

What way so sure of elevating and spiritualizing the homely details of life, as that of teaching their scientific meaning, and showing thereby the literal truth of the word. Not a sparrow falleth to the ground without our Father,—that not the meanest event befalls in this great universe, but in obedience to those great laws that keep the stars in their courses? Is a piece of knowledge any less worthy to be known because it can be turned to useful purpose?—does that render it any less dignified? Lord Bacon did not think it so. Or is it inevitable that the knowledge of practically useful truth will be turned to some selfish and mercenary account? The history of all great discoverers and inventors contradicts it. Of this we are sure, that no firm foundation in the minds of youth for scientific knowledge, can be laid in abstractions, and that unless school knowledge is closely united with the child's own experience of life, it will be vain to hope for healthy progress, or look for maturity of fruit.

We have been led to these thoughts by observing a movement now going on in England in this direction. We believe it originated with the Rev. Richard Dawes, Dean of Hereford, an enlightened friend of popular education, who successfully attempted the introduction of practical elementary instruction in the science involved in common things in the schools of his neighbourhood. In 1847, Mr. Dawes published a little volume, full of good sense, called "Suggestive Hints towards improved Secular Instruction, making it bear upon Practical Life." The edition before us is the sixth. We have also a lecture on the same subject delivered by him at St. Martin's Hall in connection with the Educational Exhibition of the Society of Arts. Subsequently the subject attracted the attention of Lord Ashburton, (well known in this country as the negotiator of the North eastern Boundary Treaty,) who offered a series of prizes for the teaching of "common things" to the teachers of the district in which he resides. We have before us a small pamphlet, containing the proceedings of a meeting between Lord A. and the elementary schoolmasters, assembled at Winchester, and we extract the following passages from his very excellent speech on the occasion:—

"I do not require you to remit in the slightest degree your attention to the mechanical arts of writing and reading, or the practice of arithmetic; but I do ask you to turn your attention and the attention of your scholars to the acquirements, at the same time, of other principles of knowledge which will continue fruitful of improvement, as reading and writing are fruitful of improvement, in after life.

"I ask you to show, not only by your lessons in school, but still more powerfully by your example out of school, how the garden can best be cultivated; how the dwelling may be most efficiently and economically warmed and ventilated; upon what principles food and clothing should be selected; how chronic ailments may be averted by timely attention to premonitory symptoms, and recourse to the physician. You can teach the measurement of work, the use of the lever, the pulley, and the windlass; you can, in short, expound those methods suggested by ever-advancing science, by which toil may be lightened, and subsistence economized. All this is capable of being taught, and well taught.

"Why is one mother of a family a better economist than another? Why can one live in abundance, where another starves? Why, in similar dwellings, are the children of one parent healthy, of the other puny and ailing? Why can this laborer do with ease a task which would kill his fellow? It is not luck nor chance that decides these differences; it is the patient observation of nature that has suggested to some gifted minds rules for their guidance which have escaped the heedlessness of others.

"Why should not these rules, systematized by science, illustrated by your didactic powers,—why should not they be imparted to the pupils of your schools, to enable youth to start at once with the experience of age; or, if this be not in every case possible, why should not all be taught betimes to read those lessons in the book of nature from which some have derived such unquestionable advantage?"

After referring to the strikes among factory operatives, just then occurring, and the ignorance they showed of the simplest principles of political economy, Lord Ashburton proceeds to say:—

"After these remarks, it is but just that I should be called upon to explain distinctly what it is that I propose that you should teach, how the topics are to be selected, how connected, in what manner brought forward. Allow me to begin by reminding you that yours is not the only education given in life. There is yet another, beginning earlier, continuing later, producing greater results; and that is the education of Home. It is there that the child, by the side of parents, or of its neighbor, is familiarized, partly by inclination, partly by precept, with the rudiments of its future occupation. It is there that the girl is trained to love a mother's cares and duties; it is there that the boy learns to demean himself as a member of society, as a father of a family.

"Let any man pass over in his own mind the business of a given day; he will there see how much the larger, the more important part of that business he has learned at home. Let me give you an instance. The Chelsea school for the education of the female orphan children of

soldiers was given up, because it was found that the girls there educated became an easy prey to the temptations of the world. This was not because they were less religiously, less morally brought up than other girls, but because, being withdrawn as infants from a home education, they lacked that knowledge of the world which home alone can give; because the only experience they had gained at school was how to deal with their girl companions. They had no experience to guide them when brought into contact with other companions and other trials. Such children must have been equally incapable of performing the duties of good housewives, good mothers;—in short, they had received a mere school education, which, at the best, under the most careful, the most accomplished teaching, left them ignorant of the great indispensable duties of life. And be it remembered that when, with reference to orphan children, I speak of the advantage of home, I speak of a home under perhaps a harsh relation, or under a stranger more harsh, more unfeeling still. But even in that home, under that severe training, experienced from the tenderest years, nature provides compensations for the lack of a mother's care, which no school can give; for, thrown on her own resources from earliest infancy, in the midst of that world in which she was destined to live, the child grows in experience as danger springs up in her path. Her quickened perceptions, her rapidly matured character, become her safeguard.

"Now, with this education at home, it is not for us to compete, for it is the education of nature. It is acquired not through the medium of words only, but through the medium of the senses also, which senses God has given us to employ for that purpose, graciously allotting to each exertion of their powers its appropriate pleasure to sweeten and stimulate their use. Your education on the other hand, is an artificial education, imparted chiefly through the medium of words, appealing mostly to the reason instead of the senses, divested, I regret to say, too often through the fault of the teacher, of the pleasurable excitement which God intended to accompany the acquisition of each new idea.

"Your mission is to assist and complete the home education. Your care should be so to work as to stimulate rather than impair the instinctive craving for knowledge; the vigor of the attention, the retentiveness of the memory, the practical character of the understanding. You will do this best if you take the successive facts in the child's life; facts with which he is familiar; and upon his knowledge of those facts you engraft first the principle or theory which explains them, and then all the kindred facts,—deductions from the same principle,—which may be useful in after life. For example: the child sees the fire kindled by his mother at the bottom of the grate, and asks why. She cannot tell it why, but you can; you can do more,—you can not only explain why fire spreads upwards rather than downwards, but having done so, you light, by way of further illustration of the principle, a strip of paper; you hold it with the flame downwards, and show how instantaneously the whole is consumed. You light another and throw it on its side; it scarcely burns. You then proceed, upon these facts witnessed and understood, to build up other kindred facts, hitherto unobserved, but good for use and improving to the intelligence. You show how, if a girl's frock catches fire, she should at once, in obedience to this same principle, be like the paper shred, laid flat; and then you might further show how, in conformity with a second principle, illustrated by the way in which a candle is put out by an extinguisher, the air might be excluded from the burning frock, by throwing a cloak or mat over it, and the flame extinguished. Take another case. As the flame of the candle uses up the air confined under the extinguisher, and went out for want of more, so we also, sitting in large numbers in a small room, use up rapidly the vital part of the air, and sicken for want of more, and would absolutely die, were the doors and windows altogether air-tight.

"Again: water is brought in for breakfast. The child has pumped it. He has seen the pump repaired, and witnessed how his father strained to pull up the very same sucker by hand, which, with the help of the pump-handle, he has been working up and down with ease. This is one familiar fact whereon to rest the knowledge of the lever. The use of the spade presents another, when it enables the child to tear up a block of clay from its adherence to the soil beneath, which block he would vainly attempt to lift afterwards one inch with his hands. The water is put into the kettle, of which the bottom is purposely left uncleaned, on the plea that the water will on that account boil the more quickly. You confirm the fact; you explain why this is the case, and you show that two principles are involved; one principle teaches, also, that paint exposed to the sun should be of a light color, in order to stand without blistering; the other principle leads to the further result, that a bright metal teapot will retain its heat longer, and therefore make better tea, than one of crockery, black and unglazed.

"Again: the water boils in the kettle by the same law which diffuses the warmth of the fire in the room, and creates the draught in the chimney. By this law the cause of smoky and ill-ventilated rooms may be explained, and the proper remedies suggested." * * * * *

"Social questions are more difficult, not because it is less easy to explain them, but because the minds of children are less interested by their discussion. The child understands when and why nuts are