ART. VI.—*The Higher Education of the United States.*

(1.) *L'Instruction Publique aux États-Unis, Écoles Publiques, Collèges, Universités, Écoles Spéciales. Rapport adressé au Ministre de l'Instruction Publique,* par M. C. HIPPEAU, Professeur de Faculté Honoraire, &c. Paris. 1870.

(2.) *The Educational Institutions of the United States: their Character and Organization.* Translated from the Swedish of P. A. SILJESTRÖM, by FREDERICA ROWAN. 1853.

(3.) *A Visit to some American Schools and Colleges.* By SOPHIA JEX BLAKE. 1867.

(4.) *Various Reports:—Minnesota, Wisconsin, Chicago, Iowa, Illinois, and Cornell Universities; Lafayette, New York City, and Dartmouth Colleges; Norwich and other Free Academies; various Polytechnic Institutes and Industrial Universities; State Normal Schools, and Pennsylvania, Michigan, and other Agricultural Colleges.* 1867-8-9.

(5.) *Reports of Vassar College for Young Ladies, and of Oberlin for Youth of both Sexes.*

(6.) *The Daily Public School in the United States.* Philadelphia. 1866.

ABOUT a year and a half ago, we gave in this *Review* a tolerably full account of the system of primary education pursued in the United States. We developed at some length the theory on which it is founded—a theory unique in the history of education—which, regarding the people as potentially the rulers of the nation, assumes that the Government, as representing its collective will, has a right and a corresponding obligation to secure for every member of the community, at its own charge, instruction and training sufficient to prepare him to exercise his duties as a citizen; and we showed both the remarkable general success, as well as some of the conspicuous shortcomings, of the actual working of the system. The substantial accuracy, both of our facts and deductions, has been admitted by competent authorities in the United States. Meantime, the complaints of truancy, late attendance, apathy of parents, culpable neglect of country school-boards, untrained and inefficient teachers, poor school-houses, &c., are rather increasing than diminishing, and the demands for authoritative intervention to adjust the practice to the theory wax louder and louder. The political problem, indeed, of reconciling the almost unbounded liberty of the American citizen with the right of the State to constrain obedience, is still, it must be confessed, far

from being solved; and this state of things largely influences the condition of primary education in the United States. It is only those who are ignorant of the facts that talk of that condition as satisfactory; all who carefully investigate them know that it is not. It can, however, scarcely be doubted that the resolute will of the nation will in time overcome this difficulty, and that we shall see 'the most extensively educated people in the world' (Fraser and Hippeau) also the most soundly educated.

We found this conviction in a great degree on the remarkable development within the last few years of the higher education of the country, the influence of which cannot, in the nature of things, fail greatly to stimulate and improve the lower. We propose in this paper to describe at some length the machinery by which that higher education is carried out, and in doing so to testify to the spirit, energy, and intelligence of the nation—the intelligence which perceives what is wanting to place its educational institutions on a par with those of the most advanced countries of the world, and the spirit and energy which are devising the means for supplying it. In accomplishing our purpose, we shall have to repeat a few of the particulars before given, in order to present a clear view of the relation between the several parts of the system.

The theory of American primary education contemplates a continued course of instruction to be carried on at the public expense between the fifth and eighteenth years of the pupil's age. When this course is concluded the responsibility of the State ceases; it has prepared the youth for his duties as a citizen. Should he, for professional or other purposes, wish to continue his education, he must, unless exceptionally aided by scholarships, &c., pursue it at his own charge. The full course of elementary instruction which the State thus offers free of charge to all its citizens, male and female, embraces three stages—(1) the Primary School, for children of from five to eight or nine years of age; (2) the Grammar School, for those from nine to thirteen; and (3) the High School, for those between thirteen or fourteen and eighteen years of age. Together they form the 'common-school' system, and are so organically connected that a child commencing the course in the primary school at five years of age may pursue it, stage by stage, until he emerges at the age of eighteen from the high school, prepared to commence the ordinary business of life, or to enter on a collegiate or special professional career of advanced instruction. This system, it will be observed, offers not merely elementary but also superior education to all the citizens; such superior education, indeed, as in other countries is generally monopolized by the rich and

privileged classes. M. Hippeau* enthusiastically descants on the conception thus presented to his view :—

'Where,' he says (p. 335), 'is the nation that can boast, as the Americans do, of possessing schools in which the whole juvenile population can learn, without charge, not only reading, writing, arithmetic, drawing, and a little geography and history, as they do in our primary schools, but everything which constitutes that secondary education which amongst us is reserved for families in easy circumstances, and which some timid spirits believe cannot be offered without danger to the children of the working classes?'

The high schools, or schools for secondary education, which we now proceed to describe in detail, form the culminating point of the common-school system, and are in some respects its most satisfactory exponent. The instruction given in them is conducted almost uniformly by men of eminent attainments, long experience in teaching, and great zeal, who are as a general rule fairly rewarded for their labours, a point by no means sufficiently provided for in the case of the primary and grammar-school masters, who are often miserably underpaid. The result is that the high schools, especially in the larger towns, attain a very advanced degree of excellence. Bishop Fraser, in describing those of Boston, speaks of the American High School as one which he would have liked, had it been possible, to 'put under a 'glass case and bring to England for exhibition, as a type of a 'thoroughly useful middle-class school.' He was particularly struck by 'the excellent spirit that seemed to pervade it—the 'healthy, honest, thorough way in which the work, both of 'masters and pupils, seemed to be done.' The energy and life of the high schools generally is attested by all who visit them. M. Hippeau thus describes his own impressions on this point, and in doing so also illustrates the external machinery of the system :—

'Wherever,' he says (p. 72), 'I have found these superior schools established, I have witnessed in the pupils an eagerness to do well,

* M. Hippeau was deputed, in 1868, by M. Duruy, the then Minister of Public Instruction in France, to examine into the education generally of the United States. In November, 1869, he presented his very interesting Report to M. Bourbeau, M. Duruy's successor. M. Hippeau examined the whole field of American education, and reports upon it all in the most favourable sense possible. He scarcely indeed hints at a fault anywhere. All is *couleur de rose*. This somewhat indiscriminate panegyric detracts from the value of his judgment respecting the merits of the American system as a whole. He was evidently unprepared for the energy, zeal, public spirit, and intelligence which characterize the efforts made, in the large towns especially, to advance popular education, and eulogizes, therefore, rather than criticises, what he saw.

a zeal, an emulation, which indicate the value that they attach to the studies which they have voluntarily chosen for their course. They pursue them without requiring constraint or severe discipline. Ample and well-ventilated class-rooms in elegant buildings, provided with everything that can render study attractive and profitable, libraries, cabinets of chemistry, physics, and natural history, museums, music-halls, gymnasia for military exercises, short sessions, varied exercises, frequent recreation—everything contributes to make these noble institutions, confided often to the direction of superior men, interesting to the pupils.'

The curriculum of studies pursued with the advantage of these means and influences is large and comprehensive. It embraces classics, foreign languages (especially French and German), mathematics in their fullest extent, with practical applications to mensuration, surveying, navigation, &c.; political economy, logic, mental and moral philosophy, natural theology, the physical sciences, practical mechanics and engineering, together with the English language and literature. It is not, of course, to be imagined that every pupil introduced to this formidable programme of arts and sciences ventures upon more than a small portion of it. After a few months spent in ascertaining that the foundation previously laid in the grammar school is solid and may be depended upon, the parents of the pupils are required to select for their children such studies as they may wish them to pursue, and from that time the course determined on is maintained to the end. In the larger towns there are Latin high schools, in which classical instruction takes the lead, and English high schools, in which science and general subjects are substituted for classics; the former answering, with notable differences, to the *Gymnasia*, and the latter to the *Real-Schulen* of Germany. All pupils are admitted on a 'thorough and searching examination' (Fraser), held twice in the year by the principal and teachers of the high school, under the supervision of the committee of the school, with a view to perfect impartiality; 'the reputation of the grammar schools being supposed to depend in public estimation upon the number of candidates which they succeed in passing.' No pupil under twelve years of age is allowed to compete for entrance, and in many cases it is stipulated that the candidate must have attended the grammar school for at least twelve months. The average age of the pupils who pass is thirteen. About one-fourth of the candidates are annually rejected, and sent down to the grammar schools from whence they came for further preparation. The subjects of the entrance examination are in most cases spelling (to which a high degree of importance is attached), reading,

arithmetic, modern geography, and the history of the United States. With this equipment the pupil enters the high school course, which lasts for four or five years, and ends, in some few of the larger towns—in Philadelphia, for instance—in the attainment of a diploma attesting satisfactory advancement.

As an illustration of the intelligent teaching found in the best of these schools, we may quote a passage from Bishop Fraser's Report. He was present himself during a lesson in English literature, given at the girls' high school at Boston to a class of girls of about eighteen years of age. It consisted, he says, of—

'reading, paraphrasing, grammatical analysis, mutual criticism, and general literary appreciation and taste. The class had commenced the play of "Hamlet," and were engaged that day on a passage from the first scene of the first act. It was read by one girl, paraphrased by another; the paraphrase had to run the gauntlet of general criticism; questions were proposed as to the meaning of this phrase, the definite allusion in that; objections were raised to this and that interpretation, illustrations were adduced, and the whole exercise was characterized by much spirit and life.'

Mr. Anthony Trollope, in his 'North America,' had previously given an amusing account of his visit to a ladies' school at Boston which he does not name, but which was probably that which is above referred to:—

'In one of the schools,' he says, 'they were reading "Milton," and when we entered were discussing the nature of the pool in which the devil is described as wallowing. The question had been raised by one of the girls—a pool, so called, was supposed to contain but a small amount of water, and how could the devil, being so large, get into it? Then came the origin of the word "pool," from *palus*, a marsh, as we were told—some dictionary attesting to the fact—and such a marsh might cover a large expanse. The "Palus Mæotis" was then quoted. And so we went on, till Satan's theory of political liberty, "Better to reign in hell than serve in heaven," was thoroughly discussed and understood. These girls of sixteen or seventeen got up one after another, and gave their opinions on the subject, how far the devil was right, and how far he was manifestly wrong.'

He then expresses his surprise at the remarkable ease and self-possession with which the girls discussed such questions—'just as easy in their demeanour as though they were stitching 'handkerchiefs at home.'

Notwithstanding the fun that Mr. Trollope gets out of his peep into a girls' class of literary critics, there can be no doubt that much intellectual life is kindled and sustained by the practice above described, which evidently aims at bringing

the pupil's mind into as complete a contact as possible with the author's. It would be well if something of this 'spirit' could be substituted in many of our schools of superior instruction for the stolid, stultifying adoration of the 'letter,' which finds and leaves the pupil's mind entirely on the outside of the text which he is professedly studying. At the same time we venture to consider it very desirable, that while much indulgence is granted to young pupils in their early efforts to think, a corrective in the shape of definite knowledge should always be at hand, lest easy speculations about morals, religion, and political topics, eliciting no doubt much native talent, but not tending to mental discipline, should come to be estimated at too high a rate. A stricter training would probably do much to repress that 'tall talk' which prevails so much in America, and which so conclusively indicates the defective cultivation of the person who indulges in it.*

The tendency to this elevated style is, it must be admitted, even fostered at some of the girls' high schools by the practice of handing over to the press, instead of to the waste-paper basket, compositions which evince nothing whatever but the remarkable immaturity of the writers' minds, and the need of close and severe mental discipline. It would be easy to illustrate this morbid state of things by quotations from 'Prize Essays' before us; but it would be hardly fair to the writers to laugh at them, inasmuch as the persons chiefly to blame are the teachers, who have so badly consulted the interests of their pupils as to let the world know that such essays ever were written. If we judged, then, of the high-school system by its too frequent product in the matter of English composition, we should pronounce it to be showy, flimsy, and unsatisfactory; but we do not. The mistake in such cases as this is not the production, but the publication, of school exercises as specimens of English 'composition;' a point in regard to which, as we have hinted, the teachers' reputation, rather than the pupils', is impeached. The tendency to inflation and bombast in style is, however, by no means

* Take the following specimen, extracted from a speech delivered in Congress three or four years ago. The speaker is referring to the fruits of the recent war:—'No gentle speech, "no candy courtesies," no dull oblivion of the pregnant past, befits the crisis that is on us now. We have just trodden the wine-press of revolution, to encounter at its closing doors the bloodier form of anarchy; while the untamed fiends of the rebellion, their appetites inflamed and their hands dripping with the blood of the martyrs, laughed—as none but the damned could laugh—at the rising vision, but dimly foreshadowed by the St. Bartholomew's of Memphis and New Orleans, of the opening of another seal, which should turn our rivers into blood, and visit upon us and our children more than apocalyptic woes.'

confined to the crude exercises of pupils; it pervades the reports of school superintendents, in which, not unfrequently, very small thoughts are dressed up in unconscionably voluminous folds of words. This 'incontinence of words' is a remarkable trait in the educational literature of America. The late Horace Mann —a man worthy of all reverence for his most honourable labours in the cause of education—afforded frequent instances of it in his, in other respects, valuable reports. He was by no means convinced—at least, his practice belied such a conviction —that the 'bright consummate flower' of the highest literary effort is simplicity. As regards this question of 'English composition' generally, we venture to suggest, by the way, that the aim should be rather practical than literary, and that the elementary teacher who succeeds in getting his pupils to write with ease, simplicity, and grammatical accuracy on the commonest topics of daily life and experience, does them a far better service than the teacher who stimulates them to literary effort. The seed-time should never be confounded with that of flowers and fruits.

In view of the provision of a complete course of elementary instruction for every citizen of the nation, it is natural to inquire how far it is actually carried out. It is evident that the theory can only be fully satisfied by the passing of all the children who attend the elementary schools through the entire course. We see, however, in what takes place in America in this as well as in many other respects how difficult, indeed, how impossible it often is, to realise a plausible theory. In the case before us the theory which assumes that a certain quantity of instruction (to say nothing of quality) is necessary for the proper equipment of a citizen for his duties, is defeated by many adverse causes, and especially by the imperative demands of society for the work of its citizens, be their education what it may. It appears from the report of a New York assistant-superintendent (quoted by Bishop Fraser), that 'not more than 'one-half of the children who attend the primary schools ever 'enter the grammar schools,' and 'that a considerable number 'do not even complete the primary course'—that is, they leave school at about nine years of age. The general result indeed is, that only about one in one hundred of those who enter the primary schools ever pass on to the high schools; and of these about one-fourth stop short at different stages of the higher course. In Boston the proportion is about one in thirty-three, while in Philadelphia it is only one in one hundred and fifty. Again, it must be remembered that these statistics apply only to large towns, in which alone high schools are required to be set up.

The law of Massachusetts—a State which presents the best type of American education—requires a high school to be established in towns of more than 4,000 inhabitants. In towns of 500 inhabitants the grammar school, with its very limited curriculum, is the necessary consummation of the theory of 'a complete course of instruction for all the citizens of the 'State.' We state these facts, not with the view of reproaching the Americans with their failures, but to correct that somewhat loose and vague manner of talking about American education, which confounds the theory with the facts.

It is important, in considering the general question of the value of superior education to a commonwealth, to call attention to the complaints which are beginning to be very freely raised by some of the enlightened educationists of America, that the superior or high school education is unwisely stimulated to the injury of the lower and more essential instruction. It must be remembered that at present gratuitous instruction is furnished not only to the poorer classes, whose circumstances require help, but also to those classes who do not need it, and who receive it as a means of advancing the interests of their children by preparing them for active and professional life. Now, the training of the latter class involves an immense expenditure at the public charge on the few who receive it, and the question is, whether it is wise or just to lavish public money in stimulating that which it is alleged would be secured in the case of those really requiring it, through private and personal means? In other words, the question is, whether the promotion of superior education at the public expense brings with it an advantage to the public interest, which compensates for the imperfect accomplishment of the theory of 'the education of the citizen' in the primary schools? The author of the very interesting pamphlet on 'The Daily Public School in the United States,' which has been much quoted lately in England (especially by that *eminent* educational authority, Lord Robert Montagu), argues this question at length, and shows, by adducing an immense body of facts, as we also showed in our former article, that the primary school system throughout the States generally is in a very unsatisfactory condition, while at the same time the ambition of the people leads to the unnatural—as he views it—encouragement at the public expense of schools for superior instruction. His views may be gathered from the following extract:—

'We shall not,' he says (p. 24), 'be understood as denying that instruction of various and much higher grades than the daily public school supplies should be easy of access to all who are disposed to seek

it, but we maintain that this should be the natural outgrowth of the public school, and should be sustained by other means than a general public tax. The income from that source should be restricted to the thorough accomplishment of the preliminary work. Why should we not educate machinists, engineers, and farmers at the public charge, as well as book-keepers and bank clerks?'

To show that this question is not one of speculation only, we may refer to the fact that in 1866 a motion was introduced into the City Council of Philadelphia for disallowing the funds for supporting the Boys' High School. The mover stated his belief that a 'majority of the citizens were in favour of abolishing 'the school.' 'We tax the people,' he went on to say, 'to give 'them an equal system of education, but only about four per 'cent. of the pupils can be educated in the high school. Of 'those educated there, at least seventy per cent. are drones 'upon the community.' This speaker, however, showed that it was not sordid considerations of expenditure, but a patriotic desire for the real interests of the commonwealth, which moved him, by expressing his desire that the money gained by the abolition of the high school should be expended in raising the standard of instruction in the lower schools. Another speaker insisted that they 'should compel every child to attend school 'until a certain age. He thought the 27,000 dollars asked for 'the high school would be of more service if appropriated to 'educate those who now never go to school. The city should 'give a fair English education and nothing else.' Another 'doubted the propriety of maintaining a college out of the money 'of the taxpayer;' and a fourth 'was in favour of abolishing 'the high school, because the grammar schools would then be 'fostered, and the system of cramming a few pupils to get them 'in (into) the high school done away with.' The grant was, however, in the end carried, and the high school maintained. It came out as a curious and anomalous feature of this debate, that a motion for increasing the salaries of the teachers of the primary schools (and thus, one would think, increasing the desired efficiency of these schools) was negatived by a considerable majority. The writer of the pamphlet referred to, after showing in some detail that the highest education of the country was well provided for by the multiplication and ample endowments of classical, polytechnic, and commercial colleges of various grades, thus pursues his argument to its legitimate conclusion:—'So that in fact the real educational wants of the 'country, in these higher grades, would be well supplied without 'the elaborate and expensive machinery of high and normal 'schools sustained at the public charge; and,' he adds, 'there is

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'no principle sounder and more practical, touching the functions 'of government, whether civil or domestic, than that it should 'not do for people what people can and should do for themselves.' At the same time he repeats his disclaimer of any desire to abate in the slightest degree the interest that is felt in the higher grades of schools. 'We have no controversy,' he says, 'with 'the friends and advocates of the largest liberality in dealing 'with the whole question of popular education. Let the super-'structure have whatever magnitude and fashion it may, our 'eyes are just now fixed on the foundation. Our fear (we may 'almost say our belief) is, that through neglect of this, and the 'desire to make a lasting and imposing display in school archi-'tecture (material and metaphorical), we shall find sooner or 'later that even if we have a *reading*, we shall not have an '*educated* people.'

The grave importance of the question at issue, as above stated, must be our apology for the space we have given to it. It is important, both in an economical and political point of view. To give to those who are not in need what you withhold from those who are, is bad economy; to stimulate to ambitious display while you neglect what is fundamental but comparatively obscure, is bad policy. On the other hand, it may be justly argued that the encouragement of the higher education tends to raise the standard of the lower, and that no nation can hope to attain the highest rank which fails to appreciate the importance of the highest cultivation.* It is essential to diffuse as widely as possible practical instruction suited to the daily wants of the people; but it is also most important to carry on the instruction so as to embrace principles and theories, which constitute, after all, the goal to be aimed at in a complete course of mental training. The man of rules and formulæ is not strictly speaking an educated man, nor can he be so considered until he is in possession of principles and theories as well. It is these especially which give life and power; that life which quickens life in others, that power which emancipates from the slavery of routine. The man who merely understands the formula $2+2=4$ is, as the accomplished author of the 'Autocrat of the Breakfast Table' ingeniously remarks, in a totally different intellectual condition from the man who understands $a+b=c$. 'We are mere operatives, empirics, and egotists, until we learn 'to think in letters instead of figures.' At the same time, however, that we admit the importance of encouraging by incidental means, such as private endowments, &c., the culti-

* 'Le peuple qui a les meilleures écoles est le premier peuple.'—*Jules Simon.*

vation of exceptional native talent, we rather agree with the dissidents whose opinions we have cited in doubting whether it is a duty of the State to supply with gratuitous education at the public charge, those whose avowed object it is to make that education merely a means of personal advancement. It is the more important that we should in England understand this question, as even now many students are receiving at the public expense, in our normal schools for primary teachers, a course of education which does not benefit the public service, inasmuch as—so we are informed—an increasing number of certificated masters, ostensibly trained for the public service, is regularly employed in private schools. We cannot, however, pursue the subject further in this place.

It is sufficiently evident from what we have said that the high schools are the most characteristic and most successful feature of the American system. The education given in the primary schools (including the grammar schools) is not, perhaps, on the whole, superior in quality to that given in our own schools conducted by certificated masters, though the system of grading by which, as we have before explained, the different classes of schools are organically connected together, tends to stimulate the more ambitious scholars to efforts transcending those generally put forth among us. The number of such energetic spirits, as tested by their advancement from one grade to another, is, however, as we have shown, comparatively small. Our remarks are intended to apply to the great bulk of the schools, as scattered over the whole country,* and taught very generally in rural districts by utterly unqualified teachers, who, itinerating from district to district every few months in search of better pay, have no real interest in the profession which they have for the time adopted, and whose work is very rarely tested by authoritative and competent inspectors. These are not the schools which visitors are invited to admire; on the contrary, the reports of school superintendents are filled to overflowing with complaints of their many and striking defects—defects as regards management, school-working, methods of teaching, and, in short, almost all the acknowledged characteristics of really good schools.† It is

* It is computed that about twenty-eight out of every thirty children in the United States attend the schools of the rural districts. It is to them, therefore, and not to the privileged minority, that our remarks apply.

† Some of these reports were quoted in our former article. The following extract from 'The Daily Public School in the United States,' as to the general results, is worth quoting, though the words are those of a witness who is obviously concerned in making out a case:—'Such

true that they are gradually improving, and mainly because female teachers, not so much given to wandering restlessly about as the men, and qualified by zeal and earnestness and a fair amount of knowledge, have in so many instances since the war superseded the masters.

In passing from the High Schools to the Academies, Colleges, and Universities of the United States, it is important to observe that the latter have no organic connection with the former. The commonwealth has done its work when it has conducted its young citizens to the threshold of the collegiate course. If they wish for further instruction, they must expect to gain it, as a general rule, at their own charge, and in their own way. Their special pecuniary or personal interests are supposed to supply the requisite stimulus to further effort. The State has, by theory, made them well-informed and well-trained men, but it does not engage to make them architects, lawyers, engineers, or farmers. The professional education necessary for success in these pursuits is regarded simply as the means towards a personal end, that end being presumably the attainment of lucrative and honourable positions in cultivated society. As, however, the State is itself interested in having these positions occupied by well-qualified men, it comes forward, in many cases, especially in that of the agricultural colleges, with substantial aid towards the attainment of this object. In general, however, the colleges and universities of America are the product of magnificent private endowments, furnished by the patriotic zeal of individuals, and are quite independent, in all that concerns their internal management, of State control or interference. The arrangement of studies, the appointment of professors, and the distribution of funds, are directed by the constituted authorities of the institutions themselves, and all that the State has to do with them is to secure them in their independence.

It is interesting to contrast for a moment the difference between the spirit which has called these establishments into being, with that which controls machinery of the same kind in some of the older countries, for example in France, a point on which M. Hippeau dwells with considerable fervour. In the one case, we see individual or local effort taking the initiative,

‘ observation as we have been enabled to make in interviews with many ‘ thousands of children and youth [in the rural districts] satisfies us that ‘ nine in ten of them are incompetent to read properly a paragraph in the ‘ newspaper, to keep a simple debtor and creditor account in a mechanic’s ‘ shop, or to write an ordinary business letter in a creditable way, as to ‘ chirography, orthography, or a grammatical expression of ideas ’—(p. 11).

relying on itself for success, contriving its own machinery, and only seeking to prevent that interference with its free action which would compromise or neutralize its inherent spirit. In the other we see a central administration, directing all the schools, colleges, and universities of the country, appointing all their officers, fixing all their programmes and methods of instruction, specifying the text-books to be employed, and regulating and controlling all the expenses. The end aimed at in the two cases is the same; but how widely different the spirit and the means! We do not ourselves quite agree with M. Hippeau in considering, as he appears to do, the one system as altogether wrong, and the other altogether right. Centralization is, we know, the *bête noire* of the Americans, to be shunned and abhorred, as they believe, in its every aspect; but we also know that, especially as regards their common school system, they are at this moment suffering severely for their unwise dread of it, and that the recent appointment of Mr. Barnard, as the Minister or Commissioner, as they style him, of public instruction, though a virtual compromise of the principle, has been already attended with most beneficial results. When—and that time will surely come—it is seen that a truly representative government is simply the embodiment of the popular will, the co-ordination of the two apparently opposing forces of centralization and decentralization will achieve successfully much that is now accomplished feebly and imperfectly. Leaving, however, this question unsolved, we proceed to quote again from M. Hippeau a passage in which he paints in glowing colours the actual working of the collegiate system in the United States:—

'These colleges,' he says, 'are not located in the midst of populous towns, but generally in their neighbourhood, and are surrounded by a pleasant open country, where the pupils breathe pure air, and can walk without constraint by the banks of the brooks, or under the avenues formed by grand old trees (*arbres séculaires*). Many separate buildings, each having a special destination—chapel, class-rooms, library, common hall, cabinet of natural history, scientific museums—are grouped round the residence of the president. On all sides elegant cottages serve as dwellings for the professors, who may there serenely give themselves up to their favourite studies. Lastly, at no great distance from the college there are private houses where the pupils find board and lodging, ignorant of the vexations and restraints of discipline, following the course of study laid down by their teachers, working at their own time (*à leurs heures*), and finding close at hand all the necessary appliances, supplied for their use at great cost. With the professors their relations are those of affectionate respect. They listen to their advice with deference, and gather from their

instructions a mass of information which happily supplements the teaching of the class-room'—(p. 199).

We will not mar this charming picture by a word of suspicious criticism, but proceed to describe in detail such of these institutions as are characterized by special features.

Among them stand out some which, as far as we know, are unique in conception, and well deserve our careful attention. We refer to such as collect together under one roof, or, at least, in one locality, and under one direction, large numbers of young men and women for the purposes of united instruction. There are so many obvious theoretical objections to such an arrangement, that we hear with some surprise of its remarkable and increasing success. M. Hippeau was fairly struck with amazement at the working of a system which, as he could not but allow, would be utterly impossible in France, and which we must also allow, would be all but impossible in England. We can well believe that the flagrant 'gallantry' of the French, the 'drinking habits' so prevalent in some of our public schools, the sensuality and debauchery of Sandhurst, and the Vandalism lately displayed at Christ Church, Oxford (we refer only to facts publicly stated), would accord but indifferently with the moral habits of institutions in which 'all use of intoxicating liquors' and even smoking are strictly forbidden*—regulations which, as appears by all the evidence accessible, exist not only on paper but in fact. We do not pretend to discuss all the phases of the interesting social and educational problem presented by these 'mixed' colleges, involving as it does, amongst other speculative questions, that of the mental equality of the sexes; but we may fairly contend that *if* students of both sexes could be brought together in pursuit of a common object without danger to morals, many economical and social advantages would result. Men would become more refined, and women more self-reliant, while it would be more generally acknowledged that women have an especial stake in the interests of society, with an ability and a right to discuss them, which are now, to the detriment of those interests themselves, so frequently ignored or denied. We hold it to be an omen of especial promise that women's opinions are, amongst ourselves, gradually but energetically acting on public opinion itself, and moulding it, as we believe, for good. The extravagance which manifests itself occasionally here, and to a far greater extent in

* 'La défense de fumer, partout prescrite et partout violée (in France), 'est scrupuleusement observée à Oberlin grâce à la présence des jeunes 'filles, envers lesquelles aucun élève ne voudrait manquer d'égards.' —*Hippeau*, p. 111.

America, in the utterance of those opinions, will be gradually, we doubt not, corrected by the very exercise of the right to express them, in proportion as women generally—not merely 'advanced women'—take part in such discussions. When the spectacle of well-informed, intelligent, sensible women, devoting their special qualifications of acute perception, ready tact, and aptness for business to the problems of society, shall become less rare than it now is, we firmly believe we shall be much nearer the solution of those problems. We further believe that the improved education of women is the direct means to that end, and that it is highly probable, though, perhaps, not as yet proved, that the association together of the sexes from earliest youth in the pursuit of a common object, in which both are so deeply interested, is destined, by the mutual aid and incentive it affords, to be the most powerful agency by which that improved education will be secured. As to the question of the capacity of women to compete in the intellectual field, as far as common education is concerned, we hesitate not to say that the American experience has removed it from the platform of theory to that of fact. Whenever boys and girls, young men and young women, are set down to an examination paper, founded on instruction which they have equally received it is found that the average of success in answering it is quite as often in favour of the weaker as of the stronger sex; and, indeed, that those of the 'more worthy gender' are often ingloriously beaten. Then, as to the vital question of morals; all the evidence adduced by Miss Jex Blake, and confirmed in every respect by M. Hippeau's more recent investigations, goes to show that if there is any danger it is guarded against and prevented by the wisdom and prudence of the directors of these establishments, who, as M. Hippeau remarks, are not so blind as not to see abuses if they existed, and not so destitute of moral principle themselves as to tolerate them if they saw them. These gentlemen are unanimous in declaring that the evils hinted at exist in surmise only and not in reality.* To our mind the most conclusive evidence of all is the continued and ever-increasing prosperity of the largest of these institutions—the Oberlin College, in Ohio—during a period of nearly forty years.† It would seem quite impossible

* M. Hippeau learned that in the course of the five years ending 1868, only one girl out of the 200 or 300 of the higher classes was expelled at Oberlin, and that was for an offence against order rather than morals. He further attests that there is no town in the United States the streets of which are, night and day, so quiet and undisturbed as those of Oberlin.

† The number of students of both sexes (rather more than half of whom are females) which, when Miss Jex Blake visited Oberlin in 1865, was 901, had increased in 1868, when M. Hippeau was there, to 1,258.

in the nature of things that the parents and guardians of 1,300 pupils (the present number)—persons whose moral and religious characters are quite as respectable as those of the corresponding classes amongst ourselves—would send their children to an institution against which any serious moral charge could be brought. We assume, therefore, that no serious moral charge can be brought against these mixed communities, though we dare say that a considerable amount of folly and frivolity might be detected without a very close inspection. Even on this point, however, the evidence is very strong that the pupils in general are remarkably distinguished by the earnestness and zeal with which they pursue their studies.

The Oberlin College, to which we have just referred, may be taken as a type of those intended for the instruction of both sexes. Its modest commencement in 1833—under the patriotic impulse of the Rev. John Shepherd, a Presbyterian minister, and his friend, Mr. Stewart, who had been a missionary among the Cherokee Indians—in the midst of a clearing gained from a dense forest of North Ohio, gave little promise, in the thirty pupils established in log huts run up to meet the emergency, of the seven large school buildings, representing a capital of £32,000, the twenty professors (with numerous assistant-teachers) directing six distinct courses of study, the 1,300 pupils of both sexes,* and the town of 5,000 inhabitants which now compose the *ensemble* of Oberlin. When the college was first opened, 'the Indians' hunting-path,' we are told, 'still traversed the 'forest, and the howl of the wolf was heard at night,' and for more than two years 'the devious tracks through the forest were 'often impassable to carriages.' The design of the founders was to establish 'a school, open to both sexes—preparatory, 'teachers', collegiate, and theological—furnishing a substantial 'education at the lowest possible rates,' and combining manual labour with mental study. The idea thus sketched out has throughout preserved its original features, though the last condition, involving handicraft work of some sort for four hours daily, is no longer obligatory. It still, however, exists for those who may choose to avail themselves of it. The bulk of the students at Oberlin are children of parents to whom economy is an important object, and in order to reduce the expenses of education to a minimum, and consequently to offer its advantages at the lowest possible rate, rigid frugality reigns

* 'Coloured students, varying widely as to hue, form about a third of 'the whole number, and I suppose there is hardly any community in 'America where the coloured and white races meet on so real and genuine 'a footing of equality as at Oberlin.'—*Miss Jex Blake*, p. 17.

throughout the whole establishment. Hence the professors' salaries even are 'meagre' (Miss Jex Blake's expression), and the arrangements generally of buildings and appliances, &c., exhibit 'an utter absence of all the appearances and pretensions of wealth.' The education given under such circumstances is perhaps not of the highest order of excellence,* nor are the graces cultivated to an undue extent. Miss Jex Blake (who spent ten days at Oberlin, and employed them well) speaks of the 'almost absolute deficiency of polish of manner' which prevailed. She was especially surprised at 'the incessant spitting ' that went on during class hours, as well as at all other times.' It is to be devoutly hoped that the influence of the softer sex may in time prevail so far as to repress entirely this distinctly masculine accomplishment of too many native Americans. Our lady reporter was not less amazed to see 'young men (at their ' classes) with their heels poised on the back of the next seat, ' about on a level with their heads, or their legs stretched out on ' the seat beside them, while an examination was going on in ' perhaps quite abstruse branches of study, which are usually in ' our minds associated with a very considerable degree of ' culture.' These features are not pleasing in themselves, and are less so when we consider that a large proportion of the young men under instruction at Oberlin are destined to become masters of the primary schools, and therefore models of manners to their pupils. Notwithstanding these drawbacks, however, there can be no doubt that very much good work is done at Oberlin. An earnest love of learning pervades the classes, in most of which young men and women sit together (though at different benches), and the general result is eminently satisfactory. It should be remarked that it is the educational life only which is common to both sexes—the social life, its boarding and lodging, being completely separate, with the single exception that the midday repast is pleasantly shared in common, without any restriction upon the intercourse between the young men and women, who meet as members of the same family. The pupils of different sexes are forbidden, Miss Jex Blake assures us, to walk to and from the classes together, a regulation ' which,' she adds, 'seemed to be well obeyed;' but M. Hippeau, whose rose-coloured glasses may have betrayed him, speaks of their 'walking and riding together within certain prescribed limits,' and even of the young men 'having the privilege of

* 'It is only right to say that we had previously heard some accusations ' against Oberlin for want of thoroughness in study, and the recitations at ' which we were present hardly convinced us of the injustice of the ' charge.'—*Miss Jex Blake*, p. 22.

'admission to the house occupied by the young ladies at certain 'hours, after tea, for instance, until seven or eight o'clock in 'the evening.' We evidently want further information on some of these points. Into the details of studies, text-books, &c., we cannot enter, but our description of Oberlin would be incomplete without some reference to one very characteristic feature. The institution was founded, in the first instance, on a thoroughly religious basis. It was to be surrounded by 'a Christian community, united in the faith of the Gospel,' and a covenant of 'consecration to the work' was framed, binding its subscribers to a 'common purpose of glorifying God in doing good to men.' The spirit of this Puritan constitution is still strictly preserved. The 'religious exercises' are very frequent; 'morning prayer in the families, and evening prayer in the 'chapel, forming but a small part of them. There were in- 'numerable "Sabbath-schools" and prayer-meetings announced 'from the pulpit on Sunday, and during the week prayer- 'meetings and lectures seemed of daily occurrence' (Miss Jex Blake). To such an extent are 'religious exercises' carried, that every separate lesson begins with either a hymn or a prayer. Miss Jex Blake confesses that she was more struck than edified when present at a lesson on physiology, which was preceded by the singing of 'All hail the power of Jesu's name,' &c., and followed instantly 'as the last word of the 'verse died out,' by the voice of the lecturer briskly demanding 'What did I say were the physical functions?' Upon the religious element, which is thus seen to pervade the spirit of Oberlin, and which is further manifested in the strongly expressed desire for 'revivals' as a means for intensifying it, we do not venture, in the absence of more definite information, to pronounce a judgment. We simply echo Miss Jex Blake's opinion, that unless very carefully watched over and guided, it must tend to produce an unhealthy tone of character both as regards religion and morals. Nor is it irrelevant to the subject to add that there appears throughout the entire community an indisposition to physical recreation. There is no suitable provision made for it, and no gymnasium exists for either sex. 'During our ten days' stay, we saw no sign 'whatever of athletic sports or exercises, unless indeed, some of 'the students belonged to a company of firemen recently 'established, who exercised in front of our windows. The 'utmost physical recreation seemed to consist in a country 'walk, and I doubt if even this was common, though a large 'number of the students had just returned from the disbanded 'army. This absence of desire for physical sports seems more

'or less common throughout America' (Miss Jex Blake). This lack of a proper corrective, both to the effects of the very earnest spirit of study that prevails at Oberlin, and the tendency to morbid excitement which we have referred to, is surely very serious, and ought to be supplied by the authorities, at whatever cost. It is, perhaps, both cause and effect of the phenomena we have pointed out.

Leaving Oberlin, with its economical arrangements and somewhat rough machinery, we next consider one of the largest ladies' boarding-schools in the world, the Vassar College, at Poughkeepsie, on the Hudson, which, with its palatial façade of nearly eight hundred feet, pleasure-grounds of nearly two hundred acres, library of seven thousand volumes, art gallery, music-room, laboratories, astronomical observatory (with first-rate instruments), natural history museum, calisthenium (containing a riding-school one hundred feet long, and a gymnasium seventy feet long), bowling-alley for in-door exercises, lake for boating in summer and skating in winter, forms, it must be acknowledged, an institution of a truly remarkable character. M. Hippeau, indeed, declares that there is no place of instruction in the world equal in 'magnificence' to this college for young girls. It was founded some seven years ago at the expense of Mr. Vassar, an opulent brewer of Poughkeepsie, with a view to accomplish for young women what colleges of the first class accomplish for young men—that is, to furnish them the means of a thorough, well-proportioned, and liberal education, adapted to their wants in life. Mr. Vassar gave during his lifetime (he died two years ago) about £100,000 towards the accomplishment of this object, and left at his death £30,000 more, to form (1) a lecture fund; (2) a library, art, and cabinet fund; and (3) an auxiliary fund; the last for aiding students of 'superior mind and sound scholarship' to enjoy the advantages of the place at a reduced rate. The arrangements are adapted to receive 400 young ladies, each of whom pays about £80 a year, exclusive of text-books, stationery, and music and riding lessons. The total expense seems to be about £100, and there were 382 girls (every five of whom have a common sitting-room) in the school when the last yearly report was issued. It will be seen that, considering the value of the capitalized income, and the (for America) large sum paid by each pupil, there is no lack of funds, and hence the noble scale on which the whole of the educational machinery is framed. A candidate for admission must be at least fifteen years of age, and must submit to examination in arithmetic, English grammar, modern geography, and

the history of the United States, so strict 'that further lessons 'in these subjects will not be needed, no provision being made 'for such instruction in the college.' The programme of studies for the four years' course is large—even as some competent European observers think, too large—but this ambitious fault is one which generally characterizes the educational efforts of the United States, and which only experience will correct. It will in time be found out that 'Multum non multa,' and 'Qui trop embrasse mal étreint,' are cardinal principles in the teaching of the young. The plan of 'bifurcation' allows each pupil to choose between (1) the Classical course; and (2) the Scientific and Modern Language course; and there is every reason to believe that the instruction, received under the advantages of first-rate professors* and costly machinery of every kind, is of a very superior order. We are glad to see that the prospectus of studies especially insists on the laying of a good foundation. The first year, called the 'freshman (!) year,' is devoted to mental discipline and solid attainments, not to specious advancement.

'Great importance is attached to this early part of the course, as preparatory to what follows. It is a cardinal point in the plan to teach nothing in a mere compendious and superficial manner; and all experience shows that it is a sad waste of time to set young girls of fifteen or sixteen years of age, without any proper intellectual preparation, at (*sic*) the studies which belong to the junior and senior years (that is, the third and fourth years) of the college course.'

Such is a brief account of the leading features of an institution which M. Hippeau, after examining schools of all kinds throughout the United States, pronounced to be in many respects the most remarkable of them all.

The colleges of America are very numerous, and present every variety of type. They are mostly first called into being by the noble generosity of private individuals, and afterwards maintained by fees. A college, in respect to its curriculum of studies, is generally an advanced high school, but having no organic connection with the national system. There are said to be in all the States together about 290 of these institutions, with about 3,000 teachers, giving instruction to between 70,000 and 80,000 pupils. The libraries attached to the colleges contain in all about 1,800,000 volumes. The title of 'university,' which

* There are eight professors and about thirty teachers on the staff, besides Dr. Raymond, the president, and Miss Lyman, the lady principal. The professor of astronomy is a lady (Miss Mitchell), as is also the resident physician (Miss Alida Avery). The teachers of Greek, Latin, and mathematics are ladies.

is given to a few of them, appears merely to indicate an institution in which the course of instruction is larger and more complete. Many of these colleges are founded on a decidedly denominational basis, and are intended for the special instruction, often mainly theological, of various sects of Christians. This is particularly the case with some of those which bear the distinctive name of 'Academies,' which are governed generally by committees of men holding strict religious opinions, and are selected by parents of the same belief with the view of bringing up their children in their own faith. The colleges and universities are generally well attended. The University of Michigan has 1,500 pupils; Madison (Wisconsin), 775; St. Louis, 618; Cambridge (Harvard College), 479; Yale, 505; Lexington, 650; Oberlin, 1,200; Cornell, 425; St. Francis Xavier (Roman Catholic), 568.

Harvard and Yale College and Universities stand at the head of all these institutions, though they are not the most numerously attended. The students are, however, generally of a higher class, and the professors of a more distinguished literary and scientific position, than those of the other colleges, while the means and appliances of instruction are ample and sufficient. Yale, especially, has, within the last seven or eight years, been aided in a princely style by high-spirited, wealthy men, who seem to take a pride in casting off their abundance into the treasury of the educational fund. No less than £180,000 has been thus bestowed on Yale College from 1860 to 1868. Amongst the donors, George Peabody's* name appears for £30,000, and Joseph Sheffield's for £34,000. It is extraordinary that amongst the fabulously wealthy noblemen and merchant princes of England so very few similar examples are to be found.† In America they swarm, as the history of nearly every one of its grand educational institutions attests. It is not necessary to enter into minute particulars with regard to any of these colleges or universities. The problem being given how to provide for the superior instruction of say from 300 to 700 students in a country where there is so little control over free action, and where the initiative is usually taken not by the State but by private individuals, we can readily believe that it is frequently solved but indifferently—that the professors are not all of a high order, nor the degrees which every college confers much worth having. Indeed, the very idea of more than 300 centres of

* Mr. Peabody also gave £34,000 towards the Geological Museum at Harvard.

† Mr. Whitworth's recent appropriation of £100,000 to Scientific Scholarships claims, however, to be conspicuously recorded as a noble exception.

learning sending forth as many guarantees of attainments, each of course estimated on a different scale, seems, on the face of it, absurd. To be a graduate of *a* college means, therefore, next to nothing, and, generally, American degrees have not yet become a power in the world of letters. They are often, too, most unaccountably flung at the heads of foreigners under the designation of 'honorary;' and there are at this moment English dissenting 'doctors' not ashamed to flaunt in the face of the world titles thus, we might almost say surreptitiously, gained. The system certainly reached the acme of absurdity when the College and University of Waterville (a place we cannot find in any common gazetteer) made a worthy Baptist minister—whom, probably, not a single member of its faculty had ever seen—a 'Doctor of Divinity.' It is not only in literary style, as we showed before, but in educational style also, that the Americans have still to attain to simplicity. There is too much show, too much fuss, too much ambition, too much pretension—in short, too much licence. The common schools are suffering, as we have already said, from the want of authoritative inspection, and the colleges for want of a limited number of examining boards, which alone should have the power of conferring degrees. Were some such arrangement carried out on the pattern of our own University of London, an academical degree in America would have a definite and well-understood value, which at present it certainly has not.

Among the numerous schemes for carrying out the fundamental idea of a college or university (convertible terms, as we have shown) in America, those of Michigan and Ithaca (the Cornell) present some striking peculiarities. The former, with its 1,500 students, is noticeable for its extensive range of studies, and for the renunciation of all prizes and external distinctions as incentives to exertion. Its curriculum embraces almost all knowledge; and it is evident, from all the evidence that can be gained respecting it, that a very earnest spirit of work prevails equally amongst teachers and taught. Its two great divisions—the literary and scientific—are so arranged that neither wholly excludes the other. It is justly conceived that the humanizing influences of classical studies cannot be excluded from the mental discipline which is necessary for a complete education; while, on the other hand, it is seen that to ignore in a country like America—teeming with practical intelligence, and aiming at the subjugation of the powers of nature to the daily service of man—the arts and sciences, which directly minister to that conquest, would be not only absurd in theory but impracticable in fact. The literary course, therefore,

embraces a certain proportion of science and the scientific, some initiation into the classical programme. As to the renunciation of prize-giving, the President, Mr. Haven, lately expressed himself as follows :—

'Young people,' he said, 'ought to learn early in life to perform their duties without requiring us to appeal to their desire to obtain first places, prizes, medals, or any other external reward of merit. It is doubtful whether measures of this kind really elevate study, while it is certain that they engender discontent and envy—hatred, even—and tend, moreover, to diminish proper self-respect in those who are influenced by motives so ignoble. Experience,' he adds, 'has proved to the professors of our university, many of whom have been attached to establishments in which the contrary method is pursued, that our system is in no respect unfavourable to the efficiency of study, and that it is incomparably superior to the other by the moral influence which it exercises over the pupils.'

The remarkable popularity and success of the Michigan University may also be regarded as a sufficient answer to objections on this score. As a specimen of the style in which educational apparatus is provided at Michigan, it may be mentioned that the observatory is fitted up with instruments by the first makers of Europe and America, with all the most modern appliances for their use. The meridian circle is described as magnificent, and is, indeed, the largest yet made, and the refracting telescope has an objective lens of thirteen inches diameter; so that, as M. Hippeau remarks, 'We see here for 'the service of a university establishment in a small town of the 'United States, one of the most powerful and complete astrono-'mical apparatuses to be found in the world.' The art instruction carried on at Michigan is also aided and stimulated by galleries so richly provided with statues, busts, vases, medallions, and copies of famous paintings, that M. Hippeau declares that none of the colleges of France can show anything comparable to them.

A distinctive feature worth mentioning is seen in the curriculum of Lafayette College, at Easton, in Pennsylvania. This is not one of the largest institutions of the kind, but it is eminently distinguished by the intelligence and zeal which pervade its arrangements (superintended by a first-rate President, the Rev. W. C. Cattell, D.D.), and make themselves felt in the success of the teaching. For some years past, under the able direction of Professor March, the English language has been made a prominent feature in the programme. The professor treats the English author chosen for study—Milton, for instance—as a competent classical teacher does Homer

or Virgil. The text is minutely analyzed, the mythological, historical, and metaphysical allusions carefully investigated and appreciated, parallel passages from English authors of different periods adduced, and the rules of composition in poetry or prose illustrated. As to the language itself, independently of the thought conveyed by it, investigations are conducted into the origin, value, and chronological history of the words, their formation, &c.; and in short, into everything which belongs to the domain of comparative philology. Nowhere else is the subject treated with equal competence and success.*

The Normal Colleges, which are numerous in the United States, though owing their origin very generally to private munificence, are, as being connected with the common school system, aided by subscriptions from the State. They are mainly intended to train teachers for the common schools, and the curriculum is therefore somewhat limited in comparison with that of some of the other colleges; but many of them are highly distinguished by the earnest intelligence which permeates the entire body, both of teachers and pupils; and what they attempt and profess, they seem to do remarkably well. Miss Jex Blake gives a most interesting account of that which she visited at Salem, Massachusetts. She expresses her admiration in terms similar to those in which Bishop Fraser praises the Boston High School. She says, her 'one regret was, that she could 'not transplant the whole affair bodily to England, that other 'teachers might share her pleasure in seeing any school so 'thoroughly well worked as this was by its excellent head 'master and a first-rate staff of most earnest lady teachers, 'whose actual erudition was almost overwhelming.' 'Indeed,' she adds, 'the amount of sheer learning acquired by really 'good teachers in America, has often surprised me.' The Salem school is for young women only, and from the account given of its plans, it can hardly fail to turn out first-rate teachers. The methods pursued appear to be characterized by rare ingenuity and intelligence, while the tone and spirit of the place is just that which one would wish to see repeated in the schools where these young pupils are themselves to become teachers. There seems every reason to believe that what in the prospectus of the school is described as its 'aims,' are really attained. 'From the beginning to the end of the course,

* Mr. March's interesting "Method of Philological Study of the English Language" (New York, 1865), is well worth the attention of teachers. He has just published an "Anglo-Saxon Grammar," which appears to be far superior to any other that has yet appeared.

'all studies are conducted with special reference to the best 'ways of teaching them. Recitation of English lessons alone, 'however excellent, are not satisfactory, unless every pupil 'is able to teach others that which she has herself learned. 'The great object of the school is to make the pupils investi- 'gate, think, and speak for themselves; to make the individual 'self-reliant and ready to meet whatever difficulties may 'arise.' Here too, as in the Chicago University, in Dartmouth College, and others, extrinsic rewards of learning are discountenanced. 'It is not deemed necessary to awaken a 'feeling of emulation in order to induce the scholars to perform 'their duties faithfully. The ranking of scholars according 'to their comparative success in studies is not here allowed. 'Faithful attention to duty is encouraged for its own sake, not 'for the purpose of obtaining certain marks of credit.' These are the words of the prospectus, and here is Miss Jex Blake's testimony, showing that the words are interpreted by deeds. 'Indeed, the whole spirit of the school seemed most admirable, 'whether as regarded the untiring zeal and energy of all 'the teachers—who were for ever doing work beyond what was 'required of them—whose one aim seemed to be true and 'genuine success at any cost; or the ready industry and unflag- 'ging interest of the pupils—who co-operated so heartily with 'the teachers for their own progress; or the general spirit of 'sympathy and natural goodwill that reigned over all. In the 'course of my many visits, I never once saw idleness or de- 'liberate carelessness in a pupil, nor superficiality or impatience 'in a teacher; still less any appearance of jealousy or ill-will 'anywhere, and not a black look among the whole community.' Such a testimony from so competent an observer settles the question in our mind (though we had no doubt before) of the value of training for the teacher. It will be a bright day for education amongst us when hundreds of such schools shall be established in England, where every one 'who chooses to think that he has a gift for teaching' is at perfect liberty —without any knowledge whatever, and without the least preparatory training—to perform any number of murderous experiments, and for any length of time, upon the bodies, minds, and souls of the wretched little victims whom evil fate throws into his hands. The educational *furore* which is beginning to take possession of the English public mind will, we venture to say, avail comparatively little until the paramount want of all—that of trained teachers—is felt and supplied. The teaching of the teacher is the most vital question of the day; and the solution of it concerns the whole community, from

the patricians of Eton down to the urchins of the ragged school.* If England is about the worst educated country in Europe, it is not merely because so many children are not taught at all, but because so many of our teachers know nothing about the art of teaching. It is with them that our efforts to improve English education ought rightfully to begin.

It is not surprising that with so practical a people as the Americans, schools expressly founded to give instruction in technical science, as well as Agricultural Colleges, should be greatly encouraged. The progress that has been made in this respect is truly surprising. Only the other day, Mr. Siljeström—whose report on American education still remains by far the most thoughtful and philosophical of all that have been published on the subject—expressed his surprise that he found scarcely any institutions dedicated to the teaching of the principles of science. He looked in vain for those agricultural and technological colleges, which, as he deemed, so well suited the genius of the people. At this moment he would find thirty such institutions of the first class, richly endowed with funds, and establishing themselves in the hearts of the people by the intelligence and comprehensiveness of spirit which conceived them and which maintains them in efficient action. Among them the Sheffield Institute and the Lawrence Scientific School, in connection respectively with Yale and Harvard Colleges, the Boston Technological School, the School of Mines at Calombia College, the Agricultural Schools of Amherst and Pennsylvania, have a deservedly high reputation.

The Technological Institute of Boston is one of the fruits of the combination of private* and State endowments, to which we have so often referred. Its object is to form engineers, chemists, builders, and architects. The four years' course of instruction embraces for the first two years (in which the studies are common to all the students), algebra, geometry, descriptive geometry, free-hand drawing, elements of mechanics, chemistry with manipulations, descriptive astronomy, carpentering, the English language and literature, French and German. The third and fourth years are devoted to special instruction adapted to the professions chosen by the students. The subjects are mechanical engineering, civil engineering and topography, practical che-

* "In no department of human activity is there such a pretentious display of power, with such a beggarly account of results" (as in English teaching).—*Professor Blackie, of Edinburgh.*

* Among the donors are Dr. Walker, £40,000; Mr. Huntingdon, £10,000; Mr. Thayer, £5,000; Mr. Mason, £4,000; Mr. Hayward, £4,000, &c.

mistry, mining engineering, architecture, and a general course of science and literature. To carry out these studies there are vast laboratories for chemical, physical, and metallurgical experiments, as well as schools devoted to practical carpentering, levelling, geodesy, and nautical astronomy. This instruction is supplemented by visits to factories, mines, mills, &c., so that the student goes forth to his business in life well equipped with all that is necessary for success in it.

In the Agricultural Colleges the course pursued is very similar. General education in literature and science precedes the special business of the college, for teaching which, the arrangements, made on a grand scale in the best of these institutions, furnish every aid that is necessary. Practical chemistry, animal and vegetable physiology and zoology, form parts of the course, as well as experiments in the best methods of cropping, manuring, planting, &c.

The question of the proportions in which the literary and scientific elements should combine to form the cultivated man is one of the highest interest to Englishmen as well as Americans. It is under discussion in England, but it is solving by action in America. The old traditions which are still reverenced here are being superseded by antagonistic movements there. The utilitarian spirit, which is liberally interpreted amongst us, is more strictly interpreted amongst the Americans. We have never in England tried the experiment of training the mind on a scientific basis; our transatlantic cousins are trying it for us. The results are, doubtless, interesting and striking; but at present they must be considered as inconclusive. Our limits, however, forbid our entering either into a full discussion of the theory or a description of the results. We may perhaps return, on some future occasion, to the subject, contenting ourselves for the present with the remark that the attempt to learn something of every science—an attempt which has a strange fascination for Americans—is generally found to end in failure. The average capacity of the human mind may be looked upon as a 'constant quantity,' which you do not permanently increase by inciting it to unwonted and often distracting effort, any more than you increase the digestive powers by unlimited supplies of food. It is still ordained that into the kingdom of knowledge, as into the kingdom of heaven, we must enter as 'little children;' nor can we conceive of a 'common 'measure' between the progress of a nation's knowledge and that of an individual, for whom, even were the sciences ten times as numerous as they are, it will ever be necessary to begin his own career with A B C. We may, it is true, furnish

an opportunity for learning everything; but then everything cannot be learned. *Non omnes omnia possumus.* Even to know this requires something beyond mere knowledge; and should the provision of unlimited means of knowing lead only to improved methods of cramming, the results will not be satisfactory. Cramming, we hold to be the unlawful attempt to appropriate other people's work—to gain the results of labour without the labour itself. The flowers thus plucked and stuck into the ground may make a gaudy show, but they begin to wither away at once, for they are severed from the root which nourished and matured them. We do not say that the American plans for superior education lead to cramming; we merely point out an obvious cause of danger.

But we must give as complete an account as we can in a small space of the last wonderful birth of the American earnest zeal and lofty conception of the idea of a University. Nowhere is this idea realised as it is at the Cornell University at Ithaca (N.Y.), an institution in which, in conformity with the founder's own conception, 'any person can find instruction in 'any study.' Mr. Ezra Cornell, a private citizen of New York State, adding from his own resources £200,000 to the Central Government endowment—which is allotted to each State for the special purpose of founding colleges of Agriculture and Mechanical Arts—has achieved no ordinary fame in having his name for ever associated with an institution which is, in many respects, without a rival in the whole world. Every study that has, in any age, been considered as forming a part either of the training of the mind or of the practical exercise of its faculties, finds here a representative department. There is, to use the words of the prospectus, 'no fetichism in regard to any single course of study'—all stand on the same footing; all have an equal chance afforded them. The six main divisions are—(1) Agriculture; (2) the Mechanic Arts; (3) Civil Engineering; (4) Military Engineering and Tactics; (5) Mining and Practical Geology; (6) History, Social and Political Science. These again are subdivided into forty-six special departments, each with its separate professor and its distinct course of study. Then, besides the professional staff which is responsible for the daily teaching of the various classes, there is the novel feature of a virtual affiliation of all the highest colleges of the United States with this, by engaging their most eminent professors to take part in the instruction given in the Cornell. These are attached to the professional staff under the name of non-resident professors. The valuable services of Agassiz, Gilman, Dwight, Lowell, Dana, Noah Porter, &c., are thus secured to the insti-

tution. These gentlemen give courses of from twelve to twenty lectures yearly, which are open without charge to the public of Ithaca, as well as to all the students. It is needless to add that all the material educational machinery—laboratory, library, museum, gymnasia, observatory, &c.—is on a scale corresponding with the fundamental idea. Everything is of the best modern type—excellence, not cost, being the point of consideration.

There are a few exceptional points of interest in the idea and the machinery of this university, which deserve further illustration. First we note, what we have referred to already, the extraordinary range of the curriculum, which simply comprehends all human knowledge, theoretical and practical. In consistency with this idea, the educational machinery embraces the workshop and farmyard equally with the laboratory, the museum, and the professor's class-room, and, in short, arrangements are here made for teaching everything that anybody can desire to learn. Everybody, moreover, who goes to Ithaca has 'university liberty (a singular expression) in the choice of studies;' in other words, there is no prescribed course. The constructors of the programme urge the great advantage of thus allowing the student to choose the studies that he likes, inasmuch as 'discipline (*i. e.*, mental discipline) comes by studies which are loved, not by studies which are loathed.' We very much question, however, the correctness of the principle thus laid down, if it is to be strictly interpreted. It may be wise, on the whole, to allow, under the circumstances, an unrestricted *libertas discendi*, but certainly not, as far as our judgment goes, for the reason given. The very idea of mental discipline seems to us to involve self-denial, restraint, patient toil, endurance, and is, in fact, the fruit of the experience gained by contending, by agonizing, as it were, with opposing forces. Such discipline is surely not gained as a matter of course, by doing merely the things we like and eschewing those that we dislike, but mainly by the contrary course of action. Few men probably have ever gained eminent rank in arts, letters, or public life, whose position was not greatly due to the fact of their being made by circumstances to do things they did not like. Their conquest over difficulties, and therefore over themselves, made them what they are. We do not wish, however, in making these remarks, to seem captious, but we do wish emphatically to demur to the principle laid down, as the reason of a very important regulation. Experience will at length decide the question at issue; but if in the meantime it should be found that the studies which are easy attract much of the love, and those which are difficult much of the loathing,

that result will only show, what was known before, that American students are, after all, very much like those of other countries.

The framing and the execution of the laws necessary for preserving order are, for the most part, devolved on the pupils themselves. After much deliberation, the authorities decided to adopt 'neither a military, nor the ordinary collegiate discipline,' but the 'free university system of Continental Europe, where comparatively little is done by college police, and much is left to the students themselves.' 'In this system,' they remark, 'the university is regarded neither as an asylum 'nor a reform school. Much is trusted to the manliness of the 'students. The attempt is to teach the students to govern them-'selves, and to cultivate acquaintance and confidence between 'Faculty and students.' The author of 'Tom Brown,' in his interesting article in the July number of *Macmillan*, gives evidence that the plan thus adopted at the foundation of the university has proved efficient. In an institution to which the great bulk of the students resort for the purpose of real study, and in which disorder would defeat the very object in view, it is easy to see that arrangements are possible, which, in our older universities —which are for the most part attended by those who intend to study as little as possible, and generally carry out their intention—would be impracticable; but we quite agree in spirit with the author just quoted, in the wish that some stern authoritative voice were appointed to thunder in the ears of hundreds of the young men who are carrying on at Cambridge and Oxford the farce of 'study,' the old command—'*aut discite aut discedite*.' The expulsion of the drones from the hive would be a great gain for English education.

In order to promote what is certainly a very desirable object, a more free and sympathetic intercourse between professors and students, it is recommended 'that additions be made to professors' salaries, expressly as an indemnity or provision,' to meet such expenses as might be involved, and arranging for social meetings between the parties concerned. 'The same prin-'ciple which has led wise Governments to make extra allowances 'to ambassadors, for the express purpose of keeping up genial 'social relations with the people among whom they are sent, is 'the basis of the experiment now suggested.' We are not informed what success has attended this novel experiment.

Among the regulations, there is one curiously illustrative of the business quality which prevails in all American arrangements. It is, 'that the university will tolerate no feuds in the Faculty;' and it is founded on the fact 'that the *odium theologicum* seems

'now outdone by hates between scientific cliques and dogmas.' The remedy is sharp and decisive: it is ordered that 'in case 'feuds and quarrels arise, every professor concerned be at once 'requested to resign, unless the disturbing person can be identi- 'fied beyond a reasonable doubt,' and 'that all concerned be replaced by others who can work together.' 'Better,' it is added, 'to have science taught less brilliantly than to have it 'rendered contemptible.'

Another of the notable features of this unique university is the encouragement (not, however, the compulsory obligation) of daily manual labour on the part of the students, with a view both to improving their bodily health, and enabling those whom it may concern to obtain the means of pursuing their education at Ithaca. It appears that about a fifth of the five or six hundred students of the institution have availed themselves of the option given them. The experiment is yet in its infancy, and no positive judgment can as yet be formed of its ultimate success. It will probably not become a permanent feature of the university. The time must arrive when the labour now beneficially employed in the establishment itself will no longer be needed, and the directors have no intention of setting up workshops in rivalry of the industries of the country.

The last feature to which we shall refer, is the treatment of the religious question. It is characteristic of the country in which the university is situated, and indicates the condition of things to which—as we believe for the honour of 'pure and undefiled religion'—we are tending in England. So long as religion, or what is called such, is so closely connected with social station, wealth and respectability, that 'each seems either'—religion being respectability, and *vice versâ*—it is difficult to distinguish that which is 'pure and undefiled' from that which is not. The discussion of the principle, however, is no part of our programme, and we therefore append, without further comment, the official regulation:—

'The Cornell University, as its highest aim, seeks to promote Christian civilization. But it cannot be sectarian. Established by a general Government which recognises no distinctions in creed, and by a citizen who holds the same view, it would be false to its trust were it to seek to promote any sect, or to exclude any. The State of New York, in designating this institution as the recipient of the bounty of the general Government, has also declared the same doctrine. By the terms of the Charter, no trustee, professor, or student can be accepted or rejected on account of any religious or political opinions which he may or may not hold.'

But we must stay our hand, while we leave an abundance of

interesting material untouched. We have aimed at presenting an idea, as complete as our limits permit, of the vast machinery employed in conducting the higher education of America. The features which it has in common with those of similar institutions in the Old World, we have not dwelt upon. They can easily be imagined. Those, however, which are typical and illustrative of the remarkable public spirit, energy, zeal, and intelligence which characterize the people, we have endeavoured fairly and candidly to display.