

with the brevity of life, tend to sunder things which should be joined, and in the same measure, the law of action and reaction holding even in schedules and time tables, to join things which were better apart, it would have seemed to the author even more appropriate to place the exercises at the beginning of the chapters, or best of all to interweave them with the text till the 'phase boundaries' between the two disappeared as far as might be—a process which might perhaps often be applied with advantage to the phase boundaries (of lath and plaster, still more of mental attitude) between lecture-room and laboratory. The book would then become, if the design could be adequately carried out, a text-book of physiology, in the perusal of which the student was not permitted to forget for a moment that the value of the so-called 'facts' described was in the last analysis dependent wholly upon the accuracy of innumerable observations carried out in the laboratory by methods and apparatus with which he had gained, or was gaining, some first-hand acquaintance in his practical work. When a statement in the text is followed by a page reference to the Practical Exercises this is for the precise purpose of reminding the student that the laboratory is the seed-bed of the whole science. Lest he forget this the exercises are not even placed all at the end of the book, still less in a separate volume.

The question has been sometimes asked whether the methods, and especially the apparatus described in the exercises, will exactly suit most laboratories. They will not, and they ought not to be expected to do so. This is also necessarily true of all laboratory guides. All must be adapted in some measure not only to the material equipment of any particular laboratory in which they are being used, but quite as much to the ideas and, what is by no means unimportant, to the habits of the teacher. To a certain extent in America a standardization of physiological apparatus for students has been realized, and this has been of considerable benefit to the teaching of physiology. Individual teachers and laboratories have nevertheless gone on developing their own ideas with marked advantage, and nothing would be less desirable than the uniformity of machine-made physiological teaching, could this be achieved, which luckily, in the nature of things, it cannot be.

CLEVELAND,
April, 1918.