

HEALTH THROUGH EDUCATION.

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In this address I propose to consider the question of "Health through Education," that is to say, the study of those methods of education by which the mind, during the whole period of its work, may be maintained in a healthy and properly balanced condition, its powers usefully employed, and its natural tendencies allowed full and natural scope and development.

Up to the present time the progress of science for the promotion of health has had reference, almost exclusively, to the physical health in education, to the state of the school-room, to the diet of the scholar, to the clothing, to the training and exercise of the body, to the position of the scholar at the desk, and to such-like purely physical considerations. These considerations can scarcely be over-estimated. I have had the happiness to associate with the most earnest and energetic of the sanitary leaders who, in our generation, have striven to force them on the attention of a public not always too willing to listen to them, and I regret that I should have to put them somewhat aside for the present hour. But I feel there is another subject even of more pressing moment, and therefore I turn to it. The purely physical study has made its way to some extent: the subject I have now before me has made, practically, no way at all, although its importance can hardly be exaggerated.

Men engaged steadily and systematically in taking different views of the same object are led to see differently and to express themselves differently. I cannot, therefore, conceal that I approach the argument I would set forth with a perfect knowledge of the fact that I must speak what is, or what may seem to be, contrary to the opinions which are entertained by many who are deeply interested in the work of education, and who, in most respects, are masters or mistresses of the argument on its practical, scholastic side. Those who are engaged in the actual labour of teaching from day to day may entertain views very different in kind from mine. Those who are anxious and over-anxious for the education of their children may entertain views of a very different character from mine, and may, indeed, be far more likely than the teachers of their children to differ from me. The teachers will, I think, in their hearts, be in most respects with me altogether.

When I say that the physical side of the health question is not a part of my present programme, I do not quite state the whole truth, for the physical side of the question is, in one direction, admitted in it. There is always in progress a reaction of the mind on the body which, when it is clearly understood, is seen to be momentous in its results. The amount of physical disease that is dependent on mental influence is large beyond any accepted present conception of it. I am almost afraid to express what I know on this point, lest I should appear to be putting forward what is speculative instead of what is real. And yet I may venture to say that a good fourth of the deaths of adults who die in their prime from what are called natural diseases are due to diseased conditions of body that have been induced by mental influences. The actual and immediate cause of the demise, the killing blow, may be outside the body, may be independent of the body, may be very subtle and seemingly very slight, may admit of no correct scientific exposition at this present stage of science, may be some unknown or obscure meteorological influence; and yet the conditions leading up to the point when slight causes take effect may all the while have been in steady progress, and may all the while have been mental—mental from the first in the persons affected. Thus men in the prime of life often die suddenly from some slight external influence of a physical nature which has acted upon them fatally, and which gets the whole of the blame; but the conditions of the body which have rendered that external influence effective have been long in operation; have been, in the strictest form of expression, mental influences modifying the physical structures, and making those structures susceptible of destructive change from slight external shocks or vibrations. Thus, again, hereditary tendencies, originally formed from mental action, are often transmitted in the character of hereditary physical disease, under which, from some slight external influence, death may occur.

Impressions traversing the senses into the organ of the mind afford the most striking illustrations of physical derangements and of degenerations from mental action in which the mental and the physical most intimately blend. They give rise, in fact, to a term which is as distinctly physical as any that would describe a mechani-

cal concussion or blow—the term, most correct in its application, of "mental shock;" a shock or blow received by the body through the mind, and producing physical action in the body; a transmutation of an unknown force—which we have only named, so far, by metaphysical names, such as fear, anger, hate, love—into a strictly physical force and a resultant effect; a vibration through the senses, yet not of mere sound, not of mere light, but of something more of which sound or sight are but the modes of conveyance, modes of conveyance into the nervous atmosphere or ether, to be changed there into some new state of motion or into a new physical condition that is inimical to continuance of life.

Let me explain by one example.

A little boy was once brought to me by a medical friend under the following painful circumstances. The boy was the son of a carpenter, and his father sent him occasionally to a neighbouring timber-yard to give orders for wood. The keeper of the timber-yard, a modified type of Mr. Quilp, had a morbid delight in frightening children. He had bought a large ugly and savage dog, and he tied the dog closely up in a recess in the passage leading to the timber-yard. The little boy I speak of, knowing nothing of this new and terrible importation, was proceeding, as usual, down to the yard, when the dog flew at him. The dog could not reach the boy, but the little fellow was so affrighted that he stood motionless for two or three minutes, and at last fell to the earth. He was picked up by some kind passer-by and taken home, and from that moment was stricken by the fatal disease called diabetes, of which in time he died. In this instance there was the direct physico-mental shock followed by physical change, in line. There was the metaphysical vibration of fear transmitted by sight and sound into the body; there was the nervous storm engendered in the body; there was the resultant in a modification of chemical action, by which, in continuous new conditions, a part of the food taken into the body was changed into glucose or grape-sugar; and, on the formation of this sugar in excess, there followed a new series of other organic changes, ending in destruction of the unity of functions which makes up what we call life. I need scarcely say that the illustration above supplied is one in which a mental impression, made through the mind upon the body, was exceptionally severe in its physical effects. But such severe effects have to be seen before the great and primary truths they teach can be recognised.

I was myself many years in practice as a physician before I fully recognised these physical changes wrought through the windows of the mind. It is true I had read of those who were almost bechilled to jelly by the act of fear, but then I looked upon such sayings as mere flights of poetic genius, and in medical literature proper I discovered no clue for guidance in this beat of observation. At last such facts as the one I have stated arrested my attention, and since it has been so arrested I have been daily studying the subject with increasing interest. I could, indeed, fill this essay and many essays with details of observed phenomena of physical disease from mental action.

Indeed, in so many forms do the mental impressions tell on the bodily organisation, that mental health in education becomes a new branch of science which all persons should begin to learn. By the assistance of this learning our successors will formulate a new world of thought, and will in no small degree fashion, physically, a new world of women and men, having the garb of their souls structurally finer, stronger, and more tenacious of life, from whom shall come a new evolution of species, and a new living earth.

On this inviting theme I must not longer dwell. It is my desire now to treat on those bad mental influences in education which undo the mental and physical health, and on the modes by which these injurious influences may be removed.

Suppose we had before us in our schools a body of children all of whom were typical specimens of health. It would then be a momentous fact to know that we could, by our methods of feeding the children with knowledge, make them all specimens of good or bad health. But the truth is that, when we have before us a class of children, we have probably not one before us who is a typical specimen of perfect health. It is a solemn thing to say, and yet it is as truthful as it is solemn, that I have never in my whole professional life seen a perfectly healthy child, and I doubt if one exists in the land. The birthday of health is not yet in the almanac. As a rule, in the majority of children of every class, there is some prepared mode of departure from health inborn in its members. In many of its members the bad health is not merely inborn, but it is in actual existence, easily detectable under scientific research. How important, then, that in the modes of training the mind such modes only should be selected as shall lead to the better development of both body and