

"A man who meets age, or debility, or want of constitutional power, by alcoholic stimulants, even in moderation, by coffee and tea, conceals his real nutritive condition from himself. When both the nervous and muscular systems are exhausted, and want repairing by legitimate nutrition—by beef, mutton, bread and rest—a man may galvanize his economy by nerve stimulants so as to be equal to nearly anything up to the last. But the process is a destructive one, exhausts vital power, impairs healthy nutrition, and lays the foundation for morbid organic changes.

"By alcoholic stimulants, constantly repeated whenever exhaustion supervenes, the power of work may be supported until within a few days or hours of death, as we constantly see in the lower classes of life. Tea and coffee have nearly as great an apparent nerve stimulating strength-supporting power. Let any one who doubts it take a cup of strong tea or coffee when exhausted from want of food and from physical fatigue. The craving for nutritive elements to repair waste, and the sense of fatigue, both disappear in ten minutes, and a couple of hours' more abstinence and work are easily borne. But what have we done? The physical organization wanted repair, wanted the elements of nutrition; the nervous system, rest; and we do worse than give them a stone—we galvanize them into continued action.

"Night work is principally done on such stimulation. The student, the writer, young or old, who retires to his study in the evening to work, does so on tea or coffee. The tired brain wants sleep; it is galvanized into intellectual labor. Is it surprising that morbid organic conditions should occur in the long run? For we must recollect that the nervous system rules over all organic and nutritive changes, normal and abnormal.

"What applies to our medical brethren, applies to all; and it is our duty to lay, nakedly and sternly, these facts before our erring patients. It is not very evident that we have recently lost our most distinguished literary man, Charles Dickens, at the early age of fifty-eight, from continued over-straining of the nervous system?—in his case altogether without cause or excuse. On his return from America, he wrote that his readings during his tour in the States had much wearied and injured him. The constant travelling; the excitement of the meetings; the dinners; the receptions—had been too much for him. Had he then been made to understand that he was working against age and impaired vital power—risking his life, in a word—he might have taken rest, and been with us now. But he continued the same labors, the same excitement, and died from brain disease, regretted by a nation, prematurely."

2. HEAD-WORK BEFORE HAND-WORK.

In everything that we do, or mean to do, the first condition of success is that we understand clearly the result which we desire to produce. The house-builder does not gather together a mass of bricks, and timber, and mortar, and trust that somehow a house will shape itself out of its materials. Wheels, springs, screws and dial-plate, will not constitute a watch, unless they are shaped and fitted with the proper relations to one another. I have long thought, that to educate successfully, you should ascertain clearly, with sharp and distinct outline, what you mean by an educated man.

Now, our ancestors, whatever their other shortcomings, understood what they meant perfectly well. In their primary education, and in their higher education, they knew what they wanted to produce, and they suited their means to their ends. They set out with the principle that every child born into the world should be taught his duty to God and man. The majority of people had to live, as they always must by bodily labor; therefore, every boy was, as early as was convenient, set to labor. He was not permitted to idle about the streets or lanes. He was apprenticed to some honest industry. Either he was sent to a farmer, or if his wits were sharper, he was allotted to the village carpenter, bricklayer, tailor, shoemaker, or whatever it might be. He was instructed in some positive calling by which he could earn his bread and become a profitable member of the commonwealth. Besides this, but not independent of it, you had in Scotland, established by Knox, your parish schools, where he was taught to read, and if he showed special talent that way, he was made a scholar of and trained for the ministry. But neither Knox, nor any one in those days, thought of what we call enlarging the mind. A boy was taught reading that he might read his Bible, and learn to fear God, and be ashamed and afraid to do wrong.

An eminent American was once talking to me of the school system in the United States. The boast and glory of it, in his mind, was that every citizen born, had a fair and equal start in life. Every one of them knew that he had a chance of becoming President of the Republic, and was spurred to energy by the hope. Here, too, you see, is a distinct object. Young Americans are all educated alike. The aim put before them is to get on. They are like run-

ners in a race; set to push and shoulder for the best places; never to rest contented, but to struggle forward in never-ending competition. It has answered its purpose in a new and unsettled country, where the centre of gravity has not yet determined into its place. But I cannot think that such a system as this can be permanent, or that human society, constituted on such a principle, will ultimately be found tolerable. For one thing, the prizes of life so looked at, are at best but few and the competitors many. "For myself," said the great Spinoza, "I am certain that the good of human life cannot lie in the possession of things which, for one man to possess, is for the rest to lose, rather in things which all can possess alike, and where one man's wealth promotes his neighbor's." At any rate it was not any such notion as this which Knox had before him when he instituted your parish schools. We had no parish schools in England for centuries after he was gone, but the object was answered by the church catechizing, and the Sunday school. Our boys, like yours, were made to understand that they would have to answer for the use that they made of their lives. And in both countries, by industrial training, they were put in the way of leading useful lives if they were honest. The essential thing was, that every one that was willing to work should be enabled to maintain himself and his family in honor and independence.

Pass to the education of a scholar, and you find the same principle otherwise applied. There are two ways of being independent. If you require much, you must produce much. If you produce little, you must require little. Those whose studies added nothing to the material wealth of the world, were taught to be content to be poor. They were a burden on others, and the burden was made as light as possible. The thirty thousand students, who gathered out of Europe to Paris, to listen to Abelard, did not travel in carriages, and they brought no portmanteaus with them. They carried their wardrobes on their backs. They walked from Paris to Padua; from Padua to Salamanca; and they begged their way along the roads. The laws of mendicancy in all countries were suspended in favor of scholars wandering in pursuit of knowledge. At home, at his college, the scholar's fare was the hardest; his lodging was the barest. If rich in mind, he was expected to be poor in body; and so deeply was this theory grafted into English feeling, that earls and dukes, when they began to frequent universities, shared the common simplicity. The furniture of a noble earl's room at an English university at present, may cost, including the pictures of opera-dancers and race-horses and such like, perhaps five hundred pounds. When the magnificent Earl of Essex was sent to Cambridge, in Elizabeth's time, his guardians provided him with a deal-table covered with green baize, a truckle-bed, half a dozen chairs and a wash-hand basin. The cost of all, I think, was five pounds.

You see what was meant. The scholar was held in high honor; but his contributions to the commonwealth were not appreciable in money, and were not rewarded with money. He went without what he could not produce, that he might keep his independence and his self-respect unharmed. Neither scholarship nor science starved under this treatment; more noble souls have been smothered in luxury than were ever killed by hunger. Your Knox was brought up in this way; Buchanan was brought up in this way; Luther was brought up in this way; and Tyndal, who translated the Bible; and Milton, and Kepler, and Spinoza, and your Robert Burns. Compare Burns, bred behind the plough, and our English Byron!

This was the old education, which formed the character of the English and Scotch nations. It is dying away at both extremities, as no longer suited to what is called modern civilization. The apprenticeship as a system of instruction, is gone. The discipline of poverty—not here as yet, I am happy to think, but in England—is gone, also; and we have got instead, what are called enlarged minds.

I ask a modern march-of-intellect man what education is for, and he tells me it is to make educated men. I ask what an educated man is; he tells me it is a man whose intelligence has been cultivated, who knows, something of the world he lives in; the different races of men; their languages, their histories, and the books that they have written; and again, modern science, astronomy, geology, physiology political economy, mathematics, mechanics—everything in fact which an educated man ought to know.

Education, according to this, means instruction in everything which human beings have done, thought, or discovered; all history, all languages, all sciences.

Under this system teaching becomes cramming; an enormous accumulation of propositions of all sorts and kinds is thrust down the students' throats, to be poured out again, I might say vomited out, into examiners' laps; and this when it is notorious that the sole condition of making progress in any branch or art of knowledge is to leave on one side everything irrelevant to it, and to throw your individual energy on the special thing you have in hand.