

came to Colet and to Erasmus as the gay sceptic in whose company they could laugh down the superstitions of the time. It is by a strange turn of the wheel, whose backward whirl a well-known Horatian maxim bids us forecast, that the children of the Renaissance assail those very studies which alone can be called liberal. No commercial educationist of our time could possibly feel so much suspicion and dread of a young fellow with a good knowledge of Greek, as did the average English gentleman of the sixteenth century. Each in his place would heartily join with that old Rabbinical anathema, "Cursed be he that keepeth a pig, or that teacheth his son Greek." And yet a very great man, who has touched more points in the circle of knowledge and experience, than many men can ever hope to do, wrote these words to a friend:—

"What I feel is, that the relation of pure science, of natural science, modern languages, modern history, and the rest, to the old classical training, ought to be founded on a principle, and that these competing branches of instruction ought not to be treated simply as importunate creditors, that take one shilling in the pound to day, because they hope to get one shilling in the pound to-morrow, and in the mean time have a recognition of their title.

"Its recognition of title is just what I would refuse: I deny their right to a parallel or equal position; their true position is ancillary, and as ancillary it ought to be limited and restrained without scruple as much as a regard to the paramount matter of education may dictate.

"The truth I take to be, that modern European civilization, from the middle age downwards, is the compound of two great factors—the Christian religion for the spirit of man, and the Greek (and in a secondary degree the Roman) discipline for his mind and intellect.....

"The materials of what we call classical training were prepared—and, we have a right to say, were advisedly and providentially prepared—in order that it might become..... the complement of Christianity in its application to the culture of the human being."—(Rt. Hon. W. E. Gladstone, Public Schools Commission Report, Vol. ii., p. 49.)

No one in our time will attempt to dispute that very bountiful culture may not be attained without intrinsic knowledge of the classical authors.

But the truth being that, while the ideas of Greece and Rome have passed into our literature to such a degree that no student can fail to imbibe their influence, there is not always individual need of reference to the sources and springs of literary inspiration. Hence they are the common heritage of all educated men—of him who has learnt the Greek geometry and builds a bridge, and of him who exemplifies the fire and pathos of tragic composition. The material ideas of Athens and of Rome are now in the very pulse of culture.

But as the highest culture goes beyond ideas to their ultimate form, and as these ideas must be sought for in the exquisite shapes of their original diffusion, and as language has his share of art, and is capable of being made intrinsically beautiful, so must the highest education be sought in the medium of these studies.

The common run of feeling being, however, that these studies are not "useful," let us search for the useful in what remains. There remain only Mathematics and Natural Science. For the abolition of the severe study of the ancient languages, with their collateral topics, abolishes also the study of modern languages, and with them the muse of History. No one will contend that the acquisition of French or German, in the way that they can be most easily acquired, constitutes an education. A courier who initiates travellers into the ways and doings of some foreign town, is often very facile in six languages, and lives by that knowledge; but somehow we have grown to associate a great facility in Continental languages with the same sort of clever-

ness which makes a facile billiard player or a facile bookmaker. A child may pick up a knowledge of at least two languages in the nursery, by association with a French or a German *bonne*, but the absence of any effort in acquisition deprives the process of any educational value.

History, as a severe study, cannot be prosecuted with either consistency or consecutiveness, if we omit from calculation the authorities, the evidence, the art, the religion of a thousand years. Clio cannot remain with those who have expelled the Homeric narrative equally with the language of the New Testament, and who forbid us read with Tacitus what manner of men we were in the German forests, or with Cæsar of our own land as he saw it.

In Mathematics, however in its early branches, the apostles of Useful Education claim to find something sound and reliable. But it is not quite clear that the object is surely attained. That Mathematics have been made in England the sole means of culture in the early stages of education, does not come within my knowledge; but that the attempt has been seriously made elsewhere, appears from the following remarks of the late Mgr. Dupanloup. Speaking of the Ecole Polytechnique, he says:—

"Mathematics are often a study too laborious, too hard for these young scholars.....

"Beyond all doubt, Mathematics give consistency to, and ripen, by vigorous and useful exercise, by their tollsome intellectual gymnastics, reflexion, judgment, reasoning powers; but they require absolutely that these faculties already possess a certain vigour and development, otherwise they crush them..... Always, when Mathematics are allowed to have a despotic or premature influence in education, the result is disastrous.

"Not only do they obliterate from the mind the grace, brilliancy, generous sentiments and kindly feeling, due to imagination and poetical feeling, but they destroy the sense of moral justice.....

"These are disastrous results.....and what do we gain by incurring them? We often make the mathematician at the expense of the man.....and often we have, perforce, to regret the absence of both the mathematician and the man."

If education is intended to adapt men for the world, Mathematics minister to the result feebly. There are hundreds of daily events it is impossible to force into mathematical relationship. The very rigidity and accuracy of the study are drawbacks. It is no use trying to adapt methods, that must eventuate in neat solutions or nothing, to the habits of a being whose ordinary life is a series of petty uncertainties. "Mathematics," it has been well said, "have been brought into matters where their presence is of doubtful utility. If they have given precision to literary style, that precision has been sometimes carried to excess. If they have tended to clearness of expression in Philosophy, that very clearness has sometimes given an appearance of finality not always true. If they have contributed to definition in Theology, this definiteness has often been fictitious, and has been attained at the cost of spiritual meaning."—(*Quarterly Review*, Oct. 1867, No. 246.)

The famous attack of Sir William Hamilton on mathematical study (Hamilton, "Discussions," pp. 313, 314, &c.) has had this advantageous effect: that, in the rejoinders it evoked, all that could be said in their favour was said by Whewell, and De Morgan, and Mill.

Taking Mill as the foremost opponent of Hamilton on this as on other topics, there are passages in his apology for Mathematics fraught with instruction.

"Descartes," says Mill ("Mill on Hamilton," p. 610 ff.), "is the completest type history presents of the purely mathematical type of mind, that in which the tendencies produced by mathematical cultivation reign unbalanced and supreme. This