

## THE LIVING BODY

## A Text in Human Physiology

By Prof. Charles Herbert Best and Prof. Norman Burke Taylor. Pp. xxii+563+15 plates. (London: Chapman and Hall, Ltd., 1939.) 18s. net.

A TITLE such as "The Living Body" raises the hope that this is no ordinary text-book of physiology for medical students designed for a group of readers who have already passed their first medical examination and are now studying not only physiology but also anatomy and biochemistry, on each of which they read special books. "The Living Body" suggests, and according to the authors' preface rightly so, an elementary account of how our bodies work, which includes everything, anatomy, histology, biochemistry, as well as the topics commonly included in the narrower sense of medical physiology. Only the most elementary knowledge of physics and chemistry is presupposed, and such a book might well be designed for the intelligent layman who remembers a little of the science he did at school, for nurses, and for others who are not concerned with more specialized aspects of the subject.

There may be some truth in the saying that our generation which reads avidly of the advances in physics and even biology has no interest in physiology because concern with one's body is not quite healthy or not quite proper. Yet many, not only the unhealthy or improper but also those who are healthy enough not to bother about being thought so, and those who are specifically interested in subjects such as the nutrition of the people and athletics, have been asking for a book which will tell them about the spectacular discoveries in physiology and their application to medicine which have featured in the news of the last few decades. To make these discoveries intelligible and interesting they must be accompanied by a general account of the happenings in the body. If such a demand exists, it is certain that it has not been adequately met by physiologists, who have become increasingly preoccupied with the rapid advances in their own special branches of the subject. Occasional works of genius re-fashion the shape of the subject on a wider scale, for example, Bayliss's "Principles of General Physiology" or Barcroft's "Features in the Architecture of Physiology", but these are addressed to readers who are living with the material of physiology. For the non-specialist reader some similar creative effort is needed to break away from the presentation of the subject which has become traditional in connection with the medical curriculum, to reorientate the study of the body around certain

themes of immediate social urgency such as nutrition and muscular exercise, and to muster appropriately new selections of our physiological knowledge, much of it recently acquired, which might catch the imagination of the reader as a scientific adventure in exploring the functions of the body.

"The Living Body" scarcely aims so high. It professes to be elementary and dogmatic. It is elementary perhaps most noticeably in the sense that we regard anything we did in our youth as elementary, that is to say it has something of the flavour of the text-book of a generation ago, this impression being reinforced by the unusually high proportion of old friends one recognizes among the illustrations. Many instances of the danger of such a method can be found; for example, Fig. 201 showing the effect of temperature on the isotonic contraction of muscle was in its day a famous example of inappropriate apparatus yielding results which are misleading to the point of being in the opposite direction of those recorded by modern instruments. Other figures emphasize aspects of the subject which have become unfashionable because displaced by the wealth of material nearer the heart of physiology; no less than five figures, for example, depict water flowing through models consisting of rigid tubes, but the properties of the models are not to any extent used to elucidate the features of the blood circulation, the physical analysis of which is now so elaborate that the subject—*hamodynamics* as it was grandiloquently called—has almost dropped out of elementary text-books.

The degree of dogmatism which is needed to make a short account of physiology clear to a reader is a hotly disputed subject, and differs according to the aims and tastes of the author. Fashion in physiology has on the whole dictated sparing use of dogmatism about disputed matters when simplicity seems to require it, but has discouraged statements appearing as facts when no evidence about the matter exists. As an example of the less fashionable view taken by the authors on the latter point may be quoted the rather unlikely value of 5 mm. given as the pressure in Bowman's capsule in the mammalian kidney.

"The Living Body" is profusely illustrated and straightforwardly written and meets the requirements of the class of reader, such as nurses and some dental and agricultural students, who requires, as the authors say, "a less scientific and more dogmatic method of instruction than that customary in more advanced texts."

F. R. WINTON.