

"learner The third is the system of forcing the mind into needless *complications*, by which passions, which are not intellectual, but animal, feed the intellectual fool with desire, and, by creating an over-development of the nervous physical seats of passion, make or breed a soul of passions which may never be quenched in after life, until it itself puts an end to life abruptly by the dreariness it inflicts.

"I have sketched from a trustworthy record, the work of learning imposed on a pale and nervous boy at a school, the discipline of which is by some felt to be rather light than heavy. For the exercises of the mind imposed eight hours of work are necessary and if this period of labor were enforced, with two hours for meals and relations and four hours for play, it would require all the remaining ten hours out of twenty-four for sleep, in order to supply that renovation of body and extra nutrition which growth to the developing organs so vigorously demands. This tax is extreme while growth is in progress. But it seems never to be conceived that growth is labour. To put a young horse in harness and to make it work hard while it is growing, is considered the most ignorant of processes, while to work a growing child is often considered the most correct and excellent of processes."

The writer then proceeds to discuss the ill effects of this system of training; and ridicules the application to such cases as he cites the ancient proverb, that "whom the gods love die young." He shows that they are systematically killed by the fatal process of indiscriminate forcing at school. He then points out the common error of "failing to allow for differences of mental capacity and turn of mind in different learners." He speaks of the "many minds of neutral tendency; minds that can take in a certain limited amount of knowledge on almost any and every subject, but which can never master much in anything." He then goes on to say:—

"There are two other very different orders of minds. There is the mind analytical—that looks into details in business, into elements in science, into figures and facts in civil and natural history. . . . There is again the mind constructive, or synthetical; the mind which uses facts and figures only in the end, for its own purpose of work; which easily learns principles of construction, . . . and which cannot, by any pressure inflicted on it, take hold of minute distinctions."

"In the small school of the youth, as in the great school of the world, these representative orders of mind are ever present. The mistake is that they are so commonly confounded that no change is made in the mode of study to suit the genius of the one or the other. The consequence is that lessons are given to the analytical student which he cannot possibly grasp, and to the synthetical student which he cannot possibly master. Under these conditions both chafe and worry, and do not get on. Then they grow fretful and feverish, are punished or slighted. And so, if they are unduly forced, they grow up unhealthy in body and in mind."

"These bad physical results the physician alone sees, as a rule, . . . nor does he, nor do others, see the remaining evils from the physical side. As William Howitt says: "There is no mistake so fatal to the proper development of man or woman as to pile on the immature frame, and on the yet unfinished fabric of the human body, a weight of premature and, therefore, unnatural study. In most of these cases, where nature has intended to produce a first-class intellect, she has guarded her embryo genius by a stubborn slowness of development. Moderate study and plenty of play and exercise in early youth are the true requisites for a noble growth of intellectual powers in man and for its continuation in old age."

These extracts may serve to put teachers in possession of the matured opinions of eminent medical men on the evils of the undue pressure of studies on the youth under their care. A knowledge of the facts and opinions cited will be of great value to those teachers who sympathize with the popular objections to this undue pressure, and who are anxious to mitigate its evils as far as possible. It will no doubt aid them in dealing with the individual classes of pupils whose mental peculiarities are so fully described in the foregoing extracts.

GYMNASTICS OF THE BRAIN.

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In presenting this subject for the consideration of the Association, I feel satisfied that no more important topic could occupy the attention of medical science than that which closely concerns the

welfare of society, and promotes in the most comprehensive sense, the "*mens sana in corpore sano*." Mental hygiene and physical hygiene are inseparably connected, and a few observations at present may not be out of place in regard to the essential balance of mind and body, and the application of a few ordinary principles to the present system of education. The physical well-being of the pupils in our schools should be as carefully guarded as the acquirement of knowledge. Year after year our educational system is becoming more complicated, and even the so-called Public School course is quite academic in character and more than an ordinary test of strength to the young brains, in their plastic state, budding forth to the supposed stage of practical usefulness. While acknowledging the rapid increase in the required subjects of study, branch after branch being yearly added, we must not overlook the very tree of life and the processes requiring such close attention to obviate the inroads of disease which soon saps vitality and ruins the prospects of the brightest specimens of intellect in the incipient stage of development. The mental and physical well-being of the pupils should advance equally, otherwise growth in either case will become, in a measure, one-sided. While approaching this subject I am fully aware that it is dangerous ground; still, as a matter of public duty, it may not be out of place to advert briefly to a few points respecting which it is important all classes of the community should alike have full information. The point to which I first wish to direct attention is "the brain of youth." The problem, and one of the most difficult and trying of the age in which we live, is, how to build the best brains out of the materials placed at our disposal. Education or educated evolution certainly has considerable to do with the development of mental power. The building of a brain is a social problem of more than ordinary interest to every family circle. Mothers particularly have to do with it, and teachers are desirous of drawing out innate power in its various forms, just as varied and peculiar as the phases of the human countenance. The brain, the chief part of the nervous system, must be built up in keeping with the development of the whole body, the one depending greatly on the other, in order to arrive at the greatest degree of power and perfection, either as to organization of structure or performance of function. Dr. Maudsley, in his Gultonian lectures of 1879, says:—"The time has come when the immediate business which lies before anyone who would advance our knowledge of mind unquestionably is a clear and searching scrutiny of the bodily conditions, of its manifestations in health and disease; he must recognize how entirely the integrity of the mental functions depends on the bodily organization—in fact, must acknowledge the unity of mind and body." The brain, the seat of the mind, possesses a mechanism peculiar in itself, and a power diversified in character, presenting various phases and peculiarities, throughout the highest order of intellectual development in the *genus homo*. In the crude and almost rudimentary state of the cerebral pulp—soft, pliant, and undecided in cerebral type, as to inherent mental power or capacity—more than ordinary care must be observed in suddenly straining the structure nature has put in the cranial cavity. The drawing out process embraced in the true education must be conducted with care, caution, and more than ordinary guidance and observation. It is here that mental hygiene operates, embracing as it does all that relates to development, exercise and the maintenance of mental activity—in fact, education in the most comprehensive sense. The brain may be considered a central telegraphic office, constantly distributing messages to every part of the system; and in order to attain success in the working of the complicated nervous machinery, it is absolutely necessary to know something of the physiological principles involved in the promotion of a single thought or idea. It is a well-known fact that the growth, training