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# HIGH-PRESSURE EDUCATION

BEING

AN EXPOSITION OF THE EVIL EFFECTS UPON  
THE RISING GENERATION OF HURRY AND  
WORRY AT SCHOOL

WITH SUGGESTIONS.

BY

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Etc., Etc.



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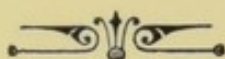


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## HIGH-PRESSURE EDUCATION.



It is impossible to ignore the valuable opportunities possessed by medical men on the staffs of our Children's Hospitals for studying carefully the ætiology of the multiple forms of brain mischief, from which the children in our Board Schools have suffered under the existing system of payment by results. The evidence already to hand from the pens of physicians attached to London hospitals is weighty, and worthy of careful consideration by philanthropists, teachers, sanitarians, and the governing authorities of our schools. These gentlemen speak of an increase of headache, lassitude, pallor, and sleeplessness, with brain irritability and chorea among their patients during recent years.

I feel it incumbent upon me to enter the arena of conflict backed by an experience of fifteen years' constant study of children's diseases, with an average attendance upon over one hundred Board School children every week at the Victoria Hospital for Children. I must add to the list of positive evils alluded to above, some equally pernicious effects of over-pressure, if not quite so directly traceable as cause and effect. I refer especially to the want of systematic inspection of the sanitary arrangements of schoolrooms. Is it not most unreasonable to herd together teachers and children in magnificent palatial buildings erected with every care for sanitary fitness and permanency of structure, and yet to have no officer appointed to see that the excellent hygienic arrangements, provided regardless of cost by the architect, are being brought into daily use for the benefit of the children? In such

an ever-varying climate as ours it is impossible to leave sanitary arrangements to work automatically. The class rooms need to be ventilated and the air changed at regular intervals, and for this purpose arrangements should be made, depending upon the varying state of the external atmosphere, for efficiently purifying the air inspired by the children. Masters have complained to me of sickness, lassitude, and incapacity for work, in consequence of the tainted atmosphere in which they have to sit with the children daily. I can almost hear the echo of the children's voices as they listlessly sit under the tyranny of such iron-bound codes and casements, breathing out the plaintive lamentation, "*Dum spiro, spero.*" In any attempt to rectify the acknowledged faults of our existing system of education, we must enlarge the scope of our enquiry by endeavouring to ascertain the amount of blame which undoubtedly must lie at the door of the persons who act *in loco parentis*. A large per-centage of Board School children are brought up by foster parents because the father has emigrated, or he is consumptive, or he is *non est*, and the mother must be the bread-winner. A still larger per-centage have drunken parents who neglect their children, and so they are brought up in squalor and starvation. This side of the question might well be enlarged upon by School Board officers and others, who are well acquainted with the habits and passions of the working classes, in defence of the School Board system. I introduce it here merely to show that I do not ignore the fact that the question of over-pressure is many-sided, but nevertheless too important to allow a *tu quoque* argument to swamp the enquiry.

I have particularly noticed of late the frequency with which boys from 16 to 20 have come under my care with nervous twitchings of the face, making all kinds of contortions, especially when in society, and such boys I have invariably found are undergoing a course of cramming which thoroughly unhinges the delicate framework of nerve organization.

To force the mind by excessive and prolonged tension during the periods of childhood and youth, as is too often the case under the modern system of high-pressure education, can only be attended with the most pernicious results. A temporary blaze of

intellectual energy will astonish and delight the spectators ; but such a rapid outburst of brilliancy is almost as rapidly extinguished as soon as the occasion for the display has passed away. Precocious children are, to say the least, a great bore, and even those endowed with highly developed mental powers often turn out the most ordinary commonplace individuals.

I desire to show the necessity of giving more direct attention to the health and growth of the body during the period of adolescence, so that *pari passu* mind and body may each receive, by steady and continuous cultivation, an accumulation of force and energy to enable the whole being to grapple successfully with the continual strains put upon it by unavoidable competitive examinations.

In the hurry of life we find that scarcely any attempts are made to gauge the moral, intellectual, and physical powers of boys when they first enter upon school life, with a definite desire to foster and develop those special traits of character which each boy possesses. In consequence of the herding together of so many boys in large public schools, individuality is often lost. The masters aim rather at high averages of proficiency in their totality, than at developing the dormant energy of mind which needs a personal effort to effectually bring it to the front. Hence the advantage of the tutorial system in some respects, although that, if carried to excess, will produce monstrosities of intellect, with no depth or breadth of real brain power, nor of that *haut ton* which is the special characteristic of our collegiate system, and of which we, as a nation, are so justly proud. It is probable that an over-wrought brain, instead of going through a natural process of development, becomes congested. The capillaries which convey nutriment to the cells get clogged and distended, serum from the blood oozes into the brain tissue, which consequently loses its firmness, and the normal cavities of the brain become distended with fluid, causing an undue pressure upon the delicate structures around, and impairment of intellect is the inevitable result.

I am careful to adhere strictly to what is capable of distinct demonstration, and to avoid giving my readers what might be called a "ghastly picture" of the evils resulting from high-pressure education. I do not so

much wish to appeal to the sentiments of my readers as to their reason. I might have quoted from the writings of many distinguished physicians in proof that intellectual excesses are not calculated to produce brilliant successes. The brain must grow *pari passu* with the body. "If one member suffer, all the members suffer with it." I might give instances of permanent disability and structural disease induced by overstraining the nervous system. Such cases are so well known to every medical practitioner that I abstain from enlarging upon this subject.

Locke, in his well known treatise on education, by teaching the importance of reasoning with children at a very early age, has done much harm to the rising generation. Such attempts are very likely to create a predisposition to insanity. By unduly taxing the brain, the organic functions of the body are neglected, the processes of nutrition and secretion are interfered with, and impeded growth is the consequence.

It is said that insanity prevails to a larger extent in England than in any other country, and this is accounted for by some writers on the ground that almost every person has liberty to engage in competition for the highest honours and emoluments. Such liberty does not prevail in despotic countries, hence the decrease in the per-centage of insanity. I am not in a position to affirm or deny this statement, and therefore quote it without comment.

Dr. Conolly having conducted considerable researches into the statistics of insanity, found that the disease prevails most amongst those whose minds are excited by hazardous speculations and by works of imagination. Taking the educated classes, he found that priests, painters, sculptors, poets, and musicians contribute largely to swell the ranks of the insane, whereas those whose minds are engaged in more practical study, such as physicians, naturalists, chemists, &c., seldom become inmates of asylums.

The brain being the material organ of the mind, it follows that any mental derangement, however trifling, must be dependent upon some change or defective development of the actual structure, even though we may not be able to trace by the aid of the microscope the precise morbid lesion. The psychologist knows that a large number of the patients under his care

have no pronounced aberration of intellect, sufficient to cause permanent disability. Such cases are ranged on the border-land of insanity. If the tissue of the brain be examined, it may be that no structural lesion can be traced, but it does not follow that none exists. Functional disease of an organ is one thing, and structural disease is another, and the latter is more permanent in its results. It is needful for a due appreciation of this distinction to give a general idea of the minute anatomy of the brain.

In addition to certain recognised centres for the development and elaboration of nerve functions, the brain proper, or all that which is enclosed in the skull-cap, and denominated the cerebrum, consists of white and grey matter. The latter being concerned principally in the elaboration of thought is found only on the surface, something like the brown skin which covers the convoluted fruit of the walnut. The bulk of the brain, which is white or tubular, serves the purpose of conducting impressions to and from the grey matter. On section through the cerebrum, it would appear as if the grey matter constituted a very small proportion of the substance of the brain. This is not a correct way of estimating it. If it were possible to spread out the convolutions so as to expose to view all the grey matter of the brain, it would be found very extensive. The convolutions consist of a number of puckerings or enfoldings of the brain tissue, as it were, like the valleys and ridges of a very mountainous country. The sulci or valleys between the convolutions vary much in depth.

It is a popular delusion to suppose that the amount of "brains" possessed by a person is proportionate to the size of the brain. "The best goods are generally packed in the smallest parcels." So the finest brains are those which have small convolutions with deep sulci, giving an extended surface of grey matter for the elaboration and development of the reasoning faculty. The grey part consists of an aggregation of multipolar cells, closely connected together by filaments or processes through which the complex machinery of thought generates specific intellectual conceptions. It is generally considered that disintegration and re-formation of cells takes place during the process of thought conception, so that for



the performance of the most simple, as well as the most occult acts of mental development, growth and decay of cell structure are continually at work.

If this be true, how necessary it must be to foster and train the youth, by steady development and culture of the mind, so that, as the outcome of such training, the object set before him may ever tend in the direction of storing up learning and forethought which will be of the greatest service to him in after life.

We must never forget that some of the greatest philosophers and men of mark in their generation have been those who in their youth received no better education than their associates. Self-education in after life was what really made them great. If a child shows at an early age a great propensity for study, instead of encouraging him to proceed on this course, as most teachers do, it is necessary to restrain his intellectual ardour. Precocity of mind is often a precursor of disease, which is best cured by checking rather than encouraging its development. Young people are much to be pitied who have parents that are anxiously striving to cultivate their childrens' brains, so as to rival their neighbours and associates, to the neglect of all hygienic principles and *régime*. Such children are often closeted for many hours in an unventilated schoolroom, breathing impure air, when they ought to be attending to those organs of the body which during the period of adolescence are in an active stage of development. They need, and must have, plenty of outdoor exercise to promote healthy growth. Those who are much admired in youth for their genius and talents often waste their energies unchecked by friends who should know better, and on arriving at manhood they are found to possess only ordinary minds.

The basis of all sound education should be organic health, and then instruction will follow in due course, as an ornament, to grace the robust youth with a solid substratum of education.

When considering how we may best educate the rising generation, the question of rewards and punishments is one that requires to be carefully dealt with. Great difference of opinion seems to prevail as to the kind of punishment most suitable for boys at school. I have had the advantage of talking this over with one of the Harrow masters, and he is of opinion that the

usual punishment of writing lines is very bad for the healthy and moral training of boys at school. It may happen that in consequence of some sudden outburst of temper, or impertinence, a boy will be set seven or eight hundred lines by two or three masters consecutively. The result is that he scribbles them off, or bullies another boy to do them for him. Some indolent boys, who prefer lolling about, would not consider lines a heavy punishment; they do not care for games, and so the task would be some little diversion for them. High spirited boys, who require plenty of out-door exercise to let off their effervescence, are those who most frequently get into scrapes. This master always gives his boys punishment drill instead, and makes them pay the drill-sergeant out of their pocket money as a further punishment. Writing lines unhinges a boy for his proper work.

The masters blame the parents for this high-pressure education. Every mother thinks her boy a prodigy of excellence, and, if not quite up to the mark, he is surely capable of being moulded, like a piece of clay, to the required standard! Such boys are to be found at all schools, and the master, much against his will, must give them extra hours out of school to force them up to the standard for successful competition. The head masters of our public schools take care to weed out all their low standard boys by a process of superannuation. This secures them a good per-centage of results, and answers their purpose well as they have so many new applicants every term; but it does not secure to the individual boys that steady training which is so needful for ultimate success in life. Boys are pushed up from "form" to "form" before they have mastered the details of the study required by the teaching of the form from which they are displaced, and so the boy begins to despair of learning his subjects, and acquires an indolent habit which, with a little individual help, might have been avoided. We must never forget that some boys at 16 are not equal to others at 13, and a better classification should be adopted.

I could give the history of many a boy who has passed with "flying colours" through his collegiate education under the cramming system, but he has been a wreck for all the rest of his life. Such cases are

quickly erased from the memorial tablets of caterers for public appointments, but an indelible mark has been made upon the rising generation, and, though crammers may hold their peace, the kirkyard stones would cry out as a witness against them. By true education I understand a gradual development of the mind co-ordinate with its capacity for reception. The first qualification for a teacher is that of teaching the young mind how to think, and then how to apply the products of thought to some practical purpose.

The pupil must discover for himself the facts, and then seek to elaborate them by a process of mental calculation. Thus the mind is always perceiving, then thinking, then putting together, and so discovering and then appropriating the truth. The diligent pupil trains his reasoning faculty, and is really more guided than taught by the teacher.

True mental food requires quite as careful digestion as the material food that the boy eats. Physiologists know what a complicated process of trituration and peptonation the food has to pass through before it becomes assimilated and ready for nourishing the blood. How necessary then, for proper digestion of difficult problems, must be a restful mind, healthy "brains," and above all, patience, tact, and judgment on the part of the teacher, in order to secure the proper assimilation of mental food by the pupil.

We often laugh at the young tiro in horticulture for pulling up his seedlings to see how they are growing, but the skilled gardener engaged in the rearing of plants under artificial conditions of pot culture will be careful to look to the roots as well as the stem for the evidences of healthy growth.

The power to gain high and important stations in public life depends not only upon knowledge, but upon ability to retain and develop it. Knowledge is merely the A B C which puffeth up, while continuous devotion to any particular pursuit must in process of time produce certain and definite results. Nobility and dignity of character belong only to those who have minds enlarged and cultivated from their youth up, by continuous daily application with a distinct object in view.

In all grades of society we find a mighty upheaval at work in the present day. Parents whose early

education was of a meagre description are making great exertions to enable their children to acquire that knowledge which it was their misfortune not to have obtained. In the race for wealth, where we find far more blanks than prizes, it becomes essential that a high class education should be sought after. Unfortunately, there is no one to caution the purblind parents of the danger of pressing children beyond their capabilities. Seldom is the advice of the doctor sought till the mischief is done. It would be easy to narrate the history of children whose minds have been developed beyond their powers of endurance, and serious and lasting injury has been the result. Let parents ever remember that memory is not education.

I am glad to find that purer influences are being brought to bear upon the boys of the present day. Scapegoats are rare, and "the governor" is not that terrible individual that used to be the scare of "holiday house." Sons are often warned of the dangers that lie in their path by judicious parents, and a spirit of mutual confidence between parent and son favours that nobility of character which may enable him to rise above temptations of a gross character.

The aspirants for honours and scholarships at our colleges need to be told that mind and body must develop harmoniously, and for the manifestation of good mental powers, the body must be kept in a sound and healthy state. "*Mens sana in corpore sano.*"

May we not, as a corollary to all this, affirm that education, to be real, must be systematic—that national prosperity must depend almost entirely upon the provision of more definite material for training our youth with a due regard to vital energy and salubrious surroundings? Then may we hope for the day when mathematics and classics shall stand a chance of competing successfully with athletics and cyclics as the pleasurable pursuit of youths who are determined to make their very best way in the world.

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