

anticipated. Every intelligent physician understands that, other things being equal, the chances of recovery are far less in the studious, highly intellectual child than in one of an opposite description. Among the more obvious, and immediate effects upon the nervous system, are unaccountable restlessness, disturbed and deficient sleep, loss of appetite, epilepsy, cholera, and especially a kind of irritability and exhaustion, which leads the van of a host of other ills, bodily and mental, that seriously impair the efficiency and comfort of the individual.

"I have said that insanity is rarely an immediate effect of hard study at school. * * * When a person becomes insane, people look around for the cause of his affection, and fix upon the most recent event apparently capable of producing it. *Post hoc propter hoc*, is the common philosophy on such occasions. But if the whole mental history of the patient were clearly unfolded to our view we should often find, I apprehend at a much more early period, some agency far more potent in causing the evil, than the misfortune, or the passion, or the bereavement, or the disappointment which attracts the common attention. Among these remoter agencies in the production of mental disease, I doubt if any one, except hereditary defects, is more common at the present time, than *excessive application of the mind when young*. The immediate mischief may have seemed slight, or have readily disappeared after a total separation from books and studies, aided, perhaps, by change of scene; but the brain is left in a condition of peculiar impressibility which renders it morbidly sensitive to every adverse influence."

The failure of Clever Boys.—Is it not in consequence of this unduly severe mental toil together with the absence of proper physical training, that we find that many a boy of high promise, the delight of his parents, the *dux* of his school, is found to "unbeseech the promise of his youth" and turn out a very common place, if not a dull and heavy man? Is not this the reason why so many intellectual and interesting children are like medlars rotten before being ripe, and does it not supply us with the true answer to Dr. Johnson's query; "What becomes of all those prodigies?"

Ancient and Modern System.—Before leaving this part of my subject it may not be out of place to note very briefly the great and characteristic difference in this particular between the modern system of education, and that which obtained among some of the leading nations of antiquity. It is curious and instructive to mark the different degrees of importance assigned to the physical part of education in the ancient and the modern world.

"Among the Persians" we are told, "the entire education of the youth from their fifth to their twentieth years was confined to three things: riding, shooting with the bow, and *speaking the truth*." Here physical education is the chief, almost the only element, and mental education is not even mentioned. This is just such a system of education as we might expect to find among a people removed only a few degrees from the savage state. Advancing to times of civilization we come to the Greeks and Romans. Both these nations recognized, as we all know, the necessity and importance of mental education; and it formed, accordingly, an essential part of their system of education. But still physical training was by no means neglected; on the contrary, it was regarded as an essential if not the most important part of the training of the youth. The very names, indeed, of the Greek and Roman schools—*Gymnasia* and *ludi*—indicate places intended primarily for physical exercise.

Looking at the Greek and Roman plan of education we, with our modern views as to the paramount importance of intellectual culture, may feel inclined to impeach it as giving too much importance to physical training, to the disparagement or neglect of mental cultivation. But when we call over the bright muster-roll of poets, statesmen, orators, and historians which both of these nations produced, we must pause before we condemn the system of education which can point to such splendid results.

Mr. Chadwick refers with satisfaction to the fact that the authorities of the venerable University of Oxford have recently recognized the necessity of systematised bodily training in connection with the mental labor of the University, and expresses the hope "that we may have from the university an example of the revival of a really classical education, an education founded on the precepts of Plato, Aristotle and Galen, which divided the public education into three parts, of which one was for mental training in the schools, one for bodily training in the gymnasium, and the third tuition in accomplishments as music," &c.

First remedy for the Evil.—Having dwelt so fully upon the grounds upon which Mr. Chadwick, and other educational reformers following in his track, have impeached the modern system of education, it is almost unnecessary to say that the remedies for the evil of which they complain are two-fold.

1st, A reduction to the proper limits of the time set apart in

schools for book instruction;* and, 2nd, Systematic physical training of the children; including in that training for the male portion of the school population, naval or military drill, or both.

The extent to which the time usually devoted in schools to book-instruction may be advantageously reduced is a question of detail which cannot probably be conclusively established until the half-time system has been submitted for a few more years to the test of actual experience. Mr. Chadwick, indeed, asserts, and the testimony of the able and intelligent witnesses examined by him, fully bear out the assertion, that the ordinary school hours may be reduced one-half, without, in the slightest degree diminishing the amount of book-instruction acquired by the pupil in a given time.

Limit of a pupil's attention.—Without, however, attempting, here, to fix with mathematical nicety the precise number of hours during which book-instruction may be profitably carried on in schools: it may, at least, be laid down as an axiom that such instruction ceases to be profitable, and should, therefore, be given up, when the pupil is no longer able to give his entire attention to what is taught. The instant the pupil becomes fatigued and tired, the instant he loses the power of *bright voluntary attention* (as one of the witnesses aptly calls it), it is time to stop the lesson. Everything done after that is either unprofitable or hurtful, or both. If a boy makes an extraordinary effort to keep his attention fixed on the subject before him, when his capacity of voluntary attention is exhausted, the mental effort is injurious. If, on the other hand, the boy merely makes believe that he is attending to his lesson when his thoughts are on his marbles or his tops, he is acquiring a dishonest *moral* habit, that of pretending to do what he is not doing; a fatal *mental* habit, too likely to cling to him through life, of looking at a book without thinking of what he is reading, a habit of dawdling over work; a habit the very opposite to that which is so invaluable in real life, that of doing earnestly the business of the moment; of thinking of it and nothing else for the time, in obedience to the teaching of the golden maxim "whatever thy hand findeth to do, do it with thy might." * * *

Instruction through the Senses.—This is not the place to enforce the truths, which are now happily beginning to be at least dimly recognized: that children should be made to learn as much as possible by and through their senses, by their own powers of observation: that when it is possible they should be made to study natural objects, the things themselves, rather than the signs of things—words: that the senses themselves, as well as the reasoning powers, should be carefully cultivated: and that the right education of our senses, especially of the eye, not only contributes much to our comfort and enjoyment in life, but, in the case of the working classes, adds very materially to their usefulness and efficiency, and consequently to their value as workmen.

Mistaken views of Education.—I cannot, however, refrain from alluding, in passing, to the very narrow and mistaken view which many persons take of education. Physical education they wholly ignore, and of intellectual education they take a very one-sided view. With them intellectual education means nothing more than imparting to the child a certain amount of knowledge, and they gauge the value of education by the quantity of information acquired in a given time. Whereas the aim and object of education should be, as the word itself might teach us, to secure the healthy growth and development of the whole man—of all his powers and faculties, physical, moral, and intellectual. The value even of the intellectual training which a boy receives at school or college is not to be tested solely or chiefly by the amount of knowledge he has acquired, the number of dates or facts he may have learned; but rather by the mental discipline he has undergone, the mental power and force he has acquired, the intellectual tastes and habits he has formed; not by the information he has stored up, but by his thirst for information, his power of grasping facts, his faculty of judging rightly; not in fact, by what he has done, but what he has the power and the will to do; not by what he is *in esse* but what he is *in posse*. The mistake to which I have referred, as to the objects of education has led to the "cramming" or forcing system which is the bane of modern education. We insist that everybody shall know everything. As one of our most delightful modern Essayists writes:—"We may in sober seriousness apply to the present age the remark which Sydney Smith, in the fulness of his wisdom and his fun, applied to the master of the Pantologies at Cambridge—'*Science is our forte; omniscience is our foible.*'" The advocates for this universal knowledge forget that the mind, as Montaigne says, must be *forged* rather than *furnished*—*fed* rather than *filled*. They forget that of the mental pabulum which we are forced to take at school, none is of any real use to us, but that portion (and

* The official regulations for other public schools of Upper Canada do not prescribe the number of school hours, but it is expressly provided that they "shall not exceed six." They may be three, four, or five, at the discretion of the trustees.—*Ed. J. of Edu.*