

the same time be made a valuable means of mental discipline. Its connection with other sloyd occupations cannot be too strongly insisted on. A certain power of drawing is a necessary preliminary in the more advanced occupations, and there can be no doubt, on the other hand, that the practice of these occupations reacts beneficially on the teaching of drawing. The opportunity they give for the immediate practical application of drawing is in itself a gain of great importance. Again, several of the occupations—*e.g.*, cardboard-work—enable the pupil to obtain an insight into the meaning of such terms as plan, elevation, and section, such as they could probably obtain in no other way. It may not be unimportant to remark that in the natural order of the development of the faculties power to make a model comes before the power of drawing. The child first endeavours to represent the thing as a whole of three dimensions, however vaguely and crudely, and only afterwards proceeds to abstract some one aspect of it. Accordingly, in the earlier stages the model must be used to interpret the drawing, and not *vice versa*. It is only at a comparatively advanced stage that the pupil can be expected to work from drawings alone. In view of the intimate connection of drawing with the various manual occupations, it is somewhat unfortunate that these two branches of what is educationally the same subject should in the earlier stages fall to be organized and supervised by two different departments, or that drawing should in such a marked way be separated off from the rest of the work of the school.

Having detailed the various occupations embraced under the head of sloyd, I come now to consider what advantages may be expected to result from making these occupations an integral part of the work of the elementary school.

In the first place, then, we shall thereby make the education of the child more complete, all round, and well balanced. Education aims, or ought to aim, at the harmonious development of the faculties which children possess, especially such of them as are likely to be of value in the work of life. Now, there is a faculty of the hand as well as of the brain—on the intimate connection of these two I shall have a word to say later—and a reasonably complete education will not neglect the development of the former. This view might perhaps be maintained even were these faculties to some extent antagonistic; but it is greatly strengthened if, as I shall try to show, there are grounds, both in theory and experience, for believing that manual training of a certain kind and amount promotes rather than retards advancement in the ordinary subjects. In that case, there is all the more reason for regarding an education which does not include some training of the faculty of the hand as lacking in balance and completeness.

Were this balance and completeness merely a question of doctrinaire symmetry, it would not be worth while insisting upon it; but there is, I think, some justification for the opinion that the predominantly mental or bookish character of much of our common school education has certain practical consequences which are not desirable. That opinion is doubtless often expressed in exaggerated terms, based upon an imperfect acquaintance with the actual work of the schools, but it receives weighty confirmation in the following excerpt from the report of a committee of the London School Board on the subjects and modes of instruction in their schools:—

“The boys who leave school thus early are mainly employed in posts such as that of errand- or shop-boy, in which they learn no skill nor anything to qualify them to follow a trade. Their earnings help their families for a time, but they drift into that mass of unorganized and unskilled labour amongst which, whether employed or unemployed, much misery exists, and which constitutes a dangerous waste of national force.”

Of the remedies which this state of things seems to call for, one, the compulsory lengthening of school-life, is a measure of general politics which I cannot here discuss. I may remark, however, in passing, that the operation of the freedom of classification now accorded to schools will in large measure secure the same result. As I have shown elsewhere, it is extremely probable that in a few years about half of the children presented in Standard V. will be over thirteen years of age. With the more leisurely progress thus made, we may reasonably hope to secure a broader treatment of the work of V., and such enhanced efficiency as will make it virtually equivalent to the work of VI. It remains to be seen, however, whether this silent lengthening of the actual period of school-life will be acquiesced in by those most concerned.

The other remedy is a strictly educational one. It is such a broadening and simplification of the school curriculum as shall remove the predisposition which at present exists towards certain kinds of employment. Most emphatically it is not desirable that trades should be taught in schools, but we may at least secure such a well-balanced development of the faculties of the pupils as shall place them in a position of substantially greater freedom in the choice of their life-work when they leave school. Now that the system of free compulsory education has to a very large extent taken it out of the power of parents to determine for themselves what the training of the children shall be, it becomes a matter of the utmost importance to see that that education is free from all bias.

On the direct results of manual training I shall not dwell. Important as they may be, I do not wish to lay any special stress upon them in the present paper, whose object will be mainly to point out some indirect results of greater educational importance.

But manual dexterity, if general in its nature, and not the knack of any one trade, is in itself an acquisition not to be despised. It has a value for all men, but specially, of course, for those of the industrial classes.

If the doctrine, to which I shall have occasion to refer directly, of the development of the motor-centres in the brain be correct, there is reason to believe that the traditional skill which distinguishes certain sections of our manufacturing population—*e.g.*, those engaged in the textile manufactures—can only be fully acquired during what is, properly speaking, school age. It is so acquired at present, because the children in these districts leave school early, or attend only as half-timers, and if school attendance is to be prolonged, as is desirable, some provision must be made in the school itself for the development of power of hand. To certain other classes also, to the dweller in remote country districts, and to the emigrant, this kind of training has an economic value.