Facility was sought by means of debate, declamation, and representations of Terence. The classics were read in order to collect words and phrases from them for speaking and writing, without particular concern for the thought."

STATE OF MORALS.—The state of morals at the universities of the sixteenth and seventeenth centuries was very low. Idleness, drunkenness, disorder, and licentiousness prevailed in an unparalleled degree. The practice of hazing was universal, and new students were subjected to shocking indignities. The following graphic description, contained in a rescript of Duke Albrecht of Saxony to the University of Jena in 1634, would apply equally well to any other university of the time: "Customs before unheard of," he says, "inexcusable, unreasonable, and wholly barbarian, have come into existence. When any person, either of high or low rank, goes to any of our universities for the sake of pursuing his studies, he is called by the insulting names of pennal, fox, tape-worm, and the like, and treated as such; and insulted, abused, derided, and hoisted at, until, against his will, and to the great injury and damage of himself and his parents, he has prepared, given, and paid for a stately and expensive entertainment. And at this there happen, without any fear of God or man, innumerable disorders and excesses, blasphemies, breaking up of stoves, doors, and windows, throwing about of books and drinking-vessels, looseness of words and actions, and in eating and drinking, dangerous wounds, and other ill deeds; shames, scandals, and all manner of vicious and godless actions, even sometimes extending to murder or fatal injuries. And these doings are frequently not confined to one such feast, but are continued for days together at meals, at lectures, privately and pub-

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licity, even in the public streets, by all manner of misdemeanors in sitting, standing, or going, such as outrageous howls, breaking into houses and windows, and the like; so that by such immoral, wild, and vicious courses, not only do our universities perceptibly lose in good reputation, but many parents in distant places either determine not to send their children at all to this university—founded with such great expense by our honored ancestors, now resting in peace with God, and thus far maintained by ourselves—or to take them away again."

The custom of hazing was broken up in Germany about 1660, after which time the moral condition of the universities showed a marked improvement.

C. The Jesuits

HISTORICAL.—Within the Roman Catholic Church education was promoted chiefly by the Jesuits. This order, established by Ignatius Loyola in 1534, found its special mission in combating the Reformation. As the most effective means of arresting the progress of Protestantism, it aimed at controlling education, particularly among the wealthy and the noble. The organization was, perhaps, the most compact that has ever existed. Only men of marked ability were admitted to it, and on entering they gave up their personality in complete consecration to the interests of the order. The will of the general was supreme, and from his headquarters in Rome he directed the movements of the society with absolute precision and certainty. At length the order excited opposition by its ambitious schemes and increasing power, and after banishment from nearly every country in Europe, it was finally abolished by Pope Clement XIV in 1773. Though restored by Pope
Pius VII in 1814, and possessed of its earlier spirit, it has not since been so powerful.

Educational Activity.—From the time of its organization, the Society of Jesus, permeated with the fanatical zeal of its founder, worked with indomitable energy. More than any other agency it stayed the progress of the Reformation, and even won back territory already conquered by Protestantism. Although employing the pulpit and the confessional, it worked chiefly through its schools, of which it established and controlled large numbers. Secondary and higher education in all Catholic countries gradually passed into its hands. Its schools were praised and patronized even by Protestants. “Take example by the schools of the Jesuits,” said Bacon, “for better do not exist. When I look at the diligence and activity of the Jesuits, both in imparting knowledge and in molding the heart, I bethink me of the exclamation of Agesilaus concerning Pharnabazus: ‘Since thou art so noble, I would thou wert on our side.’” In 1710 the order had no fewer than six hundred and twelve colleges, one hundred and fifty-seven normal schools, twenty-four universities, and two hundred missions. Many of these institutions had a large patronage. In 1675 the College of Clermont, for example, numbered three thousand students.

Constitutiones and Ratio Studiorum.—The educational system of the Jesuits is set forth in detail in the Constitutiones, which was drawn up probably by Loyola himself in 1559, and in the Ratio Studiorum, which, after fifteen years of painstaking labor, was published by Aquaviva in 1599. Though the Jesuit system of education has since undergone slight modifications to accommodate it better to the needs of the times, it has remained loyal to the spirit of these documents.

In the Jesuit schools there was a lower and higher course of instruction. The lower course, which corresponds closely to that of Sturm, occupied six years. The principal stress was laid on Latin, though Greek also was taught.

1. Rudiments of Latin grammar.
2. Middle grammar class.
3. Latin syntax.
4. The humanities.
5. Rhetoric (two years).

The higher course of instruction usually extended through six years. Two years were devoted to philosophy, logic, ethics, and mathematics. Aristotle furnished the leading text-books. Four years were given to theology, including Holy Scripture, Hebrew, and the writings of the scholastics.

Neglect of Primary Education.—It is a remarkable fact that the Jesuits have never given themselves to primary instruction. All their efforts have been expended on secondary and higher education. This neglect of primary schools is to be explained, not by a scarcity of teachers, but by the Jesuit distrust of popular education. The interest of the Jesuits in education does not spring from a deep love of humanity, but from a self-denying devotion to their order and to the Roman Catholic Church, in whose interests they can use it as a tremendous power. Accordingly we read in the Constitutiones: “None of those employed in the domestic service of the Society ought to know how to read and write, or if they already know, ought to learn further. No instruction shall be imparted to them except with the consent of the General of the order, for it is enough for them to serve Jesus Christ our Master in all simplicity and humility.”
Distinguishing Features.—The chief distinguishing features of the Jesuit system of education may be pointed out as follows:

1. It is characterized by a conservative spirit dominated by the principle of authority. In the schools of the Jesuits only well-established views or doctrines were to be presented; and all efforts at independent investigation and independent thought were systematically and assiduously discouraged. "In every department," says the Constitutions, "let our teachers follow the safer and more approved doctrine and the authors that teach it." Accordingly Thomas Aquinas, the scholastic theologian of the thirteenth century, was taken as the standard of theology, and Aristotle, the Athenian philosopher, as the standard in logic, natural philosophy, and metaphysics.

2. Only the disciplinary side of education was regarded. The course of training, both in its subjects and in its methods, was that of mental gymnastics. "The gymnasia will remain," said General Beckx, "what they are by nature, a gymnastic for the intellect, which consists far less in the assimilation of real matter, in the acquisition of different knowledges, than in a culture of pure form." Hence, the acquisition of knowledge through wide reading and a comprehensive course of study was systematically discouraged.

3. The basis of Jesuit education was the ancient languages, especially the Latin. From the beginning stress was laid upon grammar; then upon translations from the classics; afterward upon Latin exercises in prose and verse; and lastly, upon public disputations in Latin. Latin was the language of the classroom and the ordinary means of communication among the students. And to the attainment of elegance and fluency in its use, the mother-tongue, modern languages, and history were ruthlessly sacrificed. "All use of the mother-tongue," says the Ratio Studiorum, "should be forbidden. Those who make use of it ought to bear a mark of humiliation, to which a light punishment also should be added, unless the pupil succeed the same day in throwing the double load upon a comrade whom he has detected, in school or upon the street, committing the same fault."

4. The cultivation of the memory occupied a prominent place in the Jesuit system from the first lesson in the grammar to the last lectures in philosophy. In addition to the rules of grammar, the young student had to memorize the catechism and selected passages from Cicero. In the higher classes there were frequent declamations. Throughout the course reviews were made at the close of each week, month, and term. In this way the mind of the student was stored with considerable information that was ready for use at any moment.

5. Large use was made of disputation. Subjects of discussion were assigned very frequently, and the students were required to debate them in the presence of the professor and the school. The discussions, which were always in Latin, were conducted in strict logical form. This intellectual pugilism, which aimed at victory rather than at truth, was thought to be of special utility in sharpening the intellect and in cultivating eloquence of speech. It made ready and skilful debaters of Jesuit students.

6. The Jesuits made much of emulation, and in their eager desire to promote it they adopted means that could not fail to excite jealousy and envy. "He who knows how to excite emulation," says the Ratio Studiorum, "has found the most powerful auxiliary in his teaching. Let
the teacher, then, highly appreciate this valuable aid, and let him study to make the wisest use of it. Emulation awakens and develops all the powers of man. In order to maintain emulation, it will be necessary that each pupil have a rival to control his conduct and criticize him; also magistrates, questors, censors, and decurions should be appointed among the students. Nothing will be held more honorable than to outstrip a fellow student, and nothing more dishonorable than to be outstripped. Prizes will be distributed to the best pupils with the greatest possible solemnity. Out of school the place of honor will everywhere be given to the most distinguished pupils.”

7. The supreme end of education was salvation. To the Jesuit mind this meant not only the building up of character, but especially a training in the faith and practise of the Roman Catholic Church. “Because the purpose of our Society,” says the Constitutiones, “in acquiring knowledge is, with the gracious help of God, to promote our own salvation and that of others, this in general and particular must be the criterion, according to which our students must take up and pursue definite departments of learning.” Not only was Christian doctrine taught by means of the catechism, lectures, and private conversations, but a formal piety was likewise exacted. The students were required daily to attend mass, and at regular intervals to go to confession. Prayer was encouraged at frequent intervals, and a high moral tone was required both in the schoolroom and on the playground.

8. The studies were few in number, and carefully adjusted to the pupil’s ability. In all cases short lessons and thorough work was the rule. To gain influence with the higher classes, from which they desired to draw their chief patronage, the Jesuits cultivated elegant manners, and encouraged physical training by means of gymnastics. A strict watch, which often assumed the form of hateful espionage, was kept over the pupil. Corporal punishment, resorted to only in extreme cases, was administered, not by a member of the order, but by a corrector kept for that purpose. The Ratio Studiorum explains this precaution. “Pupils,” it says, “that in view of their age or exterior appear weak, insignificant, and perhaps contemptible, will soon be youths and men, who may attain to position, fortune, or power, so that it is possible we may be obliged to seek their favor, or to depend upon their will; this is why it is important to consider well the manner of treating and punishing them.”

CONCLUSION.—It only remains to sum up in a word the results of this investigation. The Jesuit system of education, based not upon a study of man, but upon the interests of the order, was necessarily narrow. It sought showy results with which to dazzle the world. A well-rounded development was nothing. The principle of authority, suppressing all freedom and independence of thought, prevailed from beginning to end. Religious pride and intolerance were fostered. While our baser feelings were highly stimulated, the nobler side of our nature was wholly neglected. Love of country, fidelity to friends, nobleness of character, enthusiasm for beautiful ideals, were insidiously suppressed. For the rest, we adopt the language of Quick: “The Jesuits did not aim at developing all the faculties of their pupils, but merely the receptive and reproductive faculties. When the young man had acquired a thorough mastery of the Latin language for all purposes; when he was well versed in the theological and philosophical opinions of his preceptors; when he was skilful in dispute, and could make a brilliant display from
the resources of a well-stored memory, he had reached the highest points to which the Jesuits sought to lead him. Originality and independence of mind, love of truth for its own sake, the power of reflecting, and of forming correct judgments, were not merely neglected, they were suppressed in the Jesuits' system. But in what they attempted they were eminently successful, and their success went a long way toward securing their popularity."

5. REACTION AGAINST ABSTRACT THEOLOGICAL EDUCATION

PHILOSOPHY AND SCIENCE.—Hitherto we have considered the darker aspects of the seventeenth century, but there is a brighter side which is now to claim our attention. By the side of narrow theological and humanistic tendencies, there was developed a liberal progressive spirit, in which lay the hope of the future. It freed itself from traditional opinions, and pushed its investigations everywhere in search of new truth. In England Bacon set forth his inductive method, by which he gave an immense impulse to the study of Nature; in France Descartes laid a solid foundation for intellectual science; and in Germany Leibnitz "quickly reached the bound and farthest limit of human wisdom, to overstep that line and push onward into regions hitherto unexplored, and dwell among yet undiscovered truths." Great progress was made in the natural sciences. Galileo invented the telescope, and discovered the moons of Jupiter. Newton discovered the law of gravitation, and explained the theory of colors. Harvey found out the circulation of the blood. Torricelli invented the barometer, Guericke the air-pump, Napier logarithms. Pascal ascertained that the air has weight, and Roemer measured the velocity of light. Kepler announced the laws of planetary motion. Louis XIV established the French Academy of Sciences, and Charles II the Royal Society of England.

PROGRESS IN LITERATURE.—The progress in literature was no less marked. Upon two European nations the golden age of letters shed its luster. In England, Bacon, Shakespeare, and Milton wrote; in France, Corneille, Molière, and Racine. "No other country," says Macaulay, "could produce a tragic poet equal to Racine, a comic poet equal to Molière, a triller so agreeable as La Fontaine, a rhetorician so skillful as Bossuet. Besides these, who were easily first, there were Pascal, whose Provincial Letters created a standard for French prose; Fenelon, whose Telemaochus still retains its wonderful popularity; Boileau, who has been styled the Horace of France; Madame de Sévigné, whose graceful letters are models of epistolary style; and Massillon, who pronounced over the grave of Louis XIV a eulogy ending with the sublime words, 'God alone is great!'"

INTELLECTUAL EMANCIPATION.—All over Europe the human mind, gradually coming to a sense of its native dignity and power, was emancipating itself from traditional and ecclesiastical authority. Reason was asserting its rights. In the presence of this independent and investigating spirit, the imperfections of the existing education—its one-sidedness, its narrow and unpractical course of study, its unworthy aims, its mechanical methods and cruel discipline—could not escape attention. Prophetic voices were raised against it, its leading defects were noted, and many of the principles and methods now employed in our best schools were given to the world. Says Karl Schmidt: "Books, words, had been the subjects of instruc-
tion during the period of abstract theological education. The knowledge of things was wanting. Instead of the things themselves, words about the things were taught—and these, taken from the books of the 'ancients' about stars, the forces of Nature, stones, plants, animals—astronomy without observations, anatomy without dissection of the human body, physics without experiments, etc. Then appeared in the most different countries of Europe an intellectual league of men who made it their work to turn away from dead words to living nature, and from mechanical to organic instruction. They were indeed only preachers in the wilderness, but they were the pioneers of a new age.” These now come before us.

A. Montaigne

Biographical.—Montaigne, a celebrated writer of France, was born in 1533. Great care was taken with his education. At an early age he was entrusted to a German tutor who did not understand French, and who employed Latin in communicating with his pupil. As a result, he was able at the age of six years to speak Latin. At thirteen he completed his studies at the College of Guienne, at Bordeaux, and subsequently studied law. At twenty he was elected a member of the Parliament of Bordeaux, and was afterward chosen mayor of the city. But possessed of ample means, and having no political ambition, he withdrew to his estate to live in philosophic retirement.

Essays.—It was here that he produced his celebrated Essays—discussions of all sorts of subjects caught up apparently by chance. In these essays, which are written in an easy colloquial style and abound in unpretentious wisdom, Montaigne repeatedly touches on education. The fullest statement of his views is found in the essay entitled, On the Education of Children, which was addressed to his friend, the Countess de Guerzon. Montaigne was a man of keen penetration and strong practical sense. He points out with singular clearness and force many of the defects in the education of his day, and his views, often far in advance of his time, exhibit a strong reactionary tendency. He grasped the true idea of education. “It is not a soul,” he says, “it is not a body that we are training, but a man, and we ought not to divide him.”

Humanistic Education.—At the College of Guienne he had observed the methods and results of the prevailing education. He condemned the neglect of the mother-tongue, found fault with the amount of time devoted to the ancient languages, and expressed dissatisfaction with the unsubstantial character of the student’s requirements at the end of his course. “Fine speaking,” he says, “is a very good and commendable quality, but not so excellent or so necessary as some would make you think; and I am scandalized that our whole life should be spent in nothing else. I would first understand my own language, and that of my neighbor with whom most of my business and conversation lies. No doubt Greek and Latin are very great ornaments, and of very great use; but we may buy them too dear.” “Do but observe him,” he says again, “when he comes back from school, after fifteen or sixteen years that he has been there, there is nothing so awkward and maladroit, so unfit for company or employment; and all that you shall find he has got is, that his Latin and Greek have only made him a greater and more conceited coxcomb than when he went from home. He should bring his soul replete with good literature, and he brings it only swelled and puffed up with vain and empty shreds and snatches of
learning and has really nothing more in him than he had before.”

Pouring-in Process.—Montaigne inveighs against the authoritative pouring-in process then in vogue. It appears better to him to arouse the student’s interest, and to call into play a cooperative activity. “It is the custom of schoolmasters,” he says, “to be eternally thundering in their pupils’ ears as if they were pouring into a funnel, while the pupils’ business is only to repeat what their masters have said. Now, I would have a tutor correct this error, and that at the very first; he should, according to the capacity he has to deal with, put it to the test, permitting his pupil himself to taste and relish things, and of himself to choose and discern them, the tutor sometimes opening the way to him, and sometimes making him break the ice himself; that is, I would not have the tutor alone to invent and speak, but that he should also hear his pupils speak.”

Knowledge and Character.—Montaigne did not regard the cramming of the memory with information as the most important part of education. The development of a sound judgment and upright character appeared to him of greater value than filling the head with knowledge. There should not be such an overcrowding in study as to prevent a healthful assimilation of what was learned. “Too much learning stifles the soul,” he said, “just as plants are stifled by too much moisture, and lamps by too much oil. Our pedants plunder knowledge from books and carry it on the tip of their lips, just as birds carry seeds to feed their young. The care and expense our parents are at in our education point at nothing but to furnish our heads with knowledge; but not a word of judgment or virtue. We toil and labor only to stuff the memory, but leave the conscience and understanding unfurnished and void.”

Discipline.—Montaigne did not approve of the harsh, tyrannical discipline that prevailed in his day. His own early training at home had been tempered with kindness, and he had thus learned by experience that gentle leading in the paths of learning is better than unsympathetic and cruel driving. “Education,” he said, “ought to be carried on with a severe sweetness quite contrary to the practise of our pedants, who, instead of tempting and alluring children to letters by apt and gentle ways, do in truth present nothing before them but rods and ferules, horror and cruelty. Away with this violence! away with this compulsion! than which I certainly believe nothing more dulls and degenerates a well-descended nature. If you would have him apprehend shame and chastisement, do not harden him to them.”

Nature and History.—Montaigne wished to have learning transmuted into wisdom. Education he regarded not as an end in itself, but as a means to attain a broad outlook and a sound judgment in life. Association with men, observation of nature, and a perusal of history all tend, as he argued, to rid us of provincialism, and to make us, like Socrates, citizens of the world. History seemed to him to have an especial value in enabling us to form correct estimates of ourselves and of society about us. The mistakes of others, as revealed in history, put us on our guard against error, and their vices fortify us in the opposite virtues. “This great world,” he says, “is the mirror wherein we are to behold ourselves, to be able to know ourselves as we ought to do. In short, I would have this to be the book my young gentleman should study with the most attention; for so many humors, so many sects, so
many judgments, opinions, laws, and customs, teach us to judge right of our own, and inform our understandings to discover their imperfection and natural infirmity, which is no trivial speculation. So many mutations of states and kingdoms, and so many turns and revolutions of public fortune, will make us wise enough to make no great wonder of our own. So many great names, so many famous victories and conquests drowned and swallowed in oblivion, render our hopes ridiculous of eterizing our names by the taking of half a score of light-horse, or a paltry turret, which only derives its memory from its ruin. The pride and arrogance of so many foreign pompes and ceremonies, the tumorous majesty of so many courts and grandeur, accustom and fortify our sight without astonishment to behold and endure the luster of our own. So many millions of men buried before us, encourage us not to fear to go seek so good company in the other world.”

B. Bacon

Biographical.—Francis Bacon, who has done more, perhaps, for the advancement of knowledge than any other man of his time, was born in London in 1561. He was of delicate constitution, but endowed with remarkable intellectual power. Queen Elizabeth, delighted with his youthful precocity, playfully called him her young Lord Keeper. He was educated at the University of Cambridge, and in 1590 entered Parliament as member from Middlesex. After the accession of James I, in 1603, Bacon rose rapidly in position and honor, until in 1618 he was made Lord High Chancellor, the summit of his ambition and political elevation. He was greater in intellect than in character, and in

1621 he was convicted on his own confession of accepting bribes. He died in disgrace and repentance in 1626.

Novum Organum.—The Novum Organum, part of a vast unfinished work, was published in 1620, and contains the principles of the Baconian or inductive philosophy. The characteristic features of this philosophy are investigation, experiment, and verification. It urges men to quit barren, transcendental speculation for fruit-bearing research in nature. It has been potent in turning modern thought into new channels, and has contributed largely to the scientific and natural progress of the present. To quote the words of Lewes, “Bacon was modern in culture, in object, and in method;” and this statement holds true, not only of philosophy, but also of education.

Advancement of Learning.—Bacon’s first great philosophical work, published in 1605, was the Advancement of Learning. It was the aim of this work to take a complete survey of the field of knowledge, for the purpose of indicating what departments of learning had received due attention, and what subjects yet needed cultivation. To use his own words: “I have made, as it were, a small globe of the intellectual world, as truly and faithfully as I could discover; with a note and description of those parts which seem to me not constantly occupy, or not well converted by the labor of man.” In this work, as in the Novum Organum and elsewhere, he was led to treat of various aspects of education.

Narrow Scholarship.—Already at the university his keen penetration detected the faults belonging to the higher education of the time. He found himself, to use his own language, “amid men of sharp and strong wits, and abundance of leisure, and small variety of reading, their wits being shut up in the cells of a few authors, chiefly Aristotle,
their dictator, as their persons were shut up in the cells of monasteries and colleges; and who, knowing little history, either of nature or time, did, out of no great quantity of matter, and infinite agitation of wit, spin cobwebs of learning, admirable for the fineness of thread and work, but of no substance or profit."

**Speculative Learning.**—Bacon found fault with *a priori* or speculative philosophy, which seeks to deduce all truth from the inner resources of the mind. It was this philosophy that had been regnant in the universities of the latter part of the middle ages. Instead of extolling the native powers of the mind, and of relying upon its innate powers, Bacon urged a careful investigation of nature as the only sure way of arriving at truth. "The wit and mind of man," he says, "if it work upon matter, which is the contemplation of the creatures of God, worketh according to the stuff, and is limited thereby; but, if it work upon itself, as the spider worketh his web, then it is endless, and brings forth indeed cobwebs of learning, admirable for the fineness of thread and work, but of no substance or profit."

**The Principle of Authority.**—With his vigorous, independent intellect, it was but natural that Bacon should condemn the principle of authority in education. He complained of the systematic efforts made in the universities to discourage and prevent independent investigation and judgment. "In the universities," he says, "all things are found opposite to the advancement of the sciences; for the readings and exercises are here so managed that it can not easily come into any one's mind to think of things out of the common road: or if, here and there, one should venture to use a liberty of judging, he can only impose the task upon himself without obtaining assistance from his fellows; and, if he could dispense with this, he will still find his industry and resolution a great hindrance to his fortune. For the studies of men in such places are confined, and pinned down to the writings of certain authors; from which, if any man happens to differ, he is presently apprehended as a disturber and innovator."

**Opinion of the Ancients.**—Bacon was, perhaps, the first great modern author to rebel against the thralldom of the ancients. He maintained that since their day the field of knowledge has been broadened; and that, therefore, instead of sitting at the feet of Aristotle, Plato, and the rest, we should draw upon the resources of modern knowledge. This attitude of mind, far better justified to-day than in Bacon's time, is rapidly changing the character of education. "The opinion," he says in the Novum Organum, "which men cherish of antiquity is altogether idle, and scarcely accords with the term. For the old and increasing years of the world should in reality be considered antiquity, and this is rather the character of our own times than of the less advanced age of the world in those of the ancients. For the latter, with respect to ourselves, are ancient and elder; with respect to the world, modern and younger. And, as we expect a greater knowledge of human affairs and more mature judgment from an old man than from a youth, on account of his experience, and the variety and number of things he has seen, heard, and meditated upon, so we have reason to expect much greater things of our own age (if it knew but its strength and would essay and exert it) than from antiquity, since the world has grown older, and its stock has been increased and accumulated with an infinite number of experiments and observations. We must also take into our consideration that many objects in nature fit to throw light upon
philosophy have been exposed to our view and discovered by means of long voyages and travels, in which our times have abounded. It would, indeed, be dishonorable to mankind if the regions of the material globe, the earth, the sea, and stars, should be so prodigiously developed and illustrated in our age, and yet the boundaries of the intellectual globe should be confined to the narrow discoveries of the ancients.”

Humanistic Learning.—While not indifferent to the graces of style, Bacon criticized the excessive humanistic tendency of his time. He distinguished between form and substance; and to his practical judgment no elegance of style could make up for lack or feebleness of matter. He regarded the humanistic devotion to style rather than to truth as tending to bring learning into disrepute. “How is it possible,” he asks, “but this should have an operation to discredit learning, even with vulgar capacities, when they see learned men’s works like the first letter of a patent or limned book, which, though it hath large flourishes, yet it is but a letter? It seems to me that Pygmalion’s frenzy is a good emblem or portraiture of this vanity, for words are but the images of matter; and, except they have life of reason and invention, to fall in love with them is all one as to fall in love with a picture.”

The Purpose of Learning.—Bacon assigned a high end to learning. This end should be, not pleasure or lucre, but a due development and use of our faculties in the service of mankind. “Men have entered into a desire of learning and knowledge,” he says, “sometimes upon a natural curiosity and inquisitive appetite, sometimes to entertain their minds with variety and delight, sometimes for orna-

1 Pygmalion, a sculptor of the island of Cyprus, cherished a settled aversion to women, but fell in love with an ivory statue that he had made.

ment and reputation, and sometimes to enable them to victory of wit and contradiction—and, most times, for lucre and profession; and seldom sincerely to give a true account of their gift of reason, to the benefit and use of man: as if there were sought in knowledge a couch, whereupon to rest a searching and restless spirit, or a terrace for a wandering and variable mind to walk up and down with a fair prospect; or a tower of state, for a proud mind to raise itself upon; or a fort or commanding ground, for strife and contention; or a shop, for profit or sale; and not a rich storehouse, for the glory of the Creator and the relief of man’s estate.”

A Broad Foundation.—Bacon insisted on a liberal culture as the basis of a professional career. A broad foundation should precede the work of specialization. The hurried completion of a liberal course of study with the view of entering as early as possible upon professional work seemed to him a cause of the small progress of learning in his day. A liberal culture should be sought with serious purpose. “If men judge,” he says, “that learning should be referred to action, they judge well; but in this they fall into the error described in the ancient fable, in which the other parts of the body did suppose the stomach had been idle, because it neither performed the office of motion, as the limbs do, nor of sense, as the head doth; but yet, notwithstanding, it is the stomach that digesteth and distributeth to all the rest: so, if any man think philosophy and universality to be idle studies, he doth not consider that all professions are from thence served and supplied. And this I take to be a great cause that hath hindered the progression of learning, because these fundamental knowledges have been studied but in passage. For, if you will have a tree
it is not anything you can do to the boughs, but it is the stirring of the earth and putting new mold about the roots that must work it."

Learning and Religion.—Bacon held that learning is conducive to religion. Though a little learning might incline a man to unbelief, profound attainments would bring him back to the recognition of a great first cause. "It is an assured truth," he says, "and a conclusion of experience, that a little or superficial knowledge of philosophy may incline the mind of man to atheism, but a further proceeding therein doth bring the mind back again to religion; for, in the entrance of philosophy, when the second causes, which are next unto the senses, do offer themselves unto the mind of man, if it dwell and stay there, it may induce some oblivion of the highest cause; but when a man passeth on farther, and seeth the dependence of causes and the works of Providence, then, according to the allegory of the poets, he will easily believe that the highest link of Nature's chain must needs be tied to the foot of Jupiter's chair."

Raumer's Estimate.—These extracts, which might be indefinitely extended, show that a strong voice had been raised against the theologico-humanistic education of the seventeenth century. His modern spirit, with his masterful penetration, gives Bacon a prominent place in the line of educational reformers. "This significance," says Raumer, "Bacon receives as the first to say to the learned men who lived and toiled in the languages and writings of antiquity, and who were mostly only echoes of the old Greeks and Romans, yea, who knew nothing better than to be such: 'There is also a present; only open your eyes to recognize its splendor. Turn away from the shallow springs of traditional natural science, and draw from the unfathomable and ever freshly flowing fountain of creation. Live in Nature with active senses; ponder it in your thoughts, and learn to comprehend it, for thus you will be able also to control it. Power increases with knowledge.'"

C. Milton

Biographical.—John Milton, the author of Paradise Lost, was born in London in 1608. He studied at home under a private tutor. He showed extraordinary aptness in learning; and when in 1624 he was sent to Cambridge, he was master of several languages, and had read extensively in philosophy and literature. After a long residence at the university, he retired to Horton in Buckinghamshire, where he devoted five more years to diligent study. He read all the Greek and Latin writers of the classic period, and then feasted "with avidity and delight on Dante and Petrarch." To use his own expression, he was letting his wings grow. It would carry us beyond our limits to follow the career of Milton through the troublous times of the Commonwealth, and the dangers and sufferings of the Restoration; to speak of his embittered controversies and domestic trials; and to portray him, old and blind, in the elaboration of his sublime poem, the cherished thought of a lifetime. Through it all he showed himself a man of unblemished character, of undaunted courage, and of intellectual vigor unequaled in his day.

Devotion to Learning.—Milton's devotion to learning was quite unusual. In order to get at his books he rose at the earliest dawn, and to keep his mind clear he was abstemious in diet and regular in exercise. In one of his controversial tracts, replying to certain calumniations, he