

POPULAR PHYSIOLOGY

What shall we Teach? or, Physiology in Schools. By Edwin Lankester, M.D., F.R.S., &c., &c.

A School Manual of Health. By Edwin Lankester, M.D., F.R.S., &c., &c. (London: Groombridge and Son.)

THERE is an old saying, "that every man when he gets to be forty is his own doctor unless he happens to be a fool;" by which is meant that the pains and discomforts of ill health will, in the long run, convince most men that some knowledge of the facts of physiology and of the laws which govern the human body, is, after all, a desirable thing for the comfortable conduct of life. The main object of Dr. Lankester's pamphlet is to urge the question, "Why leave these lessons to chance and the fourth decade? Why not steal a march on bitter experience, and by making physiology a branch of general education, forewarn and forearm everyone against bodily indiscretions and against transgressions of sanitary laws?" Leaving on one side altogether the value of physiology in its scientific aspect as a means of training the mind, and taking his stand on the ground simply of the importance of it as mere information, the author works out his plea with unflagging zeal and energy. Indeed, all the pages bear tokens of almost the enthusiasm of a crusade. Into town and country, into girls' schools, boys' schools, infants' schools and universities, into corporations, vestries, and town councils, into the functions of clergymen, householders, lawyers, and domestic servants, the flag of physiology is most gallantly carried; and we can hardly imagine an impressionable general reader finishing the little work without at once rushing off to order "Huxley's Elementary Lessons" and the "School Manual of Health."

For ourselves we are free to confess, that while thoroughly sympathising with Dr. Lankester in his laments over the contemptible ignorance, and worse than ignorance, of mankind in all that relates to their bodies, we are not so sanguine as he seems to be touching the results of even general and extensive physiological teaching. We quite feel with him that it is perfectly outrageous that men and women should be so profoundly ignorant, as they are, of the nature of that prison-house from which they can never escape so long as life lasts, that our youth should, under the pretence of training, be taught things which they can never see or touch in after-life, should be made wise in phantoms and myths, and encouraged to put aside all curiosity about the things which they carry about with them always everywhere. Is it not monstrous that many a lad of eighteen should have so vivid a picture in his mind's eye, of, say, Syracuse during the Peleponnesian war, as to make people think he must have lived long years in Sicily, while the inside of his own body is to him a dim mystery, of which he can call up no clear image, but fancies it is some how or other more or less like a pig's? [Some day or other men will have difficulty in believing that such a state of things could possibly have existed, and certainly the longest chapter in that great book, *De Hominum Erroribus*, will be the one which deals with the teaching of the young. At the same time, we fear that the millennium will not be very much nearer when every schoolboy knows the properties of gastric juice and even vestrymen believe in

respiration. We have seen too many professors of physiology lecture on "pepsin" in the morning and rush violently into heavy dinners and indigestion in the evening, and besides, have had already too much general experience in the "*meliora probo deteriora sequor*," to feel much confidence in the reforming virtues of even the widest and most exact information, especially in everything relating to eating, drinking, and building houses. Nursemaids will continue to choke children, schoolboys to eat green gooseberries, and artizans to block up ventilators, in spite of each and all of them bearing certificates of proficiency in the knowledge of the laws of life.

Dr. Lankester's strongest point is perhaps the negative and destructive, rather than the positive and constructive, value of sound biological knowledge. Mankind suffer not so much from ignorance as from error, not so much from lack of knowledge as from the prevalence of false notions. The thing which the doctor and the sanitary reformer has to struggle against above all other things is the pertinacity with which the general public stick to false and pernicious theories, and the avidity with which they swallow everything which is absurd and ridiculous. Sometimes the attitude of the public mind towards questions of biological science is one of wholesale scepticism, sometimes of blind superstition; in all cases they appear as if they would rather be guided by any spirit than by that of patient inquiry, and of trust in conscientious and careful observation and experiment. Their minds are always readily tickled by any theory if it be extravagant enough: they run rapidly after any sign that is striking enough; but they have no taste for the sober results of sound biology. It is not enough to offer them lessons in physiology. The teacher may, perhaps, by diligence and patience at last get them to accept a part of what he teaches, but not until he uses his science as an instrument of training as well as a source of information.

And this brings us to the point in which apparently we feel obliged to break away altogether from Dr. Lankester. We quite agree with him, as we have said, in the immense value of physiology as viewed as mere information and compared with other kinds of information. But we hold very strongly to the opinion that it is training that is wanted far more than information. It is a change in the eye rather than in the picture towards which we look with hope. Beat into the general run of men some little scientific spirit, teach them how to look at the world around them in a scientific manner, how to arrive at scientific conclusions, how to approach scientific questions; put them in a proper mood, and they will then perhaps begin to become earnest physiologists and sanitary reformers. It is a right state of mind, and not a schoolboy's lesson in oxygen, that will tear down the paper pasted over the ventilator and otherwise help to lessen the labours of the coroner for Middlesex.

MÜLLER'S PHYSICS AND METEOROLOGY

Grundriss der Physik und Meteorologie. Von Dr. John Müller. Zehnte Vermehrte und Verbesserte Auflage. Mit einem Anhang, Physikalische Aufgaben enthaltend. (Erste Abtheilung. Braunschweig, 1869.)

IT is impossible to disguise or repress the feeling of a covetousness with which this book of "Elements of