as regards the difficulty of the task. This he illustrates vividly with regard to recent studies of crime and its causes, which might appear to be scientific in little more than name. Lord Brain suggests that in the social sciences generally we need not only more and better observations but more and better hypotheses. One might suggest that we also need more and better men. But how are we to find them? At the present time, the social sciences tend to attract arts men without basic scientific training or scientists who have failed to make their mark in a more conventional field of scientific enquiry. How are we to attract to the social sciences men of the calibre of Darwin, Rutherford or Freud? Money, encouragement and facilities are not enough. A positive lead must be given to find, educate and hold the right kind of men.

In conclusion, Lord Brain is led to express some general views of the proper use of our human resources in an age of rapidly expanding industrial technology. He urges that the speed of modern industrial development makes it essential that we should attempt to forecast the social changes which radical changes in technology will inevitably bring about: and this, in turn, will depend largely on our fostering, through education in the broadest sense, new attitudes to the rapidly changing social environment which science is creating. This problem is real and important. Actions may be changed more rapidly than attitudes, and every change in technology is liable to bring about some change in long-established concepts of status and responsibility. If individuals are unprepared for social change, serious loss in personal security and social stability may ensue. Education, even in the wide sense advocated by Lord Brain, is not enough. We need also much more serious study of human reaction to technological change and its impact on social structure. This, perhaps, is the most urgent challenge to the social sciences and the real lesson of Lord Brain's address.

"AND NEAR A THOUSAND TABLES PINED AND WANTED FOOD"

Man Must Eat

By Sir William Slater. Pp. ix+112. (Chicago and London: The University of Chicago Press, 1964.) 28s.

MAN Must Eat deals with the age-long problem of increasing the food supply to keep pace with the increasing population. It consists of four lectures delivered in the University of Chicago. These are augmented for publication with an introduction giving a general account of the main aspects of the problem.

The subjects of the lectures are on the means of food production, food processing, the problem in the developing

countries, and the effect on mankind of the fall-out from nuclear tests. For those engaged in food research the most interesting are probably those on food processing and the fall-out from nuclear tests. These are excellent reviews of recent advances in knowledge in these subjects.

The lecture on food production in the developing countries shows the difficulties and indeed the possible dangers of giving technical aid on food production. Some of the technicians sent out to the food-deficit countries seem to think that all that is needed to modernize their agriculture is to give the local inhabitants the Western 'know-how'. Few of them have the 'know-how' needed for soil and climatic conditions and social and economic systems different from the Western temperate zone countries, and on tropical crops of which Western experts have little experience. Further, they are apt to forget that some of the countries, like India, for example, have colleges of agriculture and research institutes with well-informed senior officials, many of whom are trained in Western universities. They know as much about the principles of agriculture as foreign experts and, in addition, know the difficult and complex conditions to which modern methods must be applied. As Sir William Slater points out, the main difficulty is the lack of local industries to produce the fertilizers, equipment and other things needed for increasing production, and the foreign credits to import them.

Looking to the future, Sir William estimates that by the end of the present century, that is, only thirty-six years ahead, the population of Britain will reach 70 million—an appalling thought for the already crowded Islands. He also estimates that home food production can be increased by only about 40 per cent. So, with her increasing population, Britain will continue to depend on importing about one-third of the food she consumes. The population of the United States will also increase so much that by the end of the century it will have no surplus to export.

This raises the problem of where Britain can find her food imports. It will not be from the food deficit countries where, with all the technical and financial aid they receive, increased production can do little more than provide for the increase in population. During 1962-63 it failed to do even that, with the result that the amount of food per head of the world population actually fell. Second only to war, the accelerating growth of population, with a possible food shortage, is the most serious threat to Western civilization. It warrants more attention from leading politicians than the attempt to put a man on the Moon, or even which political party is going to win the next election.

It is not certain, however, that the threatened world food crisis will occur. The present rate of increase of population may begin to slow down as has already occurred in a few countries, notably Japan, where the number of births fell from 2,697,00 in 1949 to 1,607,000 in 1962. If the new oral contraceptive could be produced in sufficient quantities and brought within the purchasing power of the poorest, it may slow down the growth of population and the alarming estimated increase in population may never be reached.

Sir William warns us that it will be difficult, if not impossible, to provide sufficient food for the rapidly growing population. That is certainly true under present political and economic conditions. If, however, all Governments would co-operate in a world scheme for the production and distribution of goods to eliminate hunger from the world, then, with modern agricultural and engineering science, sufficient could be produced even though the population increased at its present rate for another hundred years.

This book on food problems by an authority of international repute deserves to be studied by scientists and also by Governments and their officials dealing with the national and international aspects of food production.

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