

tics. As physiology culminates in psychology—the science of the intimate connection and mutual influence of body and mind—a knowledge of this science is also desirable. In proportion with the greater development of the organs, man acquires greater liberty and independence in his moral will and actions, as well as greater energy and power of endurance. The teacher of physical education should be able to study the mind of his pupils and judge to what extent and how best to adapt certain gymnastic exercises to their various mental and bodily constitutions. He must be an educator, a pedagogue, and have the æsthetic sense well developed.

The whole bearing of a physically well-educated human being must appear free, noble, pleasing to the eye, and satisfy the æsthetic sense; the teacher must insist on bad, ugly movements being left off, while he should rouse the sense for beautiful forms of movement. I have already mentioned why the teacher must know the elements of hygiene, he will, therefore, know that all his pupils, even those of the same class, cannot be treated in one and the same way. A plethoric pupil, one disposed to giddiness, or one with a weak but not diseased chest, is not to be excluded from the exercise class—on the contrary, many of these and similar indispositions can be removed by suitable gymnastic instruction; it is on this account that all the students in the Royal Central Gymnastic Institution of Stockholm are instructed in the diagnosis of certain complaints and irregularities of form and gymnastic curative movements, to enable them to treat their future pupils according to their constitutions.

Having mentioned the qualifications and knowledge required by a teacher of scientific physical education, you will easily understand that the drill-sergeant, calisthenic and gymnastic teacher, and dancing mistress, &c., to whom alone the physical education of our children and youth in the United Kingdom is at present confided, are decidedly not the right persons in the right places.

The reason why these people are resorted to is that even at present the majority of head masters of public and private schools, School Boards, committees of large training colleges, students and teachers, medical and military men, are all unacquainted with the present state of scientific physical education and rational gymnastics. The few who think of physical education separate mind from body, and believe that desk, school, and military drill, climbing ropes and ladders, swinging the body round and round a horizontal bar, and other exercises developing force, are sufficient. Rothstein, the author of the most philosophic and best exposition of Ling's system of gymnastics (published in 1848), says: "It is very singular that we should not confide the care and training of a valuable horse to a man who has not a knowledge of the animal's body and of the functions of the organs, while the man who is entrusted with the development of the human body is not expected to possess any knowledge whatever of such a science."

The unacquaintance of teachers with the subject I am advocating is not a libel, but a serious fact. I hope that the head master of a well-known public school in London, who intends establishing a gymnasium, to which he generously contributes a fourth of the expenses, will be careful that the instruction be more scientific than in the so-called military, model, and other gymnasia, where are used all kinds of unæsthetic exercises, which only develop brute force, and which would not have been approved of by our old friend Kleisthenes.

As the present Vice-President of the Committee of Privy Council on Education has lately proved his interest in the better instruction in singing, which is merely a part of physical education, it is reasonably to be expected that he will take still more interest in improving the present bad and deficient state of physical education and hygiene, which, if not more important, is at any rate as

important as singing; a statement the truth of which cannot be denied by anybody.

I suggest that—

1. These branches of education should be *compulsory*.
2. The teachers should be paid for the extra work in the same proportion as for reading, writing and arithmetic.
3. The pupil teachers, schoolmasters and mistresses, should be trained in training schools in the elements of sanitary knowledge and physical education, in which they should not only pass a theoretical examination, but prove their proficiency for teaching these branches practically.
4. Teachers who are already practically employed should have an opportunity, during a limited time (say, during the holidays), to go through a supplementary course of instruction, to enable them to teach their pupils at least the rudiments of the knowledge.
5. For some time *unattached* teachers of physical education should go to the various school districts, to give theoretical and practical instruction to such teachers as are unable to leave their schools even for a limited period.
6. In all schools a minimum of sanitary knowledge and physical education should form the standard according to which the teachers should be paid.
7. *Elementary* books on sanitary knowledge and physical education, approved by the Council of Education, to be used.
8. A National Central Institution for Physical Education and Hygiene should be established, on the model of that institution in Sweden which was established in 1813, and is probably the best—or of that in Berlin.

Only *certificated* schoolmasters and mistresses should be admitted, who should go through a special course of instruction in the elements of anatomy, physiology, hygiene (in their relation to physical education), and theory and practice of bodily exercises; after passing an examination they would obtain a certificate as special teachers of physical education and hygiene. Officers of the army and navy might be also admitted to these courses, as in Sweden and Prussia.

These special teachers of physical education could be employed as *unattached* teachers to give the supplementary course named (suggestions 4 and 5); while the military and naval officers could, when certified, begin similar courses in naval and military schools, in their regiments and ships.

9. From my personal experience of the few voluntary courses I have given to intelligent schoolmistresses, fifty lessons of one hour and a half, given by certified and *unattached* teachers, would be sufficient for the supplementary course in the *elements* of physical education and hygiene.

10. During the holidays, teachers from the country could be invited to come to the large towns and to attend these supplementary courses.

11. The expenses of these country teachers should be paid to those teachers who pass their examination.

12. After having passed their examination, the teachers should be obliged to make physical education an integral part of the course of instruction, for which they are to be paid in proportion to the time spent on it, or according to the results of examination in the various standards of physical education and hygiene, which, like the other subjects of instruction, will be required.

13. According to my humble opinion, the future schoolmistresses in all Training Colleges should also be practically instructed in the management of babies and infants; for which purpose a model nursery, for six to twelve orphan babies and infants, should be attached to each college, under the superintendence of an educated and well-trained nurse; every pupil teacher could thus learn how to feed, dress, wash and manage a baby in order to keep it well