This, however, is not so. It has been the painful pursuit of ultimate determinants which has proved successful. It was inevitable that this method should first arise in heredity—and even in the long-term heredity of the higher organisms. From one point of view, to be sure, heredity is merely the repetition of development. From another, however, heredity presents the same consequences of protein propagation as development does, but on a larger field—as though seen through a diminishing glass. It enables us to separate what is permanent from what is temporary; and although one of the authors does not wish us to exaggerate the importance of this distinction, it is in practice a mighty convenient one. The foundation of all physiology must be the physiology of permanence.

The present symposium in these ways puts the recent history of fundamental biology in a new light; and at the same time it reveals the new notions and methods that are likely to be important in the study of growth and differentiation in the coming years.

C. D. DARLINGTON

12/6

SOCIAL ASPECTS OF MEDICINE

Changing Disciplines

Lectures on the History, Method and Motives of Social Pathology. By Prof. John A. Ryle. (Oxford Medical Publications.) Pp. xv + 124. (London: Oxford University Press, 1948.) 12*s*. 6*d*. net.

IT is always a pleasure to read a book which combines the logic of scientific thought with the warmth of human understanding. In a series of essays, the author defines his subject as "the medicine and the pathology of families, groups, societies or larger populations". This includes the study of health in its many variations—because a knowledge of the normal is necessary for recognizing the abnormal—and the social causes and remedies of disease As professor of social medicine in the University of Oxford and director of the Oxford Institute of Social Medicine—the first of its kind in Great Britain—Prof. J. A. Ryle is engaged in pioneering work in a field which, in a more restricted sense, used to be known under the name of 'public health'.

A hundred years ago, when William Farr turned vital statistics into a weapon against disease, social medicine received its first scientific equipment; but the unfortunate separation between preventive and curative medicine which ensued gave it little chance to grow up to its full stature. The cure of the sick individual, largely in isolation from his environment, remained in the foreground of medical thought, while public health concerned itself with sanitation and epidemic disease without paying much attention to the individual in his social setting. Social medicine now "places the emphasis on *man*, and endeavours to study him in and in relation to his environment".

The author describes the work done by the Oxford Institute since its inception in 1942, and by the Oxford Bureau of Health and Sickness Records which works in close association with it. He is convinced that "the whole natural history of disease in human communities, as well as in individuals, is ripe for fuller and more exhaustive study". To-day, as in the past, the relation between poverty and disease forces itself upon the practitioner of social medicine at every step, demonstrating the failures, and occasionally also the successes, of society. Out of the figures of the occupational, geographical, sex, and income distribution of death and disease, new knowledge and a new discipline are emerging. Statistical correlations between tuberculosis and social class, between the incidence of skin cancer and occupation, and between stillbirths and the nutrition of mothers, reveal as many facts as the laboratory and the X-ray plant. Much of the present knowledge is still awaiting application. In his study on "Social Medicine and the Population Problem", the author counts the lives that could be saved every year if the present lessons of social medicine were applied. But an infinitely greater amount of detailed information about the social background of disease could be made available with greater effort and a new approach in medicine. With the institution of the National Health Service there is, at last, the opportunity of developing a national system of records which would supply as much information about sickness, its distribution and its character, as we have had on mortality for many decades. To-day, in the absence of such records, it is not possible to assess effectively the results of particular methods of treatment.

In his lecture on "Medical Ethics and the New Humanism", Prof. Ryle draws a number of conclusions for the future role of the medical profession. He urges his colleagues to play a more constructive part than they have played in the past by adapting the methods of medicine to human needs in a changing society. "Human justice—by the standards of vital statistics—is still a shoddy affair", and this fact has a close bearing upon medical ethics. "Possessing the knowledge which we now possess, is it not the duty of physicians everywhere, as Prof. Sigerist has urged, 'to assume leadership in the struggle for the improvement of conditions'?" This demands not only a change of emphasis in the training of medical students, but also a wider conception of medical ethics, "a new and broader and more intellectually inspired sense of duty to our communities and to the race and to the individuals".

This book, written in the restrained language of the man of science, contains a challenge. It should be read not only by medical men and people closely associated with medicine, but also by all those who are concerned with the social problems of our time.

H. FITZGERALD

14/-

PROPAGATION OF TREES AND SHRUBS

Propagation of Trees, Shrubs and Conifers

By Wilfred G. Sheat. Pp. xii+479. (London: Macmillan and Co., Ltd., 1948.) 25*s*.

THE author has had wide experience in propagation in nurseries in New Zealand and in Britain and writes as a practical man for practical men. He has brought together in this book the results of his own experience and that of others engaged in commercial propagation of trees and shrubs, and set forth, in handy form, the methods he has found most successful in practice in dealing with individual species and varieties.

The book is divided into two parts; the first and longer dealing with the angiosperms, and the second with the gymnosperms. In each of these parts there is first an account of the different methods of propagation (by seed, division, layering, cuttings, grafting,