

perhaps the teacher, by undue indulgence and stimulation, is strengthening what he should weaken, and weakening what he should strengthen. In things mechanical, we are satisfied to get a motor of any kind, provided it be powerful enough, inexpensive, and easy of application; but man being rational, and an end in himself, quite other necessities arise. In this human mechanism there is a spirit within the wheels, and all executive ability that militates against spiritual perfection is worse than lost. However much we may covet scholarship, we have always to remember that there is something beyond, and to strive so to make the scholar as not to unmake the man.

Motives, therefore, in education must be ranked as lower or higher. Among the lower motives may be reckoned the rod, the desire to win prizes, medals, bursaries or scholarships, and the feeling of emulation, whether in its spontaneous form, or as stimulated and forced by class lists and marks of approval. Among the higher will stand the love of knowledge, self-respect, thoughts of ideal perfection, the sense of duty, and a generous scorn of idleness and of all superficial, imperfect work.

As to the rod, it has always played a more or less useful part in the training of boys. Now and then a teacher or parent has had such a genius for government as to be able to do without it, but the cases are rare, and even then it is valuable as a power in reserve. As a good horse goes all the better for a whip in the carriage, so in a schoolroom it is well to have a rod in the background. To supersede it, however, by higher influences should be the teacher's ideal, toward which let him travel as fast as he can. The rod may be called the fourth R, and like the other famous three is only preliminary to something beyond.

The teacher should, I think, act in the same spirit in relation to other secondary motives. Competitive examinations, prizes, class lists and similar honors are perhaps useful incentives, within certain limits, but they are certainly not incentives of a very high order, and may easily be pressed to the detriment of nobler principles. In earlier years the more manly sentiments may need to be supplemented by such auxiliaries, but it is never well to lay the chief stress on the lower part of our nature, not even in boyhood, much less during a university career. Competitive examinations, with the accompanying rewards and honors, are much relied on in our day, especially in England and Canada, and there is reason to fear that we are getting rather beyond the wise and healthy use of such stimulants. This has been called "the age of examinations," and the Germans sneer at us, saying that it is as if we stood crying to all the world, "Come, come, and be examined." Examinations of some sort are, I suppose, indispensable, but they are by no means an infallible test of excellence, and when made not merely the condition to further progress, but the road to all honors and emoluments, they may easily lead to serious disadvantages. All examinations are, according to Huxley, himself a veteran examiner, a kind of "necessary evil," and it is well to keep the evil at its minimum. The greater stress we put upon a test of this kind, the more unerring the test should be, and in this "age of examinations" it is rather staggering to get the above confession from a man like Huxley. Todhunter, another high authority, also speaks as follows: "I have had much to do with examinations, principally, but not exclusively, in pure and mixed mathematics; and my experience is that nothing is so hopelessly worthless, as the products of examination in experimental science. Often after encountering a mass of confusion and error the disheartening conviction has been forced on the examiner that the candidates must have derived positive harm from their attempts. In chemistry especially, it seems to me that mere paper examination, which is all that can, under the circumstances, be effected, is a most inadequate representation of the best parts of the subject."

But even if competitive examinations were a better test than they are, there is still the question how far and in what way it is wise to use them in the work of education. We are always in danger of forgetting that a part, perhaps we should say the most important part, of education is the formation of character. Now, character is formed by the motives under which we are accustomed to act in our earlier years. There is something nobler even than knowledge, and that is the spirit in which a man pursues it and employs it. As the best teacher of boys aims at getting beyond the rod, so the higher educator will endeavor to bring young men as soon and as much as possible under the influence of nobler considerations than class competitions, or the prizes and pecuniary advantages which follow. It may be urged that the desire of winning such ordinary distinctions will not of necessity stand in the way of higher objects. There is indeed a wonderful complexity and co-operative power in human motives, and it is perhaps impossible to keep the mind always independent of inferior attractions, but, although higher and lower motives may sometimes co-exist or operate in rapid alternation, it still remains true, that the ascendancy of passion is not the ascendancy of principle, nor the sway of a sordid affection but the sway of a noble one. As in matter so in bodies do not occupy the same space, so in mind there is a certain persistence and displacement of motives by which character is determined. The more of the lower the less of the higher, and conversely. When the Great Teacher tells us that we cannot serve God and Mammon, he points very emphatically to the exclusive force of a dominant principle, or as Chalmers has expressed it, "the expulsive power of a strong affection." If secondary or sordid motives are to be sometimes tolerated, it does not follow that they are to be fostered and made all-prevailing. Milton represents Mammon, "the last erected spirit that fell," as losing "the vision beatific" by walking in heaven with "his looks and thoughts always downward bent," admiring "the riches of heaven's pavement." This may furnish a salutary hint to all those who would climb the hill of science. There is a marvellous enlargement and inspiration of soul in the upward gaze. There is, says Bacon, "no alliance so close as that between truth and goodness." And, although genius of a high order is sometimes combined with meanness of soul, sooner or later the better powers of the intellect must suffer from the ill-omened wedlock. If, as Burke says, "the passions instruct our reason," it must be the nobler passions that do so; the baser propensities tend rather to becloud and disorder the mind. And among the purer and better principles of action on which the teacher may, and should, lay great stress and assiduously cultivate, is the love of knowledge for its own sake, together with a desire to do thorough and honest scholarly work, a sort of intellectual conscientiousness, which with some students easily becomes a passion and a power. Next to the sense of duty, to which it is closely allied, this love of knowledge and mental excellence would appear to be the proper and distinctive motive of the scholar and man of science. It has been very marked in the lives of many eminent men, among them that of the great and good Faraday, who was so fearful of being touched by any sordid considerations that he gave, on one occasion, as a reason for declining an office of high honor, that he feared it would "corrupt the simplicity of his intellect." The notion with some educators would seem to be that a young man is to be drawn or pushed forward by all conceivable inducements to secure academic honors and admission to a lucrative profession, and that then there will enter, in some mysterious way, a new and better order of things. The old habits of thinking and feeling are suddenly to drop away, with the outworn academic gown, and new inspirations and tendencies are spontaneously to take their place. Perhaps it may sometimes turn out so, but the probabilities are against it, and when the transformation does hap-