

and to that end our technical education should be directed. It is an important aim, and because the operative class is the real base of everything, it should have more consideration than the education of any other section of the community. It is scarcely necessary to say that the true prosperity of a country is to be determined by the prosperity of its operative class. If this be not healthy, happy, and expressing itself in joyful work, there is something that needs alteration. Much of the overcrowding of the professions, which is justly complained of, arises from the fact that craftsmanship has not yet taken on its proper dignity, or, rather, has lost it in the lapse of years. We are in a transition state. There was a time when the trade guilds of Europe were institutions of honour and respectability, the members of which—all craftsmen—had a recognized, and to some extent, an enviable place in the community. A position in the guild was won by a seven years' apprenticeship, and, as I have already said, the craftsman of that day did work which is still unmatched. Remains of their dignity lingered long. I, myself, as a boy, have frequently seen carpenters and bricklayers going to their work in silk hats. It was the mark of a complete journeyman, a tradesman who had "passed." Sometimes the bricklayers as they worked in the open air, retained this imposing head-gear while working. But we have changed all that. It is possible, however, to restore to labour a dignity of a higher kind than could be exemplified by the wearing of a "stove-pipe" hat. We may put something inside the head instead of decorating its exterior. Technical education has, in my opinion, a mission that is above the merely utilitarian. It combines in its aims not merely the making of good operatives, but the educating of the *man*. There is in technical education, if it be properly pursued, a potency of intellectual training which cannot but assist in advancing the intelligence and status of its subjects as citizens.

It will have been gathered from what I have already advanced that I favour manual training in schools simply as an introduction to the real training of actual work. The only way to learn craftsmanship is to keep on doing it; and this continuous performance, so necessary in the training of the hand and eye is not possible in its full development in schools. It must be done in the workshop, on the building, in the foundry. Get the opinion of any number of practical men and it will be found to tally with mine. I speak as one who has passed through a workshop training and I know whereof I speak. None the less do I perceive the value of the training that may be given in schools. None the less do I perceive that in certain particulars this school-training is calculated to give a full-rounded grasp of the problems of industrial art, such as the workshop never supplies. The workshop is a money-making institution. It has not time to consider the art in its entirety on which it is engaged, and the principles which regulate it.

I have spoken hitherto chiefly on such technical training as is concerned in the constructive industrial arts. But it is plain that we must not lose sight of what may be called the ornamenting industrial arts. In some trades the desirability of science-knowledge is replaced by the desirability of art training. I call mechanical drawing a part of scientific teaching. It is really connected with mechanics and mechanical construction. But there are some trades that are concerned with ornament, and on their account we desire our technical schools to give us the requisite sort of art teaching. If a youth is to be an ironfounder, what he wants to know is chemistry, and physics, and the behaviour of metals. These will let daylight in on much that might otherwise be a series of puzzles to him. Mechanical drawing will also be useful to him. The same courses will be suitable for the machinist. But another youth is to be a modeller of ornamental patterns for iron or brass founding, and it is manifest that he