

to him of too complicated a character, and worked with the pieces; he has kept his mother in constant terror by using every article in the house within his reach, and not too heavy to handle. Why does he spend so much time in working? Because doing is so perfectly adapted to his physical and mental development. At his building, making, and experimenting with material has been done in response to an unerring instinct which guides him in the course which secures for him the most rapid, the most definite, and the most comprehensive expansion of his intellectual faculties, in addition to the cultivation of his bodily powers. The mind acts with more concentration of attention when guiding the hand than at any other time. Observation, comparison, judgment, are called into action in connection with every effort the hand makes, and their constant and interested exercise is their means of growth. Unfortunately the entrance upon school life generally puts an end to this development through the activities, and instead of educating our children in the fullest sense of the term, we too often make them what one writer calls too appropriately "stuffed parrots." The course of study and the discipline in many primary classes is such, that were the schools kept open for twelve hours per day, instead of five or six, the greater portion of the population of civilized countries would become weak in body and mind as the result of the injurious methods employed in them. The boy whose childhood is spent in the country has better opportunities for the natural development in mind and body than the boy who is brought up in a city or town. He comes more directly in contact with nature, he spends less time in school, he plays more, and his plays are of a less artificial character, and he is compelled to do a greater variety of work. By the time he has reached the age of fifteen the city boy has generally more learning, but the country boy has usually a greater capacity for learning. The advantage is decidedly in favor of the country boy.

The power to gain knowledge is much better than knowledge itself. Statistics, so far as they have been taken, show that about seventy-five per cent. of the leading men of the American cities, of the judges, the ministers, the prominent lawyers, doctors, teachers, bankers, and successful business men, spent most of the first fifteen years of their lives in the country. Does this prove that education is a failure in qualifying men for successful careers? Certainly not. It does prove, however, that school education is not always real education. I urge very strongly the need of a revolution in the work of the lower primary classes. We should change the programmes, the methods and the discipline of our schools so far as they relate to the first year of a child's life in them. The guiding principles which should underlie the amended schemes of work and management should undoubtedly be: 1. Let the child during his first year at school deal chiefly with real things, as he did before he entered school; and, 2. let him use things that he may learn not about the things themselves, but that through using them he may incidentally learn new facts, discover new principles, develop his perceptive faculties and define his conceptions. 3. Because it is the right of every man to receive such an education as will best fit him for the successful performance of his duties in whatever sphere he may labor. I do not urge that educations should be considered merely from a utilitarian standpoint. I would omit no opportunity for cultivating the physical, mental and moral natures of children. I hold that our schools will fail, to a certain extent, so long as they do not fit every pupil to advance, as far as possible for him, in the development of purity and truth, so long as they do not guide him towards the infinite source of all development, and lead him to hope for a perfect development in the life that is to follow death. Believing all this, I still regard it as nearly amounting to criminal negligence to allow our pupils to pass through their school life without giving them some definite industrial training. The majority of our pupils will have to earn for themselves and their families, not only the means of livelihood, but of the culture available for them, by the use of their hands. There is not a pupil in our schools, even among those who may not be compelled to work at manual labour, who would not find it to his advantage in the future to have well trained fingers. Surely these facts should convince us of the necessity for systematic training of the hand at the time when its highest culture is most possible and most easily secured. 4. Because the system of apprenticing boys and girls for the purpose of learning trades and occupations has been discontinued. It has disappeared through the instrumentality of trades unions, because it was unsuited to the tastes and customs of modern society, on account of the great increase in the use of machinery in manufactories,

and because it was not in accordance with the principles of political economy. Adam Smith objected to it for the following reasons: "It interfered with the property which every man has in his own labor encroached on the liberty of employer and employee, restrained competition, continued in an unnecessary length of time, and failed to allow the rewards of faithful labor to be enjoyed as they were earned." Notwithstanding these inherent objections, it had the merit of securing a class of skilled mechanics, and unfortunately nothing has yet been substituted for it which performs this important function in anything like an adequate manner.

This radical defect must be remedied in some way. The best way, undoubtedly, is a comprehensive system of industrial training. 5. Because improving the mechanical skill of the industrial classes must add to the general wealth and prosperity of a nation. This is a "National Policy Platform" on which all classes can unite. Additional skill produces wealth in two ways: by saving time and by increasing the value of the articles produced. Mr. J. Scott Russell in his "Systematic Technical Education for the English People" says in regard to this question:—"The highest value in the world's markets will be obtained by that nation which has been at most pains to cultivate the intelligence generally, and afterwards to give each the highest education and training in his special calling." 6. The marvellous increase in the use of delicate and intricate machinery in manufacturing demand a more thorough technical industrial training on the part of those who are to use the machines. Dr. Mill, in referring to the well-known fact that the first international exhibitions gave a rude shock to the English people, and aroused them to a realization of the fact that they were far behind several other countries in the excellence of their manufactures, says: "Beaten we were, and that disgracefully too. * * The lace makers of Nottingham saw that foreigners came, purchased their machines, took them home to their own countries, and by setting a more intelligent and artistically trained set of workmen over them produced a class of goods with which it was impossible for our people to compete." 7. Because the number of artistic manufactures is constantly increasing and their character varying, and consequently the workmen specially need skilful fingers that can adapt themselves to any work they may be called on to perform. 8. Because the wealthier classes are calling for a higher style of ornamental woodwork in their houses, and more artistic furniture, etc., differing from ordinary articles of a similar character in construction and design. Machine made articles are turned out in large numbers exactly similar in design. Those who can afford the luxury are anxious to have something special, of which no one else can obtain an exact reproduction. They have to pay higher prices for such articles, and they gladly do so. A painting by a great artist is largely increased in value by the fact that no duplicate copy of it can be obtained. So with a work of art produced by a mechanic. The demand for such work is rapidly increasing. Tradesmen and mechanics of all classes are compelled to vary their workmanship continually. Those who best succeed in doing so can earn most money and earn it most easily. All workmen may be aided in doing so by systematic manual training. 9. Because it will increase the prosperity of the working classes, and will elevate their social position. If a workman can by a higher degree of skill produce a more valuable article than he could otherwise do from a certain amount of raw material, he increases his own value to his employer, and will receive higher wages, because the moral effects of such a training are good. Improving a workman's position will make him more contented and happy. He will be more interested in his work, and more proud to occupy his sphere of labor, in proportion as he is able to excel in it. It will better the relationship between master and workman and improve the character of the work done by artisans. Success will induce him to make greater efforts, and will enable him to surround himself and his family at home with many of the elements of culture and refinement. This manual training has also an important moral influence in moulding the characters of children. They are naturally destructive, but the same tendency which leads them to destroy will make them take a delight in work of a productive character if they are properly guided. It is a very important part of a child's moral training to make him constructive instead of destructive; and working under the guidance of a teacher is the best means of accomplishing this very desirable end. Thousands of children grow up with a contempt for work. They generally become in some way a burden to society. Gault statistics show that three-fourths of the young men who fall into criminal courses are unable to work at any trade. "Labor, all labor, is noble and holy." The only way to