

ly few, being banished from most schools, and frequently taught by incompetent teachers. To show that their aim is of greater educational importance for all classes than is generally believed by educators, is the object of this lecture. I purpose to consider the subject from a *physiological, psychological and practical* point of view.

II. Cooperation of body and mind.

After the foregoing observations, I proceed now to point out the necessity of physical training, by considering the relation between body and mind. In attempting to do this, the problem presents itself of determining the part that the physical faculties perform in the development of man. Is there an antagonism between physical development on the one side, and intellectual and moral development of man, as has sometimes been asserted? It has been, and is still, the habit of opponents of physical education to associate physical force with stupidity and brutality. This sophism is based upon examples of athleticism in its most exaggerated and degenerate form; upon the fact of many great men having had weak bodies; upon confounding systematic physical training with the profession of the mountebanks, upon the injury that unsystematic, one-sided, and excessive muscular training causes to the mind; and from such instances as these it is inferred that the body cannot be trained but at the expense of the mind; that a certain quantity of common aliment has been fixed by nature for both, so that in case of the one requiring a larger share, the other must necessarily suffer loss.

The Greek and Roman professional athletes were certainly heavy and stupid, as Galenus says. But the cause of their brutality is not to be ascribed to gymnastics, but to their abuse of them, and to their irregular habits. These athletes offer the very best proof in support of *equilibrium* in the faculties. By the side of such immoderate and disproportionate use of bodily exercises, we may place excesses in an opposite direction; we see exclusive and excessive labors of the mind, leading men astray, and launching them into a world of unreal, unsound, and extravagant ideas. Similarly, the moral faculty also may degenerate into excess, in consequence of having been exclusively cultivated, detached from the other faculties, and left without counterpoise, and corrective. History affords numerous instances of aberrations of the mind, whether of a sacred, profane, or mystical character.

But is it true that great men have been remarkable for the feebleness of their constitution, as has been said? They were feeble in feeble nations, but strong among strong nations, according to the habits and manners of their age or country. If Pascal and Voltaire had feeble constitutions, Themistocles, Alcibiades, Socrates, and Plato excelled in the exercises of the gymnasium; on the broad shoulders of Plato sat the most intelligent head of Greece; the young Alexander broke Bucephalus before the astonished court of Philip. Witness, too, nearly all the great men of Rome: Sertorius swimming across the Rhone in full armour; Cæsar in Gaul; Pompeius, of whom Sallust says—"Cum alacribus saltu, cum velocibus cursu, cum validis recte certabat."

It has been maintained that, in consequence of an antagonism between the muscles and the brain, the state most favourable to intellectual work is that of languor of the body, where activity of the senses or muscular excitation may not disturb profound meditation. There is no doubt that such a state favours intellectual dreaminess. But for keeping the head clear and within the sphere of reality, and for reinvigorating the mind, there is nothing like keeping the springs of the machine at a

due degree of tension. J. J. Rousseau found that walking revived his ideas, and gave freshness to his feelings and sensations. In his brilliant improvisations the orator tunes his body to the diapason of his mind, accompanying his words by energetic movements and gestures.

He who, devoted to intellectual work, has learnt to temper the labour of the mind by the salutary diversion of muscular activity, knows well the magic influence that fatigue of the body exercises on the vigour of the mind. The head has become heavy and embarrassed, the confused ideas come thronging in upon a mind incapable of separating and classifying them; words pale and colourless present themselves to express hazy and imperfect thoughts; the reasoning process proceeds painfully: an hour of walking, riding, or lively play dissipates the clouds; and, as *Boileau* says, "the words, which had fled, arrive at the other end of a wood."

Again is it the fact that physical development impairs that of the feelings and moral qualities? Certainly not. It may be that now and then a strong and energetic man does not feel with that delicacy which is peculiar to woman, and to some constitutions which are as it were intermediate between the sexes. But the feelings of honour, loyalty, fidelity, and respect for the institutions of nature, of the family, of society, are found equally in both natures. How many men are there, who, having spent a life of labour, hardship, and continual struggle, have nevertheless feelings as fresh as their countenances, and hide, under an iron body, a heart of gold!

However different mind and body are in their nature and functions, they form together an inseparable whole. True education therefore ignores a separation of mind and body; it acknowledges only the cultivation of the whole man—of the understanding, the heart, and the will, as well as of the senses and muscles. If one part of the system suffers, it knows that the whole man suffers. *Schiller* says:—"The cheerful string in the body awakens also the cheerful string in the soul; so does the mournful tune in the former arouse the mournful tone in the latter." What is beneficial to the body, is so to the mind. *Perfectly healthy is the mind only in a healthy, sound body.* Education must therefore aim at giving to the mind a sound and strong foundation; it must consequently follow the rules of hygiene, by striving to bring into harmony intellectual and physical activity, exertion, and re-invigoration.

The body is the instrument of the mind. It is the executive of its thoughts. As such it has various functions to perform through its different organs. For my present purpose, the organs of sense and motion require special attention. Man in his perfection requires that the former be sound, keen, and quick, and that the latter be healthy, supple, strong, prepared for instant use. A well developed organism will exercise a great and salutary influence on the mind, and elevate the intellectual and moral life. True perfection of man is, when the intellectual and physical are closely allied, when nothing contrary to nature disturbs the harmony between body and mind, when all the faculties work together, when will and deed act in unison, when the body duly executes what the mind directs. A man thus developed possesses moral courage; he delights in mental and physical work, has strength to suppress sensual predispositions in the bud, independence with regard to social and natural influences. The life of youth passes for him in purity, full of noble, generous impulses, and a vigorous manhood and hale old age are his reward.

While thus every effort of human power is a work of united activity of mind and body, nevertheless the one activity may predominate over the other. The mutual cooperation is checked and impeded only when the body,