

one of the most skilful generals ever known, but he could not spell and hardly write. Some men who have had the most marvellous aptitude and quickness in mechanical science, have been unable from sheer ignorance to sustain a common conversation.

Education, on the other hand, deals with formalities. It does not aim so much at setting the mind right on particular points, as on getting the mind into the way of being right. It does not deal with matter, but with method. It purposes to train the thinking powers of man, not to fill the mind with facts. Hence, were it perfect, it would cultivate the intelligence so largely as to render easy the acquisition of any knowledge. It deals in short, either directly or indirectly, with logical order and the reasoning powers. That it falls short of effecting what it purposes, is due to defects in its system, to defects in man's mind, to defects in this or that man's mind. As, however, its operation is not immediate, but only indirect, its methods are frequently cavilled at as useless.

It may teach the logical method of thinking and reasoning. This however, is generally too abstract for most minds, except they be more or less matured, and more or less informed on one or two subjects. In place of this, then, it teaches ordinarily something, which is as exact an illustration of logical method as can be, and which, being unfailing in its references, trains the mind in method, and often stores it with facts. In a greater or less degree, but in some degree at least, this inculcation of an abstract method is necessary for any kind of education, and even, except it be a mere knack, for information.

Reading and writing even are educational methods. The letters of the alphabet are abstract and arbitrary signs, the comprehension of which requires a certain amount of attention, and a separation, for a time at least, between the thing signified and the sign. After a time the use and formation of letters become almost mechanical arts, though this is, to be sure, the case with all perfect methods; for what we call a mechanical process in the mind, means a habit, the exercise of which is so rapid, that we are unable to follow it, and so sure about it as not to need to follow it. Arithmetic, the science of abstract numbers, is an educational method of great and well nigh universal necessity, though it is also of great practical utility in its application to details and facts. By far the majority of people who learn arithmetic fully, never need use more than its simplest rules. So, in a still more marked way, is it with geometry, and certain other familiar educational processes. To illustrate these methods, however, we need the presence of a certain number of facts, and to arrange and classify these facts we need more or less of these methods.

Now, it is plain that some of these methods have so obvious and universal a practical application that they must be possessed by everybody who wishes to carry on, except in the lowest station, the commonest business of life. Hence they are looked on as pieces of knowledge or information as they have a direct result. Thus it is that the confusion commences between education and information. It is not difficult to put knowledge and method in strong contrast, but is not easy to say where method ends and knowledge begins.

The value of education is measured by three rules. What is it worth to the individual possessing it? What is the worth which society assigns to it? What is its material worth, or, in other words, what advantages are connected with it, which may be reduced with greater or less exactness to dollars and cents? The first of these aspects of the value of education is apt to be measured by the other two; but unless a man is to merely live by other people's good opinion, or to merely follow that which will increase his balance at his banker's, the first has a fair claim to independent consideration.

All judgments which have been worked out by a man's own mind, all general principles which have influenced society, all directions of original thought, have come from the first of these values of education. In the worth of education to the individual who has it, lie all the facts of human progress, and all hope of human progress. And in it, too, are all the consolations of the man himself, whether they be escape from prevalent error, or

relief from the toil of labor, or the shield of a rational self-respect.

The social worth of education is not so great indeed as it might be, but it is very large. It is true that the immediate product of certain branches of information is so visible and so tangible that the disposition of mankind would be to sacrifice method to knowledge, were it not for the urgency of competition among those who possess knowledge, and among whom the man who has at once method and knowledge is pretty sure to win the day. The influence of educated men on society, and the respect of society for educated men, would be more general, and more reciprocally beneficial, if more educated men applied their method to the ordinary business of life. That they do not so, is perhaps in great degree the fault of those institutions where the best education is given. I have not the slightest doubt that a person who has studied successfully, as he would do if he studied honestly, at the universities, would in trade, or any other business, speedily outrun competitors who had not the same advantages as himself. They do so ordinarily in those occupations which they undertake. They would do so in more, were not the expenses of the universities serious impediments to their popularity.

There is a popular, but I believe very shallow, notion that the course of academical instruction is not useful. It is not worth while to revive a discussion settled long since, about the relative advantages of what are called practical sciences, and what is called mere mental culture. It is sufficient to say that the world would go on very poorly without both. Exclusive cultivation of mere physical knowledge would leave a very intelligible gap in those moral and intellectual forces which for good or evil, but especially for good, have such weight for the collective destinies of mankind. That mere mental culture should supersede the development of the knowledge of the material universe is unlikely; the danger is and has been on the other side, and this with but one exceptional period from the beginning of history. The advantage of an acquaintance with some branch of practical philosophy is so obvious and immediate that one is perpetually reminded of the risks which educational method runs in either being confounded with the knowledge of facts, or of being ignored altogether, or of the experts in the one branch of human science disdaining and disliking contact with the other, and men being divided as to the most fundamental securities of progress and civilization. It was with reason that Bacon asserted that his logic of facts would equalize all intellects. But great as the vantage ground is which is promised for such learning by those simple rules of inference which he first called attention to, the result has been that the mere acquaintance with such a method has caused it to cease from being an engine of education properly so called.—*Prof. J. E. T. Rogers, "Education in Oxford."*

Suggestions for the Formation of an Irish National Teachers' Mutual Insurance Association. (1)

(BY ROBERT M. CHAMNEY.)

The scheme of "A Teachers' Mutual Insurance Association," which I wish to bring under the consideration of Congress, is not of my origination. It comes from the antipodes, stamped with the seal of success. I have, for some time past, been aware that a system of mutual insurance by teachers was established at Sydney, Australia, in accordance with a scheme adopted at a meeting of Government officers, under the Council of Education, on the 17th October, 1868; and being anxious to become acquainted with the Rules and Regulations of a body whose formation was attended with a very remarkable degree of success, I wrote to a friend in Australia requesting him to procure for me all the information possible relative to this "Teachers' Mutual Insurance Association." Happily I have not had to wait as long as I expected for the documents I

(1) A paper read at the Conference of Irish National Teachers held in Dublin, December 30, 1869.