

mechanical toil ; when another Burns, dowered with all that culture can lend to genius, "may wake to ecstasy the living lyre" while following the plough ; another Watt or Stephenson, trained in the mysteries of statics and dynamics, may revolutionize the economic service of mechanical forces ; another Hugh Miller, rich in all the latest revelations of science, may interpret more fully to other generations the testimony of the rocks. Meanwhile we may look forward, without any dread of the fancied ills of "over-education," to a widely diffused culture, broad and thorough, with its few eminent scholars and specialists rising as far above the general standard as the most cultured of our own day excel the masses. For, after all, the highest education is but a relative thing. To the author of the "Principia," all that he had achieved seemed but the work of a child, when compared with the vast ocean of truth still unexplored ; while to the rustic admirers of Goldsmith's village schoolmaster :—

Still the wonder grew
That one small head could carry all he knew.

The pastoral valleys of ancient Greece and modern Switzerland, the fens of Holland, and the rugged soil and ungenial climate of Scotland, tell what mental culture can accomplish when placed within reach of all. We need be in no fear that Canadian Bacons and Newtons, Porsons and Whewells will multiply unduly ; and for the rest we may safely leave the chances of an excessive crop of lawyers, doctors, or teachers to the same laws of supply and demand which regulate the industry of the manufacturer and the produce of the farm. But of this we may feel assured that in the grand struggle of the nations in the coming time, the most widely educated people will wrest the prize from its rivals on every field where the value of practical science and

the power which knowledge confers are brought into play. For after all what is science, knowledge, *Scientia*, but the whole accumulated experience of the past.

I had occasion at last Convocation to congratulate the students, and every friend of higher education, on changes in the University scheme which tended to substitute to a large extent for a system of paper examinations, very partially dependent on the instructions in the lecture room and laboratories : *bona fide* examinations on the actual work of the year. Prolonged experience must determine the wisdom of the change ; but thus far, the results confirm its value. In the ever widening compass of academic requirements, it becomes more and more difficult to harmonize the demands of true scholarship and science with the possibilities of the most diligent student. Everywhere the friends of higher education are seen marshalled into rival camps contending about the relative value of classical or scientific training, of ancient or of modern languages. The contest originated in the attempt to graft the ever-increasing demands for scientific education on the old academic scheme of Classics and Mathematics. Nor, so far as a mere paper programme is concerned, is there much difficulty. It is an easy matter to prescribe a scheme of encyclopædic proportions, such as may be found in the calendars of colleges whose graduates are to be the "admirable Crichtons" of the new era ; masters of all conceivable learning ! But the old classic aphorism, *ars longa, vita brevis*, has a force undreamt of when it was uttered. The Chancellor of the University of London, when recently addressing the friends of the newly founded School of Science at Birmingham, referred to the importance assigned to scientific education in the London requir-