

are based on the excellent mental drill involved in the mastery of its highly philosophical syntax, on its adaptation to philological research, on the power of its literary treasures to stimulate the imagination and cultivate the taste. But such were not the circumstances which gained for it its original admission to the seats of learning in Europe. Greek was the *practical* study of those times. It commended itself on positively utilitarian ground. It revealed knowledge which could not be obtained from the imperfectly Latinized Aristotle. It furnished the key to all that was best and wisest in human thought, not excepting even the words of him "Who spake as never man spake," thus inducing men to study it just as English scholars study German, not so much for the sake of the language as for the sake of the treasures it unlocks.

My purpose does not require any attempt at forecasting the future of this noble language in our schools. The determining principle is a plain one, and that principle is not *prescription*, but *utility*. Greek came in as a *supplanter*, because it was a better instrument than the studies it displaced, and it will go out supplanted in turn, whenever it shall cease to answer some one of the really important ends of education better than anything else. We cannot be depended on for any length of time to lumber up our courses of study with mere fossils and mummies, or to use a poor piece of machinery when a good one is within our reach. In a recent paper, the foremost Greek scholar of America, Professor Goodwin, of Harvard, after referring to the accredited place of Greek in university courses, observes: "But neither this nor any other study can occupy this responsible position except at the price of eternal vigilance. It must be wide awake, too, to see that its methods are not antiquated. . . . The foundations which it lays must be solid and lasting, or something better will take its place." These sagacious observations both state and illustrate the principle I have been trying to unfold.

Other illustrations of changes in educational subjects and methods consequent on changes in society and advances in civilization suggest themselves beyond my power to use them. When Aquaviva, in education the great organizing genius of the Jesuit Order, was planning the policy which ultimately brought the schools of Europe under his sway, he was wise enough to see that he was living in a new age, and that the *Trivium* and *Quadrivium* of the mediæval schools had outlived their usefulness. His *ratio atque institutio studiorum* was the product of a profound appreciation of the tendency of events and the practical demands of the age, and perhaps did as much as religious zeal in extending the influence of the famous Order.

It would make this part of my paper disproportionately long were I to refer, as I properly might do, to the recognition reluctantly accorded in these last days to science and her multiferm applications, first, in the universities, and then, in respect to more elementary principles, in the institutions for secondary and primary education. Suffice it to say, regarding the general subject, that I by no means wish to convey the meaning that historical references will enable us infallibly to decide the claim of rival studies or rival groups of studies. By such references, however, we learn to rebuke the dogmatism which condemns a study simply because it was not to the front a century ago, or applauds another which ages ago answered conditions that have passed away never to return. They teach us that in the studies of the school as in other things,

"Our little systems have their day,
They have their day, and cease to be,"

while, in view of the almost alarming multiplication of new sciences, and with based upon them, we increasingly appreciate the knowledge of such a principle, that we may be saved from utter bewilderment and despair. Life is too short to enable us to learn all that our forefathers learned and that vaster knowledge of which they knew nothing, in addition. If we are sometimes led to fear that the old idea of culture in the abstract, of mental discipline and development, pure and simple, is in danger of becoming extinct, we must encourage ourselves with the conviction that studies which enrich and adorn life will also train and develop mind.

2. A closely connected inquiry, and one in reference to which it would be profitable, if time permitted, to elicit the true teaching of history, is *how* shall the various branches be taught, *how*, in respect both of the ends aimed at, and the methods adapted to those ends? Though this is in fact a more important question than that which has thus far occupied us, its consideration here must be confined within narrower limits. It is impossible to compress into the few pages at my disposal the substance of the rapidly extending literature of educational science. At most I could only hope to

touch on a few leading phenomena and principles, and that in a cursory and superficial manner. The subjects taught in our schools are not only various, but to a large extent they stand related to different faculties, thus in the very nature of things, rendering it impossible to discuss under present limitations, either the underlying laws or practical methods of successful teaching, with any breadth or fulness of treatment.

We are professing, however, to view the subject in the light of historical inquiry. Well, so far as much of the past is concerned, the value of the results of such inquiry is of a purely negative character. We learn the importance of truly philosophical theories and methods of education by observing what has taken place where they have been absent, just as we learn the value of scientific systems of agriculture by noticing the sterility and desolation to which empirical farming always leads. It ought, however, to be a cause of real gratification that through the slow and often almost untraceable evolution of the ages, we have reached in these last days at least an approximation to a definitely formulated *SCIENCE OF EDUCATION*. It must be admitted that of the educating races of the world, our own has had perhaps the least to do with aiding this development, and is by no means among the foremost in recognizing its importance now. Many highly educated Englishmen, and some highly educated Canadians, too, I fear, are prepared to smile incredulously when told that psychological research has brought to light a science of whose laws all rational methods of instruction are simply the practical applications. But it is obvious that unless the human mind is utterly without law in respect to the operation of its faculties, such a science must exist *potentially*, and we have reason to be grateful for the degree of fulness and precision with which its principles have been *actually developed*.

A recent writer expresses the opinion that, "in spite of the great advances which have been made of late years, the *Science* of education is still far in advance of the *Art*, schoolmasters still teaching subjects which have been universally condemned by educational authorities for the last two hundred years, and the education of every public school being a farrago of rules, principles, and customs belonging to every age or teaching." To this we may say that it is a great thing to have the science, even if the art yet lags so far behind. Something like this might with some truth be said of the relation of every art to its kindred science. But if this be specially true in respect of the science and art of education, the reasons are not far to seek. Education is young; the sciences with which the comparison is concerned are old. The correct application of their principles has been carefully studied out by long processes of induction, measuring centuries in their sweep. Law, medicine, and theology have thus been patiently investigated amid the inspirations and opportunities of famous universities. It may indeed be said that some of the particular problems connected with education excited attention even in the earliest times. So they did. The acute and perspicacious intellect of that great speculative thinker, Plato, anticipated some of the positive conclusions of modern educational science. Aristotle and Quintilian grasped and enunciated valuable principles worthy of being incorporated in "the body of sound doctrine." But these early attempts at systematizing the principles of education were lost sight of during that long period of dense obscurity when men with difficulty retained in their vision even the rudimentary shapes of learning. With reviving culture naturally the first question was, "*What shall we study?*" not "*How shall we study?*" But in time the inductive spirit generated by Bacon did its work. Patient minds traced out the idea of education as something having a definable scientific basis, something immeasurably transcending routine varied only by empirical gropings in the dark. Unfortunately this new theory received but scant countenance at the great seats of learning. The universities had lost the freshness of the Renaissance impulse, and too generally had given themselves up to the spirit of ease. Individual names of great eminence consecrated the new science, but the task of evolving its principles and methods fell chiefly to the lot of a few lonely investigators, working apart and often repeating each other's discoveries, without in many cases proper opportunities for broad, reliable inductions, and thus led to propound as educational axioms absurd paradoxes which fuller observation would have reduced to the limits and proportions of reason.

(To be continued.)

It is said that the engravings for *Harper's Monthly* cost \$100,000 a year, and that the *Century* has spent as much as \$6,000 for illustrations for one article.