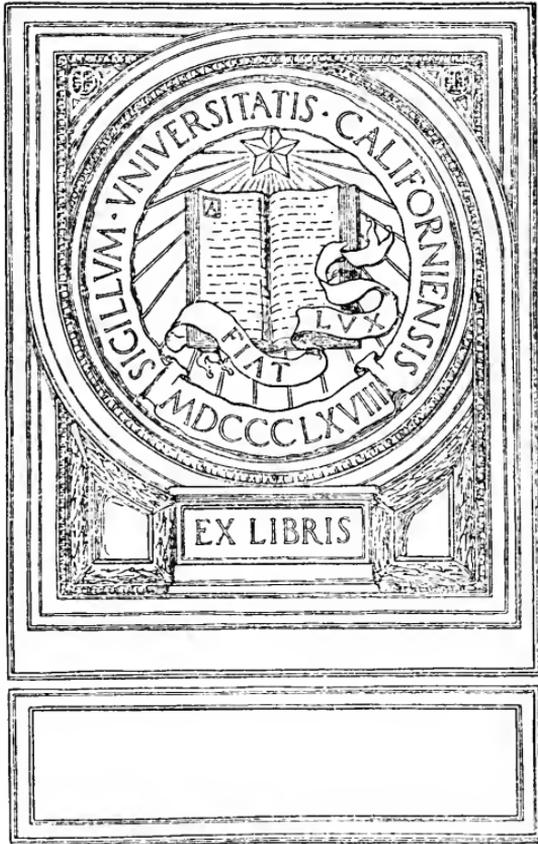


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ADDRESS

ON

UNIVERSITY PROGRESS,

DELIVERED BEFORE THE

NATIONAL TEACHERS' ASSOCIATION,

At Trenton, N. J., August 20, 1869,

BY

JOHN W. HOYT, A.M., M.D.,

*President of the Wisconsin Academy of Sciences, Arts and Letters,
Etc., Etc.*

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OTHER EDUCATIONAL WORKS BY THE AUTHOR OF THIS ADDRESS.

Recently Published:

REPORT ON EDUCATION (IN EUROPE AND AMERICA). Prepared under a commission from the Secretary of State of the United States, and published by the Government.

Now in Press:

EDUCATIONAL ADDRESSES, SPEECHES AND PAPERS;
EMBRACING :

- I. THE EDUCATION OF LABOR.
- II. TECHNICAL SCHOOLS FOR THE TECHNICAL PROFESSIONS.
The substance of numerous speeches made throughout Wisconsin, and in other Western States, in support of the Morrill Bill in Congress, for the Endowment of Colleges for the Benefit of Agriculture and the Mechanic Arts.
- III. SPECIAL EDUCATIONAL NEEDS OF THE AMERICAN PEOPLE. An Address delivered before the National Teachers' Association, at Buffalo, 1866.
- IV. FREE SCHOOLS THE SAFEGUARD OF A FREE GOVERNMENT. A Speech made at Madison, January, 1865, in a State Convention called to consider this question in the case of Wisconsin.
- V. THE TRUE POLICY TOUCHING THE FOUNDATION AND ORGANIZATION OF THE COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS ENDOWED BY THE CONGRESSIONAL ACT OF JULY 2, 1862. A Speech made at Madison, January, 1865, in a State Convention called to consider this question in the case of Wisconsin.
- VI. THE TRUE IDEA OF A UNIVERSITY. An Address delivered before the Missouri State Legislature, January 24, 1867.
- VII. EDUCATIONAL STANDARDS. An Address before the Wisconsin State Teachers' Association, delivered at Oshkosh, July, 1869.
- VIII. THE PROGRESS OF UNIVERSITY EDUCATION. The Address herewith Published.
- IX. A GREAT AMERICAN UNIVERSITY A LEADING WANT OF AMERICAN EDUCATION. Substance of a Report prepared by the Author as Chairman of a National Committee appointed by the National Teachers' Association at the Annual Meeting held at Trenton, New Jersey, in August, 1869.
- X. PROFESSIONAL EDUCATION IN AMERICA.
- XI. CONCERNING RELIGIOUS INSTRUCTION IN THE PUBLIC SCHOOLS.
- XII. THE CO-ORDERING OF THE SCHOOLS OF THE STATE.
- XIII. THE EDUCATION OF WOMEN.
- XIV. THE EDUCATIONAL DUTIES AND POWERS OF THE NATIONAL GOVERNMENT. A Paper prepared for the Sixth General Meeting of the American Social Science Association, to be held at Philadelphia in October, 1870.

In Course of Preparation:

EDUCATION IN THE OLD WORLD AND THE NEW. A carefully revised and enlarged edition of the Author's Government Report first above mentioned; designed to present a general and critical Survey of the Educational Systems and Institutions of all Countries.

With the respects of

The Author



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ADDRESS.

The term *university* has been so variously applied, since its first educational use, that one is half warranted in grouping under it a great variety of institutions, which, if compared with any proper standard, would not be entitled to inclusion. And, on the other hand, many institutions have existed to which this designation, although never applied, would have been entirely appropriate.

Such were the early schools at Athens, in which was taught all that was then known of language, of literature, of philosophy, and of civil law—in which the most gifted poets, the all-persuading orators, the profoundest natural and ethical philosophers, and the unequalled artists of ancient times were teachers—where, as pupils, were found troops of Greek youths of various genius—to which, as pilgrims to some holy shrine, went those immortal Romans, Cicero, Virgil, Horace, Lucretius, and others, for instruction and inspiration, and whence, also, in good time, they bore away, as the precious fruit of their study, that learning and grace with which they so enriched

Portions of the Address, as printed, were necessarily omitted in the delivery.

and adorned their native tongue. Such were the schools of Tarsus, and Pergamus, Berytus, and Alexandria; the later-established Athenæum of Rome, where Quintilian and other distinguished rhetoricians and philosophers taught; the still later Auditorium, established in the fourth century, at the Byzantine capital, by Constantine, and in which there were, in the succeeding century, no less than thirty-one professors of grammar, eloquence, philosophy, and law; and, finally, the Saracenic schools of western Asia, northern Africa, and Spain, in which almost exclusively was kept alive the taper-light of learning during the Dark Ages, and in which were taught with a zeal and completeness never known before, nor, in Europe, for centuries afterward, not only grammar, eloquence and philosophy, but likewise geometry, algebra, astronomy, natural science, jurisprudence and medicine. All these, as being the most advanced and the most comprehensive schools of those times, were universities to all intents and purposes, though not known by that name.

The first use of the term university appears to have been non-educational, and to have belonged to the time of Justinian, when it was synonymous with guild, being applied to various associations of tradesmen. The idea entertained was purely the etymological one of completeness; and hence the seeming propriety of its application to whatever association or society sub-

stantially embraced all the individuals of any locality whose interests and aims were common.

In this sense, the term may have been applied to the original medical school of Salerno, or to any body of students or professors united for mutual advantage, or for the promotion and diffusion of learning. In each of these senses, and in both of them, it was used at an early day in the revival of learning; and some individual schools with a single professional object, — as, for instance, the law school at Bologna, — numerous attended by students of different nationalities, banded together for mutual convenience and advantage, have thus actually embraced several “universities.”

Subsequently, this term was used to designate the entire grouping of associations of students, professors and officers gathered together at one place for educational purposes, as at Paris and Bologna. And finally it came to be referred to the subjects taught, and thus to imply an association of faculties or schools of superior rank and various aims — a signification it still bears in those countries where the university, as a distinctive institution, has attained its highest development.

I.

The first universities (proper) had their origin, as nearly as can be determined, in the latter part of the eleventh and the early part of the twelfth centuries; from which time forward for three hundred years the number multiplied, first slowly, and then rapidly, until, ere the end of the sixteenth century, a very large proportion of those now in existence, together with many that have not survived, were established.

This period of three hundred years, beginning with the twelfth century, early in which the great schools at Paris, Bologna, Cambridge and Oxford assumed a form which afterward secured to them the university title, is exceedingly interesting, for its record embraces the whole period of what might be properly enough styled the romance of educational history. The long, dreary period of the Dark Ages had passed; the morning twilight of a glorious Renaissance had come, with offers of its priceless boon of letters, science and philosophy, and kindling anew the ancient love of learning in many lands. At Paris, taught those remarkable dialecticians and scholastic philosophers, William of Champeaux, Abelard, and Peter Lombard, central lights of theology and philosophy; while at Bologna stood forth the renowned Irnerius,

profoundest master and most brilliant teacher of the Roman law. Their teachings spread like a new evangel; and soon, from north, and south, and east, and west, as it had been a rallying to the standards of a new crusade, the intellectual young men—the very flower of Europe and even of older Asia and Africa—eager for a knowledge of the new doctrines, were seen gathering in multitudes to these luminous centres; until, at Bologna, they numbered ten, twelve, and twenty thousand, and, at Paris, scarcely less than thirty thousand, students. Gathered from diverse quarters of the world, and though animated by the same general motives, still possessed of mental characteristics and intellectual and social habits as different as their several nationalities, they naturally congregated in groups, according to their sympathies, prejudices and needs. These groups soon came to be called “nations,” and to bear the names of such tribes, nations, or races as either constituted the whole, or a predominant portion, of the several aggregations thus formed.

At Paris, the number of such nations was four—the first including all French, Spanish, Italian, Greek, African and Asiatic students, and known as the French nation; the second being known as the nation of Picardy, including the northeast portion of France and the territory now constituting Belgium and Netherlands; the third as the nation of Nor-

mandy; and the fourth, under the title of English nation, embracing all students from Great Britain, Brittany, Germany, and the rest of the world. Each nation had its own statutes, its own president—known as procurator—its own seal, as well as its own separate buildings and its chapel for worship. The executive head of the whole institution—thus composed of various nations, and afterwards also including the four faculties of arts, law, medicine and theology, each with its own presiding officer, known as dean—was the rector, who, together with the deans and procurators, constituted the university council, to which body belonged the prerogatives of legislation and general management. The bishop of the diocese, and the Abbot of St. Geneviève, were university chancellors, however, and as such were alone empowered to confer degrees; while superior to all, and with supreme authority to create, alter or amend the form and character of the entire organization, was his holiness the Pope.

The university of Bologna mainly differed from that of Paris in the number of the nations embraced, and in the more democratic character of the university organization; the ultimate governing power being with the students, by whom the academical officers were elected, and by whose appointees changes could be made in the general statutes every twenty years. The teachers and students were divided

first into nations of Italy (known as *citra-montanes*), and foreigners (who were called *ultra-montanes*). But these were again divided — the *citra-montanes* into seventeen nations, and the *ultra-montanes* into eighteen. Each nation had its presiding officer, who — except in the case of the German nation, whose two presiding officers bore the title of procurator — was known as counselor. These thirty-four counselors and two procurators elected the presiding officer of the university or rector, to whom all the professors were subordinated, and who, with his council of counselors and procurators, was clothed with large general powers, including supreme civil and even criminal jurisdiction in all matters involving members of the university — a feature copied by nearly all the universities subsequently established in other countries. Here, also, there were two chancellors, endowed with sole authority to confer degrees and honors.

During this early period (the twelfth century,) the English schools at Cambridge and Oxford likewise attained considerable importance. Schools of the monastic type had long existed at those places — some historians say as early as the eighth century — but it was not until the example of the Paris institution had been set them that they took on the character of universities. They were modelled after the university of Paris, but the students had even less voice in the government than in that institution.

It may well be supposed — and history establishes the fact — that in such an age, and among such multitudes of hot-blooded young men, some of them representatives of the aristocracy, and others pinched by want, yet proud, sensitive and ambitious, frequent personal and “national” difficulties would arise, such as could be only settled by the arbitrament of war. Sometimes these quarrels were unorganized and promiscuous, like the collision of mobs; often they were duel combats, as between single knights of stately chivalry; and again cases are recorded in which hostile nations, numbering thousands each, withdrew to the neighboring fields and fought regular pitched battles with bows and arrows, best weapons of those early times.

At a later and yet early day, the foundation of “halls” and “colleges” commenced, with the view of supplying accommodations for the thousands of thirsty students who gathered about the well-spring of the university. They were not colleges in the modern sense, but great boarding establishments, with such regulations as to study and intellectual improvement, under the direction of one or more competent persons, as were calculated to further the main objects of individual and university advancement. The foundations for these colleges were granted by wealthy friends of learning, whose donations were often sufficiently large to provide not only the necessary build-

ings and equipments, but also a greater or less number — sometimes several hundred — free supports for meritorious but indigent young men, otherwise unable to secure the blessings of education.

Since the art of printing had not yet been discovered, all instruction given in those early times was, of necessity, by lectures; and, as the students were of many nationalities, there was need of a common language. Thus the Latin came into universal use, as the medium, not only of instruction, but of daily intercourse among all the members of the university; which office, I may add, it continued to fulfill in like conditions for at least four hundred years.

The range of studies was, of course, quite limited; nevertheless, the period of study requisite to the higher degrees was many times longer than at present, namely, three and a half years for the baccalaureate, seven years for the degree of master, and seven to nine years more for the degree of doctor; making a total of some fourteen to sixteen years. The degrees of master and doctor were at first synonymous, but the former came at length to be confined to the faculty of arts, and the latter to the professional faculties — a difference of application still sanctioned by all the present universities in which the faculty of general studies is a faculty of *arts*. The significance of either degree depended on the fact that he upon whom it was conferred was understood to have qualified him-

self for the work of the teacher; nay, more, in most universities, if not in all, it was conferred upon such only as bound themselves to teach, for a limited time, whatever their ulterior designs. They were to be actual *magistri* and *doctores*, and the degree in either case was their license. When a master or doctor proposed to teach any particular subject, and was assigned to that work by the university, he became a professor. The compensation of those who taught came in the form of fees paid by students.

Thus matters stood at the end of the twelfth century.

The thirteenth century was signalized not more by the continued and growing success of the four great universities already established, their development by the addition of new faculties, and the commencement in England of college foundations, destined eventually to supersede the halls — and unhappily required to be administered in the interest of the dominant church — than by the founding of six new universities, to-wit: those founded at Naples (in 1224), at Padua (1228), at Salamanca (1240), at Coimbra, Macerata, and Perugia (1290).

The first three of these were destined to attain a distinction only second to that of the universities of Paris and Bologna, and to the first is awarded the honor of having led all the universities in the systematic division of the instruction into faculties, and a distribution of

studies into annual courses. This period was also distinguished by a decline of interest in the general studies now known as the arts, and a disproportionate advancement of the professional faculties—in Italy, of jurisprudence and medicine; and in France, of theology and philosophy. So marked was this monopoly of interest by the faculty of law in Italy, that Roger Bacon, most learned man of those times, was constrained to raise his voice in earnest and eloquent protest against the educational character and tendencies of the age—the tendency especially of the jurisprudence of the Italians to do away with the study of “wisdom” (philosophy, theology and science), and so undermine the foundations of both church and state. Nor did he content himself with this solemn protest; he also made resolute endeavors to establish the high claims of inductive philosophy as the only groundwork of a true science. Nevertheless, jurisprudence was deaf to all Bacon’s protests, and as late as 1262 claimed a large proportion of the 20,000 students then at Bologna.

Bacon might with equal propriety have protested against the proclivities and practices of the university of Paris, where not even law was yet established, and where the so-called philosophy of the schoolmen so absorbed the attention and interest, that this philosophy came to be known in style as the “style of Paris.”

It was during this period that the university of

Oxford attained so remarkable a fame that thousands of students (some historians say thirty thousand) were gathered there from every part of Europe; so that bastions in the city walls had to be rented for their use. It was also in the latter part of this century that Bologna originated the practice of paying stated salaries to professors, and that boards of examiners were appointed — by papal bull for theology, and by imperial decree for law and medicine.

Hitherto the university movement had been confined to the Latin states and England. But at length the fire kindled in the less easily ignited — and really less well-prepared — German mind, and a work commenced in Austria about the middle of the fourteenth century, which gradually extended not only into all the German states, but even into Scandinavia; while Italy became more zealous, as time advanced, and added yet six other universities to the splendid galaxy already hers; and France founded those of Montpellier, Toulouse and Orleans. Rome led off in 1303, followed in succession by Orleans in 1309, Pisa in 1338, Polish Cracow in 1343, Valladolid in 1346, Prague and Vienna in 1348 and 1365, Pavia — after a while so illustrious — and Sienna in 1361, Heidelberg in 1387, Ferrara and Palermo in 1391 and 1394, and finally by Erfurt in 1392.

No single century has done a nobler work than this, and none has been more distinguished for the brilliancy of its educational history.

Spain, no longer content to send her aspiring youth to Paris and Bologna, had directed her energies for more than half a century to her own Salamanca, and was now rewarded by seeing that young university an acknowledged rival of these renowned schools, with its 10,000 to 12,000 students, gathered from her own provinces, and from many other countries north and south of the Mediterranean sea. Eager thousands still flocked to the early Italian, French and English centres, and thousands more to the newer universities.

Nor were these the chief educational glories of the fourteenth century. That for which it will be most gratefully remembered is the fact that it constituted the first period of the renaissance of letters, begun and so far advanced by those divine sons of Italy, Dante, Petrarch and Boccaccio, whose own matchless works, and whose reproduction in their purity of the works of the greatest Greek and Latin authors, did more than all else to turn the intellectual forces of those times from the comparatively fruitless channel of scholasticism into the more profitable one of sound classical culture.

Nevertheless, it stands as a remarkable fact that the *universities* of Italy were among the very last to become imbued with the spirit of the renaissance of letters, whose work was begun, and for a long time carried on, outside of the university halls. The humanities were taught in private schools, but all the

teaching officially authorized in Italy was ruled by Averroism, not only during the fourteenth, but also during the fifteenth and sixteenth centuries — ruled in the face of progress everywhere else, in spite of the humanities and the Cartesian philosophy, which by this time had found some footing in nearly all the universities of the world, and even in spite of the Catholic church, with whose doctrines it was, of course, not in harmony.

The fifteenth century was marked by a still further and wider diffusion of the love of learning, especially of the classics, now finding welcome in nearly all the countries of Europe, and by the consequent establishment of a great number of new universities; including, among those which have survived to this day, those of Wurzburg, Bavaria, founded in 1403; Leipsic, in 1409; Valencia, Spain, in 1410; St. Andrews, Scotland, in 1411; Turin, in 1412; Rostock, Mecklenburg-Schwerin, in 1419; Parma, Italy, in 1422; Louvain, Belgium, in 1426; Florence, in 1438; Catania, Italy, in 1445; Glasgow, Scotland, in 1450; Greifswalde, Prussia, in 1456; Freiburg, Baden, 1457; Basel, Switzerland, in 1459; Pesth, Hungary, in 1465; Saragossa, Spain, in 1474; Upsal, Sweden, in 1476; Tübingen, Wurtemberg, in 1477; Copenhagen, in 1479; and Aberdeen, Scotland, in 1494. By the close of this century, universities had so increased in num-

ber that Italy possessed 19, France 15, Germany, Netherlands, Austria and Switzerland 15, Spain and Portugal 9, England 2, Scotland 3, Hungary, Poland, Denmark and Sweden 1 each—in all, 67. As to condition, those of Italy, France, Spain and England were still foremost, although Cambridge and Oxford showed symptoms of weakness, and so declined in the number of students that many of the halls or hostels were pretty much deserted.

The German universities, too closely patterned after French and Italian models, and but poorly endowed, were destined to struggle long in feebleness, and to exert but little influence on the mind and life of the German people. Theology was the all-controlling element in them, as law was in Italy, and but few of the great scholars of Germany were connected with them. Habits of idleness and dissoluteness prevailed to a fearful extent, and even duels, riots, and disgraceful collisions among the students, and between them and the people of the localities, were very common, and continued to be so until a much later day.

Two important features of the German universities were distinctive: the extraordinary privileges and civil powers granted them by many of the governments under whose patronage they were established, and the policy early adopted by nearly if not all of them as to the mode of providing the corps of instructors.

The civil privileges and powers referred to were those of constituting within themselves, by appointment and election, a regular court for the trial of all members of the university, whether students, professors, or the families of these, for violations either of the university statutes or the laws of the land. The university was in fact a sort of independent constitutional government, with its own rights and prerogatives of the most grave and serious character, which even the state could not invade or disregard.

The other distinctive feature was the gradation of teachers in the several faculties, and the adoption of a system of promotions from the lowest to the highest rank, with a view to insure, first, a sufficiently large instructional force to do the work of teaching; secondly, of securing the best talent that could be developed; and, thirdly, of securing such best available instruction at the greatest economy to the university funds, which in most cases were very small. Such professors as were appointed to give the regular and necessary courses of instruction were denominated ordinary professors (*professores ordinarii*). The remainder of the work of instruction, and in many of the more prosperous universities a large proportion of the whole, was done by extraordinary professors (*professores extraordinarii*), and private teachers (*privat-docenten*), all of whom were regarded as ordinary or full professors in prospect — professors in the formative stage. These

peculiarities in the organization of the German university still characterize it, and will be spoken of more in detail further on.

Afterwards, most other European countries also adopted this system more or less fully; though, in its completeness, it has always been a *German* feature of university education.

In the sixteenth century, the work of founding new universities still continued with unabated zeal. The most important of the new institutions were those established at Wittenberg, in 1502; at Seville, Spain, in 1504; at Marburg, Hesse-Cassel, in 1527; at Granada and Santiago, Spain, in 1531 and 1532; at Königsburg, Prussia, in 1544; at Messina, Italy, in 1548; at Jena, Saxe-Weimar, in 1558; at Leyden, Holland, in 1575; at Oviedo, Spain, in 1580; at Olmütz, Austria, in 1584; at Edinburgh, Scotland, in 1582; at Gratz, Austria, in 1586; and at Dublin, Ireland, in 1591. But the distinguishing educational feature of this age was the extraordinary fruit produced by the universities previously founded. Though their teaching had but slowly improved, the more orderly and systematic manner of it, as well as the wider range it took, and the nearness of relation into which it brought the minds of their students, through the medium of the classics, now largely substituted for, or perhaps I should rather say added to, the subtle-

ties of dialectics, for which the schools had hitherto been chiefly remarkable, — these had a powerful influence upon the intellect of those times, and contributed vastly more than we are wont to suppose to that development and increased power which enabled so many leading men of that brilliant era to break the shackles of mere authority and advance into the realms of independent thought. If we pronounce the names of but a few of the great men whom the universities of that period gave, not to Europe alone and the needy age in which they lived, but to the world and to all future time, behold what a roll of honor! Luther, educated at the university of Erfurt; Melancthon, at Heidelberg; Calvin, at Paris and Orleans; Pope Gregory XIII., at Bologna; Copernicus, at Cracow; Erasmus, at Paris and Turin; Tom Moore and Sir Walter Raleigh, at Oxford; Cranmer, Latimer, Ridley, Ben Johnson, Sir Edward Coke, Spenser and Francis Bacon, at Cambridge; John Knox, at Glasgow; Tycho Brahe, at Copenhagen, and Kepler, at Tübingen — a grand constellation of the most illustrious divines, reformers, poets, sages, jurists, explorers, philosophers and astronomers, established in the world's intellectual firmament forever!

If, now, we again draw the curtain, and look in upon the seventeenth century, we shall find, in the midst of the tumults, wars and political upheavals, an

equal activity in the intellectual and educational world; the schoolmen, theologians, and philosophers in the most active, unintermitting and irrepressible dispute; the Italian universities, — already too numerous but yet being multiplied by the founding of two others, viz., at Cagliari in 1606, and at Urbino in 1671, — though not so neglectful of the humanities, yet still partial to jurisprudence, and beginning to feel the influence of the papal reaction upon the aggressive power of the Reformation; the German universities still so inferior that a majority of the ambitious youth prefer to study in foreign countries, yet increasing in number by the establishment of several new ones, including those founded at Giessen in 1607, at Innspruck in 1672, and at Halle in 1694, and yet gaining withal in vigor and force, under the stimulus of the fiery theological disputes of which they were the principal centres; the universities of Spain, like those of Italy, repressing the spirit of inquiry, and like them showing evidences of decline no less marked than the evidences of progress in Germany; the French universities losing their partiality for theology and devoting increased attention to philosophy and to physical and metaphysical science; the English universities less disturbed at first, but afterwards profoundly agitated by the political and religious troubles that marked the closing decades of that eventful period, losing more and more of their monastic char-

acter, abolishing their hostels, and building colleges in their stead; the Dutch founding the university of Groningen in 1614, and again one at Utrecht in 1636, both flourishing still; Sweden establishing her second, at Dorpat, in 1632, and her third at Lund in 1668, patterning again, as in the case of Upsal, after the original "national" models; Russia beginning her university work by the suppression of the university of Dorpat, sole institution of the kind within the limits of her empire! and America, in the wilds of the new western hemisphere, and but sixteen years after the landing of the Pilgrims, laying the foundation of her first university, at Cambridge. At the older universities we shall find a scarcely less number than in the preceding century of young men of surpassing genius preparing, by a thorough discipline of their powers, for successful grapple with the great problems of the material and spiritual universe. Among them are Descartes, Milton and Newton, at Cambridge; Sir Matthew Hale and Locke, at Oxford; Galileo, at Pisa and Padua; and Leibnitz, at Leipsic. At Leipsic university, in 1687, we also find Thomasius boldly making his innovation upon the hitherto invariable rule of lectures in the Latin language by teaching jurisprudence to his fellow countrymen in their own rugged vernacular.

The eighteenth century opened upon a new face of things. The period of romance had passed. Schol-

asticism had so long ceased to flourish, and had been so universally succeeded by the classics, that its fascinations and its somewhat useful, but more generally fantastic, achievements were remembered as a dream, or, at most, read as a part of the great history of philosophy. The solid foundations were preparing for the present noble superstructure of the metaphysical, physical, and natural sciences. Freedom of inquiry and freedom of discussion, valiantly maintained in the face of persecution and death, during the struggle of the Reformation, were now firmly established. It is true that the glory of Bologna, and Paris, and Salamanca, and Louvain, was a glory of the past; that Oxford and Cambridge, so long the pride of England, and the nursing mothers of her great men, had succumbed to a corrupt state church, had been fettered and strangled in the name of religion; that learning languished; that life in most of the colleges had become indolent and vicious; and that the English universities, dead to all ideas of duty or of glory, and controlled almost wholly by the basest spirit of religious and political prejudice, had ceased to cherish the literary, philosophic, and scientific spirit, for which they were once justly famous, and had become the foster mothers of bigotry and irreligion instead. It is also undeniable that, in all the Latin states of Europe, the effects of the great reaction from the liberalism of the Reformation on the development of the university faculties of letters,

philosophy, and science were still plainly visible. But, on the other hand, the universities of Germany, hitherto resting under the contempt of the best scholars of the times, had meantime become filled with the love of profound culture and the spirit of free investigation, and so had fairly entered upon that career of development which was destined, within another hundred years, to secure to them an acknowledged place in the very front rank of the foremost schools of the world.

During the first thirty or forty years, Halle had the lead. It was especially strong in theology, of which there were sometimes nearly a thousand students. But in 1737 was founded the university of Göttingen, with the gift of a rich endowment that enabled it to employ the most eminent men of learning in Germany, as professors, as well as to form at an early day one of the largest and most valuable university libraries in Europe, and, more than all, with the priceless boon of freedom — advantages enjoyed by none of its predecessors or cotemporaries, and which enabled it at a very early period in its development to gain the ascendancy it maintained for nearly three-quarters of a century over all other German schools. Meantime, Breslau (1702), Erlangen (1743), Lamberg (1784), and some others less important, of Germany, together with Camerino (1727), and Sassari (1766), of Italy, had been established, and Russia had laid (1755) the

foundation for her first university, at Moscow. The arts faculty of Cambridge had become pre-eminently mathematical, and, one by one, all the professional faculties in both Cambridge and Oxford had fallen into decay or migrated to London. In the new world, upon the recommendation of George Clinton, Governor of New York, a new practical application of the term university had been made by the creation (in 1787) of the University of New York, made to consist simply of a board of regents, charged with the general supervision and management of most of the academies and colleges of the state.

The fruits of intellectual culture had, by this time, become so abundant in Europe that it were vain to attempt, within small compass, to name the distinguished men whom the universities prepared during the eighteenth century for the service of mankind and for immortality in history. A mere glance at the university registers of this period shows Emanuel Swedenborg to have been a student at Upsala; Klopstock at Jena; Horsey, Blackstone, and Fox at Oxford; Goldsmith at Dublin, Edinburgh and Leyden; Hume at Edinburgh; the Jussieus at Paris and Montpellier; Linnæus at Lund and Upsal; Galvani at Bologna; Lavoisier at Paris; Buffon at Dijon; Børhave at Leyden; Wieland, Hegel and Schelling at Tübingen; Lessing at Leipsic; Fichte at Jena, Leipsic and Wittenberg; Schleiermacher at Halle; Goethe at

Leipsic and Strasburg; Adam Smith at Glasgow and Oxford; Pitt at Cambridge; and Immanuel Kant and Herder at Königsberg; together with a multitude of others, scarcely less distinguished than these, in all the departments of learning and human activity.

The nineteenth century came as the dawn of a new era, destined to be characterized by changes even more remarkable than the substitution of classical culture for the fantasies of the early scholastic philosophy—changes still in progress, and daily assuming greater and greater importance. It opened with Königsberg in the lead. The remarkable teachings and published works of a single professor—Immanuel Kant—made it the most conspicuous university in Europe. Disciples of the new philosopher were soon found in all the universities; so that, while he lived, Königsberg was a luminary that fastened the eyes of all Europe. Oxford and Cambridge showed the fruits of the intellectual agitation of the times—due so largely to the French Revolution—in the revival of learning and education. Oxford began to be less exclusively classical, and Cambridge less predominantly mathematical than hitherto, since the impress put upon it by Newton. Examinations, so long a mere farce, were made more effective; “class-list,” with its powerful stimulation, was instituted; and both of these venerable institutions again assumed a position of influence among the intel-

lectual forces of the nation. So, likewise, there was apparent throughout central and northern Europe the growth of a more scientific spirit, and even a resolute purpose in some quarters to free the university from the fetters of bigotry and mere authority, by which it had so long been restrained from entering upon its legitimate career.

Then followed those desolating wars that ravaged the continent, seriously deranging nearly all the universities, and, by reason of political and territorial changes, as well as by waste of property and the long-continued disturbance of social order, resulting in the enfeebled condition, frequent removal, and final suppression of several of the German universities; including those of Helmstadt, Erfürt, Rinteln, Frankfort-on-the-Oder, Duisburg, Wittenburg, Mainz, Bamberg, Cologne, Paderborn, Munster, Dillingen, and Salzburg. While in France the whole system of university education, pretty much broken up during the Revolution, was reconstructed in 1808 by Napoleon, who, enlarging upon the plan of Governor Clinton, consolidated all the schools of the empire, under the title of the "University of France." The whole country was divided into seventeen districts, in each of which there was an *academy*, with its rector and council in authority over all secondary and primary schools of the district, and its faculties two or more, according to the circumstances. Subsequently — during the interregnum

between the first and present empire — the number of districts and academies was increased to twenty-six. But the general cast of the system remained unchanged until Napoleon III practically merged the “university” into the present imperial council, with the minister of public instruction at its head.

In the other continental countries, no very notable changes in the university system followed the plowshare of universal war. But in England there came, soon after, a revival of religious bigotry and intolerance, still further narrowing the scope of the ancient universities, and tightening those always absurd and now monstrous religious tests, through whose agency the freest and best minds of the nation were doomed to exclusion — through whose agency, indeed, those very institutions that might have been the most potential and illustrious in Europe were maintained at a level lower than those of any other country, nay, in the condition of being, not universities at all, but mere high denominational schools, kept up in the interest of, and controlled by, the English church.

But the planting of new universities still went on. Russia founded universities at Kasan and Kharkov (1803), at St. Petersburg (1819) and Kiev (1833), and, in 1827, removed the Finnish university from Abo and substantially founded it at Helsingfors, the capital. Prussia made up for the German losses by founding the great university of Berlin (1809) and the one at

Bonn (1818). Norway established her first and only university, at Christiania, patterning after the German type. Italy added to her cluster the university of Genoa (1812). Belgium planted universities at Ghent (1816), at Liege (1817), and at Brussels (1837). The Ionian Islands founded one at Corfu (1824). Switzerland added two others, one at Berne and the other at Zurich (1833-4). England created the anomalous examining board entitled the University of London (1836), followed nine years later by the somewhat similar organization known as Queen's College, Ireland. And, last of all, Greece, mother of all the universities and of the literature, science, philosophy and art they have fostered and developed during the past two thousand years, happily completed the circle of the centuries by founding, at Athens, her first nominal university in 1837.

As to our own country, all Americans are familiar with how rapidly, within the last period, institutions of learning aspiring to the rank of universities have sprung up in all parts of the United States.

But the most remarkable product of this century's early planting — most perfect also of its kind, regardless of time — was the university of Berlin. Its foundations were laid in the dark hour of national defeat — while the thunder of Napoleon's cannon still echoed among the hills about Jena — while French bayonets yet glistened in the streets of Berlin, and the heroic

Frederick William was still an exile in the remotest corner of his dismembered realm. Its origin was a profound conviction of the king, shared by the ablest statesmen of the time, that the surest way for Prussia to her lost rank among the great nations, was through the door of intellectual supremacy; and that the most potent agency for the attainment of that supremacy would be a grand central university that should embrace the best cultivated men of the age, and that should be able by means of free inquiry to advance the knowledge of the world in every department, by the maintenance of the highest possible standards in its own faculties to raise all classes of schools below it to a higher level, and thus, by means of true enlightenment, stimulation and guidance, to insure the universal and the highest possible education of her people.

Planned under the leadership of the distinguished and far-seeing Wilhelm von Humboldt, then minister of public instruction, and in counsel with the wisest scholars of Germany, it had the benefit of the long experience of all other institutions of its kind, comparative freedom from the prejudices and errors in which they were founded, the inspiration of the new era of science, and the powerful stimulus of a desperate and yet lofty national ambition. It was founded, therefore, in the special interest of no church, or school, whether of politics, philosophy or science, but solely

and sublimely in the interest of free and universal culture. Its teachers were to know no fetters, its students to be rather led and lifted up by the inspiration of the schools than forced into fixed channels by the constraints of arbitrary law. Wolf, Fichte, Reil, Savigny, and Schleiermacher were among the illustrious men who first taught in its halls. The experiment was a splendid success. Within five years from the date of inauguration its corps of professors and teachers numbered fifty-six, and within sixteen years its students sixteen hundred. It became, of course, an object of envy to many of the ancient universities, no less than of pride to the kingdom of Prussia, under whose fostering care it soon rose to be the pride of all Germany and the grand model after which, as fast as circumstances would allow, the other German universities have been more or less fashioned.

II.

Within the past few years the European universities have ceased to multiply, and the efforts of learned men and governments have been wisely directed to the development of such as already exist, with a view to making them better answer the demands of the present age.

And yet this statement is hardly true, except as to multiplication, of Spain and Portugal, where the universities may be said to have fallen into a decay, from which nothing but the upheaval of some revolution, like that now disturbing the old order of things in Spain, seems likely to rescue them. Nor is it wholly true of the Dutch universities; for, although the university of Leyden has, of late, opened wide its doors to the physical and natural sciences, like the other two, at Utrecht and Gröningen, in most other respects it firmly holds on to the old regime of two hundred years ago. Nor yet is it true, in general, of either the Scandinavian or Russian universities, — though, in a qualified sense, applicable to those of Copenhagen and Christiania, where the field of study is being steadily enlarged, where private lecturers (corresponding to the *privat-docenten* of Germany) are beginning to find place, and where the students

are more nearly on the German footing,—for, in Russia, they have scarcely made any perceptible progress since their foundation; and in Sweden, the ancient universities of Lund and Upsal even maintain their mediæval statutory regulations as to the constitution of the four faculties, the appointment and support of chancellors, pro-chancellors, deans, professors, and assistants, and the division of all their students into *nations*, after the manner of the French, English and Italian universities of five and six hundred years ago.

In all the countries above-named, as being exceptions to the rule of modern improvement, the universities are not only state institutions, and the recipients of regular funds from their respective governments, but several of them are numerously attended — those of Copenhagen, Christiania, Upsala and St. Petersburg numbering from 800 to 1,500 students. They are weak, however, in the number of their professors; the number employed in the professional faculties scarcely exceeding four to seven, with, perhaps, two or three adjuncts and docents, and in the philosophical faculty ten to twenty professors, with a corresponding number of adjuncts and docents.

Of all the northern — north of Copenhagen — universities, the Imperial Alexander's University of Finland, at Helsingfors, seems more especially to have caught the spirit of modern improvement, and to be

fairly alive. It was there, in my recent tour of inspection, and there only, that I breathed no longer the stagnant atmosphere of the dead past. The professional faculties are not yet strong,— a fact that may be accounted for, perhaps, by the paucity of the population they have need to supply with professional men, and that geographical isolation which denies to them the advantage of numerous foreign students,— but the philosophical faculty, numbering eighteen professors, six readers (*lektorer*), and fourteen docents, is not only characterized by the activity and scientific spirit of the German philosophical faculty, but is also marked by the very notable disposition of the foremost universities of the world to develop out of itself special schools devoted to the more thorough cultivation of important groups of studies, the necessary mastery of which cannot be acquired in the simple faculty of philosophy as a school of high general and philosophic culture.

The English universities are, to-day, almost more anomalous than those of Sweden; for although these last are linked by the *national* feature to the thirteenth century, in their general faculty constitution they are the kindred of the foremost universities of the present time; whereas Oxford and Cambridge have lost their university character altogether and become nothing other than great colleges, formed by the practical and

legal aggregation of numerous grammar schools known as "colleges" and "halls." The *faculties*, as before remarked, have ceased to exist; and although degrees, theological, medical and legal, are still conferred by the so-called university authorities, the instruction received by candidates, excepting the few lectures given by the university professors, is given in connection with the independent schools, hospitals and inns of court found in the great cities.

Of the colleges thus aggregated, Cambridge has seventeen; Oxford nineteen, besides five halls, which practically amount to the same thing. Each of them is a separate corporation, with its own independent estates, and is governed by its own "head" and "fellows," who exercise supreme authority over the students within its walls. The instruction is given by "tutors" exclusively. Some of the colleges are so richly endowed that their several incomes support not only the head at a salary of \$5,000 to \$15,000, the tutors and over a score of other "fellows" at salaries ranging from \$500 to \$1,500, but also to aid numerous undergraduate stipendiaries, known as "scholars," with annual amounts of from \$300 to \$500. Fellows, tutors and scholars are elected after competitive examinations; and as, in addition to the handsome incomes thus secured, they have a free home in the college buildings, it may be supposed that those examinations are thorough and severe. The great body of the stu-

dents support themselves, however; boarding (as "commoners" or "pensioners") at the college table, and paying such moderate fees for instruction as are required to make a sufficient support for the tutors. Resident fellows, not employed as tutors, are enabled by the incomes secured to them to follow such higher courses of study as are offered them in the university, or to pursue such special investigations as they like.

Superior to these colleges and halls there is a federal authority known as the "university," whose senate legislates in a general way upon subjects of both education and discipline for the entire federation of colleges, and, through its own officers, manages them as one institution, holding the examinations, conferring all degrees, etc. The university instruction consists wholly of lectures, given by some thirty professors, many of whom are appointed quite as much to sustain the dignity of the institution as with a view to any essential service in the way of instruction. As the university itself is not endowed, like the colleges, but dependent upon the government, the post of professor is less important pecuniarily than that of tutor. It is perhaps in this circumstance of the poverty of the universities as such, however, that the promise lies of a better future; since it is the occasion of their being brought into the arena of discussion, and subjected to the criticism of liberal and progressive minds. The

fruit of such discussion is already showing itself in the partial abolishment of the ancient religious tests; in the introduction of studies long excluded, upon terms of equality with the classical studies, which so long have had a monopoly of the instruction given in these and others of the great schools of England; in the curtailment of the time once so lavishly, and, as it seems to me, unnecessarily, spent upon Latin and Greek, even upon their own theory of the relative importance of those studies; in a limited modification of the ancient statute requiring all students to belong to one of the colleges; and in the prevalence of a strong desire, in some high quarters, for a thorough reorganization of the English universities upon a basis more in harmony with the intellectual wants of Great Britain, and with the spirit of the age.

The Scottish and Irish universities, having had less need of reformation in many of the particulars above referred to, have undergone less change within the few past years than those of England.

Institutions of the university class are less numerous in Great Britain than in any other European country of equal population, except Russia, and nothing but a blind and stubborn conservatism has prevented their being put upon at least an equality with the foremost in the world.

In point of slow progress and present backward con-

dition, Italy ranks next in the ascending scale. The majority of her universities conform more nearly to the highest present standard, in the matter of constitution, the completeness of their faculties, and the length of the term of study prescribed, than a majority of those of France; but, on the other hand, in the active energy manifested, and the number of students attending them, she is behind. There are twenty in all—fifteen of them royal, and five *free*, or independent of state control—and yet the total number of students is but 10,000, or about one student to every 2,200 of the population. Even among these, the proportion is lamentably large of those who seem to be there with no very definite purpose, and who are ready, therefore, at all times to shirk the labor of hard study, and even occasionally, with or without pretext—and usually for the reason that they fancy still easier times await them at some other institution, or at no institution at all—to effect a practical adjournment of their several courses of study by retiring in large bodies; leaving their forsaken professors to lecture to vacant seats, or close their labors for that particular semester.

The professors, too, as a general rule, in the Italian universities, have fallen into easy habits, giving fewer lectures per semester by one-third than is common in those of Germany and some other states, and yet doing no more if so much in the way of private labors as investigators and authors.

A full Italian university consists of five faculties— a faculty of letters and philosophy (*facoltà filosofico-filologica*), a faculty of the sciences (*facoltà delle scienze fisiche matematiche e naturali*), a faculty of jurisprudence, a faculty of medicine, and a faculty of theology. The faculty of theology is often wanting, for the reason that instruction in the theological branches is so generally given in the seminaries established by the church.

In no country— not even in France and Belgium, where the time-honored faculty of philosophy is divided in like manner—is the field of general culture so divided up and cultivated in detail; and in none is the term of study more protracted. Not content with a single division of the arts or philosophical faculty into the two faculties first above-named, they so distribute the studies embraced as to make six four-years courses, each with its own special diploma, to-wit: one in letters, one in philosophy, one in pure mathematics (including, however, inorganic chemistry, physics and design), one in physico-mathematical sciences (which also embraces geology and mineralogy), one in the physico-chemical sciences, and one in natural history.

The terms of admission are uniform throughout the kingdom, requiring, among other things, that the applicant shall present the certificate of *licenza liceale* (corresponding to our degree of A.B.) The term of

study requisite to a final examination for a degree in the faculty of theology, in all universities in which such a faculty exists at all, is five years, in that of jurisprudence five, in that of medicine six years. Whether under a more rigorous management these protracted courses of study are absolutely necessary or not, their prescription by the Italian government affords gratifying evidence of a disposition to keep the door to the professions closed against all who refuse to qualify themselves therefor in a thorough manner.

The government further manifests its desire to make the universities useful by contributing so liberally to their support * that only very small fees need be demanded of students. Indeed, the fees are so near nothing that, with the moderate expenses of living, the average total cost of the Italian university student's maintenance is but \$160 per annum. Nevertheless, owing to the too great number of these institutions—which makes it impossible for the government to officer them with the strongest and ablest corps of professors—as well as to the general intellectual apathy which has so long prevailed in Italy, university education is at so low an ebb among the Italians that it is not without good reasons that her most enlightened statesmen are looking anxiously to other countries for the causes of their better success, and laboring with great zeal for a general reform.

* The annual amount expended upon the royal universities is over 6,000,000 lire.

University education is suffering from like causes in *all* the Latin states. France is in the most advanced condition of any of them. Indeed there is no university in Italy—or anywhere else, for that matter, outside of Berlin and Vienna—which, for the numerical strength and brilliancy of its body of professors, the vast range of the specific subjects taught, and the number of students who wait upon its various faculties, can compare with the *Académie de Paris*. But then it must not be forgotten that, in respect of great institutions, scientific, literary and professional, the remark of the first Napoleon, “*Paris c’est France*,” is eminently true. It is there that the grandly planned institutions are established—there that the most brilliant savants of the empire are gathered—there that are congregated the thousands of her young men who most hunger and thirst for the higher knowledge which promises national distinction.

There are no *nominal* universities at all in France. What was formerly called, and is still frequently spoken of as, the University of France, is nothing other than a superior council of education, with the minister of public instruction at its head. The institutions highest in rank are all known as *academies*, though in reality being universities in the continental sense. Like the universities of Italy, a full academy has five faculties—the usual professional faculties, and, besides them, a faculty of letters (*faculté des*

lettres), and a faculty of sciences (*faculté des sciences*). Many of them are wanting, however, in one or more of the professional faculties; indeed, those of letters and of the sciences are the only ones invariably embraced. The professors are all named by the emperor; and the deans of faculty, though selected by the minister with the concurrence of the professors, are confirmed by his majesty. They are not so numerous, in proportion to the total number of faculties, as they are in Italy, much less so than in Germany; the average per faculty, in the sixteen academies, being but 7.24. They are also paid by the government, which collects the fees required of students, and manages all the financial, as well as educational, affairs of the academies. Twelve thousand francs is considered a high salary.

The students pay considerably larger fees than in Italy, board where they like, and are subject to but little discipline independent of what is necessary to insure proficiency in study. Even that little consists more in searching and merciless examinations than in anything else. Admission to the academy is dependent, first, on the ability to produce the usual moral certificate, the certificate of having satisfactorily completed a course in a lyceum or communal college, and, secondly, the passing a rigid entrance examination. Admission to the professional faculties is in no case possible unless the candidate can present his diploma

as *bachelier des lettres*, or *bachelier des sciences*—degrees which indicate about the same amount of attainments as is represented by our degrees of bachelor of arts and bachelor of science and philosophy, and which are conditioned, in like manner, upon four years of academical study. The instruction in all the faculties is almost wholly by lectures.

The professional courses of study are one-fourth to one-third shorter than in Italy; that required for the degree of doctor of medicine being four years, for that of licentiate in theology four years, for licentiate in law three years. The theological degree is not recognized by the church, but is essential to such as are looking to professorships in a theological faculty.

The present number of chairs in all the sixteen academies is 384; of which 113 belong to the *Académie de Paris*. Forty-two of the 384 belong to theology, 98 to law, 61 to medicine, 86 to letters, and 97 to science so-called. The whole number of students in attendance upon all the academies and other superior institutions, such as the *Collège de France*, is something over 23,000, or about one student for every 1,900 inhabitants; of which over 14,000 must be assigned to the faculties of Paris.

As in the British universities the prevailing spirit is classical, so, on the other hand, in those of France the mathematical, physical and natural sciences are dominant. Still, neither language, literature, nor meta-

physical science is neglected, much less ignored, as has been the case so long with the physical and natural sciences in England; while history and political economy are treated with great consideration. The main ground for regret is, that there should be, or seem to be, a necessity for the curtailment of that perfect intellectual liberty without which it is impossible that any university should entirely fulfill its high mission.

The universities of Belgium, though they present some indications of German influence, are, nevertheless, so nearly modelled after those of France, that nothing more than this simple statement seems to be required in this connection. They are four in number: two under the control of the government, and two *free*, and are creditably sustained. The number of students frequenting them is about 2,400, or one for every 2,000 inhabitants.

Switzerland falls in the same general category with Belgium, except that her universities are of the German rather than of the French type; most of the instruction being given in the German language, and a large proportion of the professors being natives of the German states.

The universities of Germany have already been said to represent the best system of university education in Europe. This is universally conceded.

The number of faculties essential to what is known as a complete university, is four, to wit: faculties of philosophy, theology, law, and medicine. Of these there are some twenty-five in all the states — ten in Prussia, six in Austria, three in Bavaria, two in Baden, and one each in Saxony, Saxe-Weimar, Wurtemberg, and Hesse-Darmstadt; and though differing slightly as to constitution and management, they bear the stamp of a common mold. Some of them have more than four faculties, for instance, as in the case of the university of Tübingen, which has both a Catholic and a Protestant faculty of theology, and of the universities of Bavaria, which add to the canonical four a faculty of the political sciences. And again some of them — after the manner of the universities of Copenhagen and Helsingfors, which are incorporating polytechnic schools, and several in Italy, which have incorporated schools of engineering and veterinary science — have associated with them schools of the practical arts. Among these are the universities of Göttingen, Halle, and Bonn, which have established agricultural departments, and the university of Berlin, with its veterinary school, practically a branch of the medical faculty. But, then, they all agree in their most essential features, even as the people of the different states are one in certain physiognomical and mental characteristics.

None of the schools of the industrial professions have yet attained to the dignity of faculties

The German universities also substantially agree in the mode of constitution and government, in which respect but little change has occurred during the present century. Originally the faculties are created by appointment of the sovereign or his minister of public instruction. The organization is then perfected by the faculties themselves; the full professors in each of which elect a presiding officer (dean) for that particular faculty, and, in most cases, a single professor to represent them in the *senatus academicus*, composed of such representatives of the several faculties, the actual president or rector, and the outgoing rector. The professors — the *full* professors, not the extraordinary professors, who correspond, in Germany, to the *suppléants* or adjunct professors of France and have no share in the government, in most cases — also elect the rector of the university. All these officers — deans, members of the academical senate, and the rector — are elected for but one year.

The rector, as the executive head of the university, is charged with its general discipline, and in case of any serious misdemeanor on the part of a student, or other person within the range of university jurisdiction, he associates with him an “assessor” or judge.

The organization once perfected, the senate is virtually the governing power, although all measures of importance, as well as all nominations of new professors, must have the approval of the minister.

Besides these two classes of professors, there is still in all German universities, that third and unique class of teachers, to which allusion has already been made, as being found in the universities of Northern Europe, and, to a very limited extent, also in Italy — the class of private lecturers (*privat-docenten*). Herein lies the secret of their vitality and power. Every docent is supposed to be an aspirant for a professorship. He can only become such by applying to the faculty in whose group of studies he desires to give instruction. If, on inquiry, they become satisfied that he has distinguished himself as a student, and possesses rare qualifications, the professors in such faculty delegate two of their number to subject him to a thorough examination (known as *habilitation*) in the branches named in his application. Should the result be satisfactory, he is then nominated to the minister, whose confirmation is his warrant to lecture on any of the topics belonging to his particular faculty. It is rare that a docent receives anything whatever in the way of a salary. His sole means of support are the fees he can command for his lectures, which must in no case be lower than the fees of a full professor for lectures on the same class of subjects. He has the free use of the lecture-rooms, when not occupied by the professors, and the *quæstor* collects his fees in the same manner as the fees of the professors. No restriction whatever is put upon him as to the particular subjects

appropriate to his faculty upon which he shall lecture — not though he should choose to select the identical theme for his discourse on which the most distinguished professor in his faculty lectured in the same place the preceding hour. The student may attend which of them he pleases, and his attendance upon the lecture of the docent counts just the same, in the final reckoning, as attendance upon the lecture of the professor. Should a vacancy occur in the chair of an extraordinary professor — and such a thing is quite apt to occur where there is more genius in the rank below than in the one above — or should it be determined to create a new chair, the aspiring docent rises, and patiently works and waits for a like good fortune to place him in the chair of a full professor, either in his own or in some other university.

It is easy to see what a powerful stimulation to best endeavor, on the part of both professors and *privat-docenten*, these circumstances must create.

The full professors are held in high honor, and in most cases enjoy fair incomes; for, in the first place, they have a fixed salary from the state, of itself equal to a moderate support — being usually from \$1,000 to \$3,000 — and, besides this, such fees as their ability will enable them to command. In this way, at the most prosperous and numerous attended institutions, incomes sometimes rise as high as \$5,000 to \$8,000.

The extraordinary professors usually, though not

invariably, have fixed salaries. These are not large, however, and their main reliance is on the fees paid by students.

From what I have just said, it follows that the life and success of a university in Germany may be estimated by the number of its *privat-docenten*. For where they are numerous, the inference is legitimate that they are well supported; and good support, where dependent on fees which are limited to very small amounts, as compared with every other country except Italy, is *prima facie* evidence of activity and progress.

In the matter of material auxiliaries, such as laboratories, cabinets, museums, libraries, etc., the German universities are better provided than any other; their collections of apparatus and specimens for illustration often being very large and magnificent; their chemical, physical, physiological and other scientific laboratories the finest in the world; and their libraries occasionally numbering as high as 300,000 to 500,000 volumes.

Their educational status, as shown by the range of studies in the different faculties, may be inferred from these facts: that no applicant can be received as a matriculant unless he can produce a certificate of maturity (*maturitätszeugniss*) from a gymnasium — which certificate represents as high or higher attainments than the diploma of bachelor of arts in the United States — and is able, moreover, to pass an

examination at the door of the faculty he would enter ; that the term of study is three years in the faculties of philosophy, theology, and law, and five years in the faculty of medicine ; and that no student in any of the professional faculties can be admitted to an examination for a degree unless, either prior to admission to such faculty, or simultaneously with his study therein, he shall have devoted a considerable share of time — not less than one year — to attendance upon lectures in the faculty of philosophy, which is unquestionably the best school of high and profound general culture to be found in the world.

In matters of discipline and the requirements made of students, the universities of Germany are the antipodes of those of England. For while the British students board in some one of the colleges or halls, are watched and drilled by tutors, and are in nearly all respects subjected to the same sort of surveillance that characterizes the primary school, the German students, on the other hand, lodge and take their meals where they like, and are taught almost exclusively by lecturers, who neither watch nor pretend to control their conduct ; the theory being, that, having passed their *school* days and entered upon the study of philosophy and the learned professions, they are no longer mere boys, but men. If they seriously offend, there are the rector and his associate judge to reprimand, fine, imprison (for a period not exceeding one month),

dismiss, or expel, according to the nature of the offence. But until they do actually so offend they are treated as gentlemen. The error is, indeed, on the side of laxity; for, although the excesses of former years are no longer common, there is but little room for doubt that the character and scholarship of German university students would be still further improved by the stimulating and restraining influence of a more positive moral atmosphere, by more frequent examinations, as tests of proficiency, and by a limited use of the interrogative and recitative methods, as a means of insuring closer attention and of fixing the truths taught them more permanently in the mind than is likely to be the case when the instruction is given by lectures exclusively.

As to endowment, the German universities, with the exception of Göttingen, and perhaps two or three others, are poor. Berlin, the greatest of them all, receives almost nothing from endowment funds—its two hundred professors and its vast scientific establishments being sustained by the state appropriations, which amount to some 200,000 thalers per annum, increased by the very moderate fees paid by students.

The total number of students in the universities of the German States is over 20,000, or about one for every 1,500 inhabitants. Those of Berlin and Vienna have each 2,500 to 3,000. The number of professors is over 1,800; nearly 800 of whom belong to the

faculty of philosophy, and the remainder to the faculties of medicine, law, theology, and political economy, in the order of mention. Berlin, alone, has very nearly 200.

In view of the foregoing facts, it is not surprising that the university is a power in Germany, nor that, being free, it is a power telling with wonderful effect upon the intellectual progress and social elevation of the German people.

What, now, of the universities of the new world?

In South America, there are at present no institutions bearing the name of university; nor is there one now known by any other name to which the title of university could be properly applied. At Santiago, in Chili, there is a "national institute," embracing a high-school department, with faculties of law and medicine, but it is now in no sense a university, nor does it seem to be the fixed purpose of the government to give it a university development. And in Brazil, which, educationally, is farther advanced, although there is a fully-formed project to establish a great national university, like those of Berlin and Vienna, but little has, as yet, been accomplished. I know of no other South American state that deserves special mention in this connection.

The Canadian universities are all of the British

type, and naturally inferior in rank, as they are in wealth and years, to those of the mother country. The most important institutions are the Laval University, at Quebec, with faculties of arts, law, and medicine, and a theological school (division of the seminary of Quebec),—none of which are either properly supplied with professors or numerous attended by students, however,—and the University of Toronto. The last named has an endowment of 225,000 acres of the public lands, with an unusual array of fine buildings, erected at an aggregate cost of over \$300,000, and promises, at a day not far distant, to become a university in fact, as well as in name; but at present it is but little more than nominally so, as compared with any true standard. It embraces in its plan the faculties of arts, medicine and law, together with schools of engineering and of agriculture. There are, besides these universities so-called, several colleges, in both Upper and Lower Canada, possessing university powers, but yet being, in no proper sense, universities at all. The character of the studies pursued in them, and the degrees conferred, are essentially English; although the more scientific tendencies now characterizing the institutions of like grade in the neighboring republic are discoverable.

In the United States, the case is somewhat, though not very materially, different. The number of insti-

tutions wearing the title of university is much larger than in any other country, and a less number of them have really any sort of claim to it. But, on the other hand, there are a few, the number of whose faculties and the high quality of whose aims entitle them to respectful consideration. The oldest of these, and the oldest superior institution in America, Harvard University, at Cambridge, Massachusetts, may, with propriety, be taken as the representative of the class.

The academical department in each of them occupies the same general ground as the German gymnasium. In the mathematics, as well as in the belles-lettres and the physical sciences, it carries the pupil a little farther; but on the other hand, in the ancient and modern languages, the course of study is quite inferior; so that the most proficient bachelor of arts, on leaving Harvard, would find some difficulty in obtaining the certificate of maturity (*maturitätszeugniss*) were he to present himself before the proper authorities at Berlin. It appears, therefore, that the academical department of our best American universities is but a preparatory school, as compared with a proper faculty of philosophy, such as constitutes the nucleus of the German university.

This academical department, thus narrowly limited, and which, at Harvard, enjoys the services of some twenty-seven professors and teachers, is supplemented in a certain way, it is true, by certain so-called scien-

tific schools. But this supplementation is more in appearance than in fact, since in most cases, as at Harvard, the school in question has no essential connection with the academical department, to which it stands rather in the relation of a rival. It cannot be denied that it provides instruction of a high order, nor that its professors, in some cases, justly rank among the ablest men of the country and times. And if the terms of admission and period of study were at all in keeping with the vastness and importance of the field it assumes to represent, it might at least be placed in the same category with the *facoltà delle scienze fisiche matematiche e naturali* of the Italian universities, or the *faculté des sciences* of the best French academies. But, unhappily for the credit of the highest institutions of learning in America, this school of science falls quite below even the lowest of foreign standards in these and other respects. This is emphatically true of the Lawrence Scientific School, at Cambridge; whose term of study necessary to candidacy for the degree of "bachelor of science" is one year, and yet whose chief condition for admission is evidence of having received "a good English education!" The conditions prescribed for the School of Mining and Practical Geology, opened in connection with the Lawrence Scientific School — including especially a four-years course of study — are more worthy of the pretensions set up for it, and help its

distinguished teachers to save this somewhat noted school of science from foreign contempt.

The "department of philosophy and the arts" of Yale College is less obnoxious to severe criticism; since in the scientific section thereof, known as the Sheffield Scientific School, the term of study is three years; and since, moreover, the two-years course in its section of philosophy, philology and mathematics, completion of which is requisite to the degree of "bachelor of philosophy," is followed by certain higher two-years courses of study and examinations, leading to the degree of "doctor of philosophy."

Nor should I omit to state, as a further ground of encouragement, that, very recently, "university courses" of lectures, designed to occupy a range above the ordinary academic and scientific courses of study, and consciously aiming to supply a growing demand for the means of a higher degree of culture, have very recently been opened, not only at both Harvard and Yale, but also in several other of our universities. But then it is, nevertheless, beyond denial that, up to this moment, the very best results attained, in the way of supplying this most serious deficiency, fall painfully short of a realization of that true faculty of philosophy which is the pride and glory of the German university. And if this be true of Harvard, Yale, Columbia, and our best state universities, what shall be said of that vast

multitude of inferior grammar schools and colleges, whose half-dozen professors are mainly occupied in teaching their unlettered and undisciplined pupils the rudiments of a barely decent English education, with a smattering of the Latin and Greek languages, and which, nevertheless, claim and ostentatiously wear that high title of which the great universities of Berlin, Paris, Vienna, and Turin are barely worthy?

Our university professional schools are no less open to grave charges. With the exception of some of the schools of divinity, and two or three of the medical faculties—notable among which are those connected with Harvard University, and the state University of Michigan—they are open to any decently moral applicant, without regard to educational qualifications, and they confer their degrees with a shameful disregard, not only of those high standards of qualification so universal in the most advanced European countries, but of any really respectable standard whatever. It is a sufficient substantiation of this charge that, in a majority of such professional schools, the conditions are such that the veriest ignoramus, if possessed of fair intellectual endowments, may enter them, and, in nine months or one year thereafter, go forth to the world a regularly authorized bachelor of law, or doctor of medicine!

On the side of *practical* education, it should be remarked that many of our universities have followed

the examples set by some of those of Germany, Italy, Denmark and Sweden—that of establishing in or connecting with them schools of agriculture, veterinary science, engineering, forestry, and even proper polytechnicums; while at least one institution, by which the university title has been assumed, was planned so exclusively with reference to the practical pursuits as to have been incorporated under the new name of “industrial university.”

The fine arts have also made an innovation upon the ancient order of things, by establishing themselves as distinct schools in some of our universities; as, for example, in Yale College, Michigan University, and Washington University at St. Louis.

As to their means of support, but few of our American universities enjoy large permanent endowments. Harvard is the best circumstanced of any of them, in this respect, having an annual income of something less than \$200,000. But even there the deficiency is seriously felt and bitterly complained of. The professors are everywhere in America, not only inadequately paid, as a consequence, but, what is worse, they are, of necessity, so few in number that they are doomed to a perpetual drudgery of instruction, without the possibility, in most cases, of acquiring the most complete mastery of the many branches taught, much less of devoting any share of their time to those researches and investigations by which the circle of human knowledge is ever enlarged.

This poverty of our universities, moreover, is only less lamentable in that it gives rise to the temptation to add to the number of their students by degrading the standard of admission and graduation. Easy access, short courses of study, and cheap degrees, are the rule, therefore. Nor do they confine their honors to those who pretend to earn them by completing their superficial courses of study. On the contrary, they are, too many of them, open to bids from almost any quarter, and are in the almost yearly practice of conferring the highest known degrees upon men distinguished neither for high attainments, high character, nor eminent service in the cause of education. To such absurd lengths, indeed, has this practice been carried, that titles are no longer evidence of any definite amount of attainments; and men of sufficient learning and reputation to venture so severe a rebuke, not unfrequently do themselves the honor to decline them. On this head I repeat what I have said in another place, namely, that it ought to be established as a principle, to which all acts of incorporation should of necessity conform, that no institution should have authority to confer literary degrees representing a higher degree of attainments and culture than are actually represented by its own educational status.

III

From the foregoing account of the rise and present condition of universities in all countries, three general conclusions are deducible, to-wit: (1) that, in view of the long period of centuries since its origin, university education has made slow progress, and is still in a very unsatisfactory condition; (2) that the spirit of progress has been exceedingly active in many quarters during the past few years; and (3) that educational leaders are, nevertheless, still groping their way towards the realization of a higher ideal, without the most definite conception of what that ideal is.

In Italy, the dominant idea for some time possessing the minds of reformers has been, that the government is attempting to maintain too many universities, and should at once proceed to the suppression of at least half of them and the concentration of all the means and forces available for education upon the remainder. "It is only in this way," the distinguished Senator Matteucci, late minister of public instruction, said to me in 1867, "that Italy can hope to make her universities worthy of their great beginnings, of her re-established unity, and of her yet more glorious future." More definitely stated, it was the purpose

of the Italian government, at the date of the late war, which restored Venetia to the kingdom, to maintain but two full universities, one at Turin, and the other at Naples; the faculty of letters in which was also to serve the purpose of, or to have connected therewith, a superior normal school, for the training of teachers for the *ginnasi* and *licei* of the kingdom. The university of Pisa was also to be complete, *minus* the faculty of the mathematical and physical sciences, which, for this portion of the country, was to be located at Florence, in connection with the museum. These three universities, alone in all the kingdom, were to have power to confer degrees in letters, and the first two, together with the faculty of Florence, alone to confer degrees in the sciences, and, through their normal schools, to train teachers for the *scuole tecniche*. Law and medicine were to have faculties at Turin, Pavia, Genoa, Catania, Modena, Parma, Pisa, Naples, Palermo, and Bologna; besides which, there was to be a faculty of law at Sassari, and one of medicine at Cagliari. It was the half-formed purpose, moreover, that only the dogmatic part of theology should be left to the church seminaries; everything else requisite being taught in the universities, whose degrees were to be essential to full orders in the clerical profession.

What changes in this plan, if any, have been occasioned by the restoration of the university of Padua — and I am pained to add, by the recent death of

Senator Matteucci, who was the moving and directing spirit of the reforms — it has not yet transpired; but the evidences are gratifying that the Italian university is not only to recover its long-lost distinction and glory, but even to surpass its former self as an educating power.

Great Britain is drifting slowly towards the reconstruction of her lost faculties and the creation of new ones, embracing the important departments of physical and natural sciences, philosophy, and art — towards the total abolishment of those odious religious tests, which have for centuries prevented the growth of her ancient universities by the practical suppression of that freedom of the intellect and conscience, without which a true university is impossible — and towards the opening wide of the portals of the university to whomsoever may approach with due preparation.

Germany, so long in the vanguard, and so in advance of all other countries that she has been thought by some to have reached the *ultima thule* of university education, has broken the iron mold of the middle ages, in which were cast the inevitable four faculties, and now gives signs of an early opening of the field of the university, with impartial conditions, to every class of studies belonging to the domain of the higher education, and to every profession, suitable

preparation for which demands not only the training of the gymnasium or the *real* school,—which is the need of every man, regardless of condition or occupation in life,—but also a profound, thorough and special study of any of that multitude of subjects which, in a more general way, are properly included in a faculty of philosophy. By force of this new idea, that law, medicine and theology are no longer the only “learned professions,” political philosophy, as heretofore stated, has already set up its own faculty; and pharmacy, veterinary science, agriculture, forestry, etc., have found secondary positions within the pale of the university, or at least under the shadow of its walls.

In view of all this activity, — this evident purpose, on the part of many countries, to make the university something larger and better than at present, — it is a pity that there should not have been formed some more definite and generally accepted idea of wherein the present universities are most at fault, and of the means, and order of means, necessary to make them fulfill their real office in the world. Such a settlement of the main question — the question of what a university ought to be — seems to me practicable, if they who discuss it will come to its consideration in the right spirit. And I will not conceal the fact that the actuating motive in the preparation of this address has

been a strong desire, not unmixed with hope, that, after a careful study of the universities of the past and present, and a due consideration of the new conditions to be met, I might succeed in throwing some additional light upon the now misty and painfully uncertain way.

Whatever the origin of the term university, and how wide soever the difference in actual character and condition of the institutions that have assumed it, this one proposition is undeniable, viz.: that, since its first educational use, it has ever sought to represent culture of the *highest kind*, to whatever age or country the particular institution has belonged. This, whether we refer to the ancient universities of Italy, France, England, Spain and Portugal, the more modern ones of these countries and of the German and Scandinavian states, or to any of those more recently founded, either in Europe or America. There is no educational institution above it, nor has there been from the beginning. Upon this phase of the *qualitative* question there seems never to have been any difference of opinion.

It is the *quantitative* question that has so disturbed and perplexed the educational world in these latter days. This same problem may have engaged the attention of the mediæval Europeans for a time,—while the university, as a new institution, was in its formative stage,—but, if it did, a practical solution of

it was soon found. The *trivium* and *quadrivium* were indispensable to all who assumed to be educated men; and as the more private, and the monkish, schools, where these branches were taught originally, were apt to be wanting in a sufficient number of learned and commanding teachers, they were, of necessity, constituted a part of the university curriculum. This insured the establishment of a high faculty of general culture, the character and range of whose studies of course changed with the progress of knowledge.

But it was necessary that there should also be schools, somewhere, for diffusing such knowledge as was then possessed concerning man and his individual relations to the material world, concerning man and his relations to his fellow men, and concerning man in his relations to his Maker. Hence arose schools of medicine, of law, and of theology. These also required the concentration of learned men competent to teach in them; and since the association of men of learning, though specially devoted to different branches of knowledge, is ever both pleasant and profitable; since they who study are advantaged in like manner by frequent intercourse; and as economy of time, forces and material would be promoted thereby, without counteracting disadvantage of any sort, these schools of the professions were naturally established as faculties in the same place with the

faculty of general culture — thus completing the then narrow circle of human knowledge.

It is not strange that such a cluster of schools should have received the title of *universitas* (all together), nor that the scores of universities which succeeded those first examples, being surrounded by the same general conditions, were cast in the same mold. Nor is it surprising that institutions like Oxford and Cambridge, from which the professional faculties in course of time fell away, in obedience to the superior attractive force of a great neighboring city, with extraordinary court and hospital facilities, should have retained a title once, but no longer, appropriate.

Perhaps, also, it should fail to excite our surprise that the ancient universities should have continued in their accustomed work of the exclusive cultivation of the humanities and the three professions above named long after the sciences had gained recognition as highly important fields of knowledge and excellent means of mental discipline, and even after the progress of human development and scientific discovery had led to the creation of numerous professions no less intellectual, profound and difficult than the canonical and time-honored law, medicine and theology. It is in the nature of institutions, especially of old ones, to be conservative, and the rigid mold of the social ideas of those times could hardly allow to new professions a ready and undisputed admission to the places of high

honor so long exclusively enjoyed by the favored three.

On the other hand, whether, in view of the general lack of the highest culture in America, the ignorance of even many of our educational leaders of the systems and institutions of other countries more advanced, and the unparalleled ambition and conceit of our people,—I say, whether, in view of these facts, it be a matter of surprise or not that scores of our country schools — and very poor ones at that — have been incorporated by our state legislatures as “universities,” it is certainly a just cause of reproach that this wrong to the cause of education has been, and continues to be, actually perpetrated, and that, up to this moment, no concerted or organized effort of any sort has been made to prevent a continuance of the evil by the diffusion of just sentiments and opinions upon the subject. Our aspiring schools might at least be commended to the wholesome example of old Harvard and Yale, both of which modestly assumed the title of “college” at the beginning — although then, as now, the foremost schools of high culture in the new world — and have not yet deemed it necessary to ask for a change of title, now that they have each assumed the general features of a university by the addition of professional faculties and other schools to the academical department.

But slow and faulty as has been the past, with

these data before us, — the evident original intent to make the university *a place of the highest and most universal culture*, and the manifest tendency, on the part of the most advanced countries, to remold their universities, in this respect, after the original ideal, — it might be assumed, in the absence of any conflicting testimony or weighty objection, that *elevation and expansion* are to be, and ought to be, the watchword of their future real progress. Let us see, therefore, whether there be valid and substantial objections to this line of policy.

Of course, no scholar will question the propriety of elevating the standard of university education to the highest practicable limit. But then there is, unfortunately, a very wide difference as to what that practicable limit is. If we are to judge them by their actual deeds, a majority claim that the university must gauge its standard down to a correspondence with those of the schools below them. “Unless we do this,” say they, “we shall get no students; all our preparations will avail us nothing, and we shall lose the early glory of a great success” — which they are shrewd enough to see is measured by the public, ignorant of the true office of a university, not by the high range of its studies and the number and value of its contributions to the intellectual progress of the world, but by the number of students whose names are found in its catalogue.

It is this lack of a true and noble ambition on the part of some of our university authorities — this lack of loyalty to the sacred interests they assume to represent — this shameful readiness to impose upon an uninformed public by putting *numbers* in the foreground and claiming consideration on their account, — it is this false dealing with the real interests of education in America that is its chief curse to-day. It is a ground of encouragement, however, that here and there are to be found educators and earnest general workers in this field, who hold that the university is not to be the governed, but the governing, power — that the standards of the common schools of the country are not to determine the grade of our university education but are themselves to be determined by it — that the university is not to be elevated to a higher plane by the uplifting of the schools below it, as islands are sometimes raised in the sea by subterranean forces, but is itself the only power by which they are to be raised to a higher level.

The first effect of the substitution of higher for the present low standards of admission and graduation in our universities would undoubtedly be a diminution of numbers, since it would necessitate the transfer of a large number of half-prepared, or wholly unprepared, students from their halls to the district and high schools, where they belong. But, as a secondary effect, it would also lead to a conversion of many

unsuccessful, pretending universities into prosperous high schools and colleges, to the greatly enhanced value of the degrees conferred by the universities, and an increased demand for them, on the part of students the most worthy, and, as a necessary consequence, to the stimulation and improvement of the entire system of popular education.

I believe that these several conclusions are incontrovertible, and that, together, they constitute a sufficient warrant for the declaration that *elevation in grade* is the first important condition in the progress of university education.

If our existing universities, state and denominational, for any reason cannot yet rise to the high level of a true university, they ought at least to rise out of their present competition with the colleges and high-schools of the country, whose work they unnecessarily duplicate, notwithstanding the need is so crying for a work the colleges and high-schools cannot perform. If they cannot do even this, then are they not so much as incipient universities, and we have a moral right to demand of them, in the name of common honesty, that they relinquish their false title and henceforth claim to be what they really are.

Over the state institutions, which exist not for the church, but for the citizen, and which are sustained by the whole body of citizens, we have also unlimited

legal control, and are in duty bound to so mold and manage them as most effectually to promote the advancement of learning and the better culture of the people. When properly co-ordered, they will form a complete and harmonious system; embracing the primary school, the grammar school, the high-school, and the university, each higher resting upon the next lower member of the series.

On the basis of such a system, the university faculty of philosophy ought, if possible, to begin about where the *college* now ends. As a practical question, however, it may hardly be possible to raise even the best of our universities to this level at once. But it certainly is practicable to abolish the university "preparatory department," wherever found; leaving the work now done by it to be performed by the grammar school and "academy." More than this, it is possible to so adjust the relations between our best universities and the high-schools and colleges as to leave to these last a portion of the work now done by the university academical department; which, being, in such event, raised to the rank of a faculty of philosophy, beginning where the last year of the most advanced high-school, or the junior year of the ordinary college, now ends, and carrying the student from that point forward, one, three, or more years, according as he may aim at attainments properly represented by the baccalaureate, the master's degree, or the doctorate, would thus become the nucleus of a true university.

Having done this, if the state would then confine the degree-conferring authority — at least in the case of all degrees above that of bachelor — to the university, and put a stop to the prevailing practice of indiscriminately conferring degrees “in course” and honorary degrees, it would, by these several measures, insure to a very considerable class of our more ambitious students the advantage of two or three additional years of study and instruction in the higher ranges of science, letters and philosophy, as well as suitable recognition for attainments actually made, and so still further strengthen the suffering cause of superior education.

It now remains to inquire whether the *expansion* of the university, by the incorporation of new faculties, be also a means of true progress.

On this question, likewise, after the most careful consideration and no little observation in all countries where the university at present exists, I must take the affirmative. I am aware that there are some distinguished leaders who believe that such expansion is likely to result in the utter dissolution of the university. But do not these persons take counsel of their fears, rather than of their reason? Is it not true that since a majority of the world's universities were founded, each with its three professional faculties, new professions have sprung up and gained universal

recognition, the exclusion of which would be no less unjust and absurd than the expulsion of any of those already embraced? If not, what mean the numerous high schools of art, of architecture, of engineering, of mining and metallurgy, and of that most complex and difficult of all the professions — agriculture — a complete preparation for which requires a knowledge of the whole range of the sciences? What mean those magnificent clusters of professional schools, the polytechnicums of Paris, Zurich, Carlsruhe, Hanover, Munich, Berlin, Copenhagen, Stockholm, Helsingfors, Saint Petersburg and Boston, if law, medicine and theology are the only professions? Or, if it be insisted by the ultra-fastidious that all these are still mere *occupations*, too redolent of the barn-yard, the furnace, the forge and the factory, to be admitted into the daily company of the more refined professions, so long honored with the title of learned, what shall be said of the superior normal schools, to be found in so many of the most enlightened countries, with their high standards of admission and protracted courses of study? and what of statesmanship, that new profession, almost universal quackery in, or rather outside of, which is the present political curse of this and all other countries?

It is useless to multiply words. The Chinese wall of exclusivism, that has so long shut in the narrow

little kingdom of the university, is destined to be pulled down. The work of demolition is already going on. The question is no longer whether new territory shall be added : that is a foregone conclusion. The only vital question is, To what extent shall the annexation proceed, and upon what conditions ?

Need there be any limit at all ? and, if so, what shall the limit be ?

It is clear that there must be definite conditions of some sort, else the central idea of the university would be lost, and the vast aggregation of heterogeneous elements composing the whole fall in pieces, for want of a central harmonizing and unitizing power. But this central power once assured, I see no sufficient reason why the university may *not* also embrace faculties of normal instruction, of political and social science, of agriculture, of mining and metallurgy, of mechanical and civil engineering, of architecture, of commerce and navigation, of naval and military science, and of the fine arts. While, on the other hand, economy of means essential to the formation and support of great laboratories, cabinets, museums and libraries, economy of instructional force, the stimulation resulting from the presence, in the same general institution, of large numbers of professors and students, and the liberalizing influence of frequent association with persons devoted to different studies and aiming at different pursuits,—all these are powerful reasons why the

university *should* embrace the several professions named, together with yet others as fast as they attain to the dignity of professions.

What, now, is this central power, whose office shall be the holding of this cluster of schools together in a complete and harmonious system, even as the celestial bodies which constitute the astral systems of the universe are held in their places, warmed and illumined, each by their own central sun? It is none other than a high faculty of philosophy — that fountain-head of intellectual life and universal knowledge, to which the world has been so greatly indebted in the past, and to which it must continue to look in the future for enlightenment, stimulation and guidance. But, even more than in the past, it must be made a faculty in which not knowledge so much as the science of knowledge, not facts and events so much as the philosophy of facts and events, shall be taught, and in which science, letters, philosophy and art shall be profoundly and unselfishly studied.

Plant in the centre of your university, and there resolutely maintain, such a faculty of philosophy as this; call into its service men of learning, genius and power of inspiration; and require of all who would enter any of the various professional faculties that they shall matriculate in the *university* and give at least a liberal minimum of time to important general studies in this its central faculty, as a condition of graduation, whether in law, agriculture, engineering,

medicine, or aught else. Do this, and I care not how many professional schools of high grade are clustered around it. The greater the number the more completely will they all together constitute a true university; while each one of the cluster, by virtue of the union, will rise to a higher level and the more perfectly fulfill its own particular mission.

Whether the faculty of philosophy may, with advantage, be divided, as in the academies of France, and the universities of Belgium, Holland and Italy, and as in at least one instance* in this country, in such manner as to group those studies which more properly belong to the domain of philosophy and letters in one, and those which belong to science and art in the other, is a secondary question that I will not stop to discuss at this time.

It remains to be urged that the professional faculties must be organized under the inspiration of a like purpose to make them fit agencies of preparation for the special interests they may be intended to represent. Superficiality is criminal where thoroughness is possible; and public sentiment should rigidly hold all schools that assume to qualify men to deal professionally with the important interests of the individual and of society to a full and faithful performance of their respective functions.

As to the constitution and organization of the professoriate, it appears to me that but little improvement

* The University of Wisconsin.

is likely to be made very soon upon the admirable German system ; the main features of which are very sure, sooner or later, to be introduced in all other countries.

There is, however, one other respect in which there seems likely to be a radical change in the university — in the extension of its privileges to women. The growing recognition of the importance of better, and the best possible, facilities for their education, together with the impracticability of founding and maintaining two sets of institutions, one for male, and the other for female students, has already constrained many private, and a few state, institutions — notable among which last are the universities of Paris, Zurich, Vienna, Michigan, Wisconsin and Iowa — to throw open their doors to them more or less freely. And, unless the experience of these few should cause a revulsion in sentiment, and a return, on their part, to the former exclusive system, one hazards nothing in predicting that the example thus set by them will be followed, in course of time, by all the rest.

If now the conclusions reached upon the several questions involved be correct, — and a full and free discussion of them is cordially invited, — may we not assume that the university of the future ought to be, and is destined to be, not only a higher, but a more comprehensive institution than the highest and most complete of those now in existence — an institution

high enough to embrace the utmost limits of actual intellectual achievement, and broad enough to include every real profession — an institution fulfilling, as has never yet been done, its legitimate three-fold office, of giving the highest instruction in every department, and alone conferring the higher degrees therein; of extending the boundaries of human knowledge by means of research and investigation; and of exerting a constantly stimulating and elevating influence upon every class of schools of lower grade?

The realization of this ideal university will require large sums of money. Its foundation must be reckoned by millions, its professors by hundreds, and its means of illustration and experiment be extensive in every department. But the results upon our whole system of education, and upon the intellectual progress of the people, would be beyond calculation.

A true university is the leading want of American education. And I venture to say to this numerous and influential body of American teachers, no subject of greater importance can be urged upon your attention, or by you upon the attention of the country. If it be impossible, at the present, to secure the founding of more than one such institution in America, let us neither take rest nor allow rest to the country until at least that one shall stand, unique and grand, before the world — a fit illustration of American freedom and American aspirations for the progress of the race.

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