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THE CANADA  
EDUCATIONAL MONTHLY  
AND SCHOOL MAGAZINE.

NOVEMBER, 1884.

ADDRESS AT THE CONVOCATION OF UNIVERSITY  
COLLEGE, 1884.\*

BY DANIEL WILSON, LL.D., F.R.S.E., PRESIDENT.

WE meet once more to-day in our college hall to enter upon a new year's work with all the assuring promise that healthful progress in the past and the ever-increasing numbers of our students can supply. The numbers admitted now considerably exceed those of any former convocation. Out of 240 candidates who presented themselves from the various Collegiate Institutes and High Schools of the Province at the University matriculation examinations of the present year, 204 candidates, representing fifty-five educational institutions, were successful. At the head stood Upper Canada College, successfully carrying off sixteen First-Class and ten Second Class Honours; and Toronto Collegiate Institute with the same number of First-Class, and eight Second-Class Honours. Whitby and St. Catharines Collegiate Institutes followed, each with ten First-Class Honours, and with

eleven and seven Second-Class Honours; and then followed successively, Woodstock, St. Mary's, Brantford, Perth, Hamilton, and the other Collegiate Institutes and High Schools of the Province, with their well-won honours in the great annual competition in the University Hall. Of the successful competitors, upwards of a hundred of the most distinguished among them have already entered, as students of this college, to pursue the full course for the degree in Arts, in addition to other new entrants as non-matriculated students. When our roll is completed for all the years, we have good reason to anticipate that our numbers will show greater progress than in any previous year. Thus encouraged, we re-assemble, teachers and students alike, invigorated by the rest of the long vacation, which to some of us has had an altogether novel charm from the share we have been privileged to take in the meeting of the representatives of British science

\* Revised by the author for THE MONTHLY.

in Canada. To this notable incident of the year we may justly look for fresh incentives to exertion, alike by professors and students, in all departments of our college work. The appeal to us for workers ready to bear a willing part in accelerating the progress of investigation and discovery is one which we should be recreant to our high responsibilities if we slighted. We are invited to share in a triumph, the certainty of which is assured, whatever may be the response from us. As Lord Rayleigh remarked in his inaugural address: "Science knows no retrograde movement. Increasing knowledge brings with it increasing power; and great as are the triumphs of the present century, we may well believe that they are but a foretaste of what discovery and invention have yet in store for mankind. Encouraged by the thought that our labours cannot be thrown away, let us re-double our efforts in the noble struggle. In the Old World and in the New, recruits must be enlisted to fill the place of those whose work is done. Happy should I be," added the noble president, "if, through this visit of the British Association to Canada, a larger measure of the youthful activity of the West could be drawn into this service. The work may be hard, and the discipline severe, but the interest never fails, and great is the privilege of achievement." I can myself look back over the long interval which bridges the gulf between early youth and age, to the first meeting of the British Association at Edinburgh, and still more vividly to that of 1850, in which, for the first time, I was privileged to take a part in its work; and reflect with peculiar interest on the fact that it was then that the rarely gifted youth, Clark Maxwell—to whom Lord Rayleigh has since succeeded in the Cambridge Chair of Experimental Physics,—with modest courage made his first appearance in

the Section of Mathematics and Physics, and challenged the veteran, Sir David Brewster, in his own special domain of optics. Nor can I now reflect with other than keenest interest, in addressing the alumni of this College, on the stimulating influences then exerted over many ardent young minds, the fruits of which have been gathered in later years. The welcome which Canada has given to the leaders of British Science may well suffice to awaken high hopes in relation to all intellectual culture; reminding us of the wondrous vistas opening out to the modest searcher into nature's secrets; and the value which attaches to every suggestion of a novel truth, and every detection of those hidden laws which reward the diligent accumulation and interpretation of facts. Science has in recent years received some adequate place in our university requirements and collegiate instruction. Let us hope that it will derive a fresh impetus from our intercourse with veteran explorers, to some of whom we owe discoveries that have vastly accelerated the world's progress, and advanced alike its intellectual and material wealth. In experimental science the training now encouraged in the college laboratories is replete with promise. The present generation of Canadian students has opportunities and incentives such as were wholly unknown in very recent years; and while there are still departments of the natural sciences in which we recognize the pressing need of additions to the practical appliances of the lecturer, and especially in certain branches of biology, and in electricity: yet in other branches of physics, as in optics, acoustics and dynamics, the apparatus now available to teachers and students in this college elicited remarks of admiration, no less than of surprise from some of our recent visitors best qualified to judge of their practical value. But

while we view with unalloyed satisfaction the due prominence given to physical sciences, there is no disposition to relegate to an inferior place the study of the classics, or of comparative philology and all the invaluable training which philosophy and literature supply. The student of science will indeed be very inadequately equipped for his work if all that we owe to Greek philosophy lies beyond his reach. In the departments of mental and moral science, of ancient and modern languages and literature, and of history, the appliances needed to supplement the lectures of an efficient staff are mainly to be looked for in a well-stored library; and while we have yearly to deplore the limited fund available for the college library, nevertheless its carefully selected literature, now numbering nearly 26,000 volumes, is creditable to our young college at the accumulations of a single generation. And if we look with satisfaction on the increase of valuable appliances in every department of teaching, there is still more reason for congratulation by the friends of higher education on the growing numbers of our students. We have to contend with the honourable rivalry of kindred institutions eager to pass us in the race. We have also to encounter the detraction of ignoble rivals who strive in vain to discredit us by their misrepresentations. So long as we are able to point to such practical evidence as our growing numbers supply, in proof of the favour with which University College is now regarded by the people of Ontario, we can afford to smile at such detractions. It is impossible for those who, like myself and my old friend Professor Chapman, recall the little handful of students with whom we entered on the work of this college upwards of thirty years ago, to look with other than feelings of pride and gratification on the students as they muster here

to-day in our large, yet inadequate Convocation Hall. They sufficiently indicate how far we have already outgrown what, when originally built, was supposed to be of needlessly ample dimensions. But a novel feature invites attention now. The University has for years thrown open its competitive examinations and honours to lady students; and in this none has more heartily sympathized than myself. But such a step necessarily led to the demand for facilities of training in some degree commensurate with those enjoyed by the students of University College. On this subject I cannot do better than quote the address delivered by me in the Music Hall of this city fifteen years ago, in inaugurating the first movement for the higher education of women. The aim of the association then formed was, as I said, "to secure for ladies facilities for training in the higher departments of mental culture in some degree corresponding to those already available for young men. The liberal scale on which this Province has provided for education in the higher departments of learning has already won for it an honourable pre-eminence among the States and Provinces of this Western Hemisphere. But the ample provision thus secured for the training of young men in letters, science, and philosophy, only renders thereby the contrast more striking and invidious which leaves to the other sex nothing beyond the Common and the county Grammar School. The need of something more cannot be doubted. To what extent the want is as yet felt among ourselves the present movement is designed to test;" and the question was accordingly then submitted to the ladies of Toronto, and of the Province at large, whether there really existed among them such a desire for higher culture, and such a willingness to do the work of actual

students, as to render it advisable to organize a scheme for their higher education. In recent discussions on this subject the two essentially distinct questions of co-education of young men and women, and of the higher education of women, have been so confounded as to prove how very partially this important educational question has been studied. As to the wisdom and the great value of the latter I have ever entertained the strongest convictions; nor can I better present my views on the subject than by repeating the words addressed to a Toronto audience years ago. "There is no country in the world," I then remarked, "where woman enjoys more leisure and independent freedom of action than in this Province; emancipated as she is alike from sordid cares and from the oppressive exactions of social conventionalities. If men toil with even undue ardour in the pursuit of wealth, they are well content that sisters, wives and daughters enjoy its rewards. It is a new social organization in which, unconsciously, is being conferred on woman all which once pertained to the world's privileged orders. But let us not sacrifice thereby that womanhood which forms the fit counterpart to England's vigorous manhood. Let us not strive, as it sometimes seems to me is the result in neighbouring States, to clothe woman in all that is costly, surround her with all that is attractive and luxuriant, and then, leaving her to her own resources, exclaim:—'These be the lilies, glorious as Solomon's; they toil not, neither do they spin.' May we not rather look to woman for the true leisure class, for whom the great world of thought lies invitingly open as her legitimate sphere?" Such were my sentiments years ago, when the subject of the higher education of women had to be urged on public consideration; and such they remain, un-

changed. But to the idea of a true woman's college for Ontario, its Legislature has thus far given the negative; and I can only say for my colleagues, as for myself, that so long as co-education is the authorized system in University College it will be our earnest endeavour to make it accomplish for our fair undergraduates every advantage that the plan is capable of. That it is the best system few indeed have the hardihood to affirm. The Minister of Education, in his place in Parliament, has frankly stated that "if it could be had, he would prefer if something like Newnham Hall at Cambridge could be procured"; and, so far as appears, he expressed in this the unanimous sentiments of his colleagues; one of whom unhesitatingly condemned the plan of co-education, and protested against the disposal of so grave a question on mere grounds of economy. So far the question has been dealt with at the last moment with no apparent recognition of the gravity of the issues involved. I am reluctant to believe that a subject of such importance in its bearings on the future character and social life of our young country has received its final settlement on mere grounds of economy; or that it is vain to look among Canadian statesmen for men "too fond of the right to pursue the expedient." Economy, however is undoubtedly in favour of the present plan. Co-education is cheap; and while the little Anglo-Canadian minority in the Province of Quebec, who borrowed from our Toronto movement for the higher education of women the plan which they have successfully prosecuted till now, are furnishing to McGill College by private liberality the means for an efficient system of academic training specially adapted for its lady students, the wealthy Province of Ontario, which has hitherto prided itself on

its thoroughly organized school system, adopts a plan confessedly inferior, because it is cheap.

In strict fulfilment of my duty as President of this College, I have laid before the Minister of Education, and through him before the Government, my reasons for objecting to the arrangements proposed. I have done it in the interests of University College. But I have done it still more in what I believe to be the true interests of women. We shall, indeed, under the present system have lady students; and I most cordially wish them success in their honourable struggle for intellectual training; but I do not believe that co-education will meet the demands of the future. Nay, I feel assured that the President of Michigan University, speaking with all his ample experience of co-education, is right when he frankly says that after all has been done to throw open our halls to them, the majority of young women seeking higher education will do so at colleges specially designed for women. If this be so, then the system now introduced will fail in that incentive to the women of Ontario, as a class, which is needed to beget among us the refining influences enjoyed by a community where highly educated women predominate, and give that intellectual stimulus which I venture to think is still greatly needed among ourselves. The influence of gifted mothers on their sons has long been recognized. The daily companionship of cultured wives and sisters cannot be less influential in lifting such a community as ours above the dead level of mere greed of gain; a community in which it is still far more by conventional phraseology than from any true aptness of the term, that we can separate law and medicine from trade and commerce, as professions specially devoted to letters or science. I have protested in former years

against the mischievous idea that the purpose of an arts course is merely for professional training. No nation can flourish by such a mere trading in knowledge; or hope to reap the rich rewards which it supplies, except as on eleemosynary dole from more favoured lands. The study of the humanities is a significant academic term, not wholly obsolete in our universities, and pointing to higher aims than the mere equipment for professional emoluments. But if the narrowing of higher education to such training for professional life is a mere trafficking with knowledge on the part of men: too many of whom must, however reluctantly, be contented so to equip themselves for the battle of life; how much more undesirable is it that we should have only professionally educated women? In the grand work of education their services have long been welcomed, and there ought assuredly to be no distinction between the educational facilities and acquirements of teachers of either sex. To those ladies, as yet few in number, who seek a fit vocation in the practice of medicine, I wish nothing but success—success in practice, no less than in training, wherever their services are in demand. In so far as any of the so-called learned professions are available for women, let them have every facility for needful preparation. The amenities of the bar, and the courtesies of a cross-examining counsel, have not yet reached such absolute perfection that we laymen need look with apprehension on the possibility of a learned Portia intruding on their debates. But education in its highest sense means something distinct from this. It means education based on the love of knowledge for its own sake; and widely diffused, so that it shall leaven the whole community, and make of us an educated people. For this purpose we stand peculiarly in need of

highly educated women, through whom we may look for intellectual culture extending its refining influences even into the stormy arena of political contention, while it places before the rising generation a humane and ennobling standard such as we can very partially lay claim to now. This is what I understand by the higher education of women; and this the present scheme tends to retard, rather than to secure. It is in the highest interests, not of true womanhood only, but of Canada's true manhood also, that I have urged for years the crowning of our Provincial educational system by the establishment of a college for women, adapted for all their special requirements, and not less adequately organized and equipped than that for young men. But, while it is right that I should give free expression to my opinions in reference to a change in our college system of graver significance than anything that has been done since the secularization of the university in 1850, we are here to carry out whatever system the Legislature may determine; and it will be our aim in the future, as it has been our successful endeavour in the past, to carry it out to ever-progressive results.

But our growing numbers, and the expansion of our university curriculum to place it abreast of the science and scholarship of the age, have another aspect for us in the anxiety, not unnaturally aroused in the friends of the institution, as its expenditure more and more approximates to the annual revenue from the endowment. I am not disposed to trouble myself with our claims on the Provincial treasury. It is a mere truism that the Government are bound to see that the Provincial College does not fall behind the wants of the people and the progress of the age. But I have never been able to sympathize with those who imagine that a Provincial College

is shut out from all hope of private liberality. England's and Scotland's universities, no less than Trinity College, Dublin, are to all intents and purposes State institutions, subjected to the most radical changes in their systems, constitution, and denominational oversight, by parliamentary enactments, and supplemented by State funds. Yet they largely share in private beneficence. Nor can I doubt that University College will yet rejoice in generous benefactors, whose names will live in honourable remembrance, associated with the chairs they have founded and the resources they have supplied. But, meanwhile, the inadequate resources of all our colleges, provincial and denominational, have given a new stimulus to the scheme for an amalgamation of colleges, unsuccessfully aimed at in the University Bill of 1853; and many friends of higher education are asking anew whether some plan of united action cannot be devised which shall secure healthful co-operation, and an economizing of the resources of the colleges of Ontario. My personal relations with the heads of other colleges are of so friendly a nature that I can look forward with nothing but pleasure to any practical scheme of confederation which shall bring us into closer union in promoting the great object of higher education which we have all at heart. But it is not for us, whose system is dictated to us by the Legislature, to originate any such scheme. As to University College, it is not only growing in numbers, but, I fully believe, increasing in efficiency; and, if not unwisely tampered with by the reckless spirit of utopian innovation, I entertain no apprehensions as to its future, financial or otherwise. It has a right to say to the Legislature, without invidious disparagement of other institutions, that it is doing the work for which it was established: and has

thus far been found equal to the demands on its educational resources. Any scheme which aims at crippling it, or which, however undesignedly, is calculated to detract from the high standing it has achieved, or to diminish the advantages which it now offers to all students, I should resolutely oppose. I will add, moreover, that while ready to enter in the most cordial spirit on any wisely devised scheme of confederation, I retain no less strongly than ever my conviction of the vast superiority for a community like this of a Provincial system of education, to any denominational scheme of schools or colleges. In a Christian community like ours, secular education may be safely left under the wise control of public opinion; ever sensitively jealous of any encroachment on the cherished religious convictions of the people. Toronto may claim in this respect a character which will stand comparison with that of any other city on this continent; and the Provincial College is too largely identified with the highest interests of the community to assume a position in any degree antagonistic to it. As to the teaching of the sciences, which is regarded with most suspicion, from a supposed tendency of such studies to lead to scepticism, if not to absolute materialism; the recent utterances of Lord Rayleigh from the chair of the British Association for the Advancement of Science, supply a fitter answer than any words of mine.

If indeed, as he pointed out in his inaugural address, in spite of all the investigations of modern science, the unique phenomena of the soap bubble still remains an unsolved mystery, the student of science may well shrink with modest sensitiveness from dogmatizing on the mysteries of the universe. But there is a strange unreasonableness in vogue. When we hear of a sceptical lawyer, or come in contact with an unbelieving trades-

man, we do not jump to the conclusion that law and commerce are inimical to spiritual truth; yet such is the unjust measure dealt out to science. "It is true," as Lord Rayleigh remarked, "that among scientific men, as in other classes, crude views are to be met with as to the deeper things of nature; but that the life-long beliefs of Newton, of Faraday, and of Maxwell, are inconsistent with the scientific habit of mind, is surely a proposition which I need not pause to refute." All one-sidedness is injurious; and a too exclusive devotion to any speciality is unfavourable to a well-balanced mind. The theologian will derive healthful aid from scientific research; and the metaphysician stands peculiarly in need of its practical revelations; but only the influence of a morbid jealousy can concentrate suspicion on those students of nature, as a class, who are not only unwearingly engaged in the search for her hidden laws, but who systematically cultivate a love of truth for its own sake. That such men are less likely to sympathize with the profoundest truths of religion than our traders and merchants, our lawyers or our politicians, is a fallacy which I will not believe needs serious refutation. Here, therefore, I feel justified in affirming in the strongest terms I can utter my disapproval of any scheme that would aim at placing the sciences under a theological censorship. Religion has everything to gain, and nothing to dread from the amplest freedom of scientific research. Let knowledge grow from more to more. Give it freest scope. Truth only, all truth, will be the gainer. In this free commonwealth of Canada we cannot, if we would, shut up our young men in cloisters, and administer to them knowledge in prescribed doses. The literature of the day abounds with crude and shallow scepticism, the miserable spawn of superficial smatter-

ings of science; and the response of the indignant theologian is by no means invariably characterized by the knowledge needful to supply the antidote. The only true cure is to be found in deeper draughts at the great fountains of truth—

“For shallow draughts intoxicate the brain,  
But drinking deeply sobers us again.”

The fountain is indeed inexhaustible; for the domain of science embraces a universe in which the physicist can

assign no limits to space, and the metaphysician concurs with the theologian in realizing no end to time. Here, therefore, there is for the student no finality—

“No height of daring is so high, but higher  
The earnest soul may yet find grace to climb;  
Truth springeth out of truth; the loftiest flier  
That soareth on the sweep of thought sub-  
lime  
Resteth at length; and still beyond doth  
guess  
Truth infinite as God toward which to  
press.”

## HIGHER EDUCATION OF WOMEN.\*

BY PRINCIPAL SIR J. WILLIAM DAWSON, C.M.G., LL.D.

IN introducing this subject it may be well to recall the history of the movement in relation to the higher education of women in connection with the University. Our attention was first directed to it at the time of the establishment of the McGill Normal School in 1857, by which we were enabled to carry on classes for the preparation of women for the higher positions in the profession of teaching, and which has undoubtedly given a great stimulus to education generally throughout this Province. A little later the attempt was made to render the benefits of the Normal School and of our classes in the Faculty of Arts available to ladies not intending to be teachers; and at one time classes of ladies from the school of the late Miss Lyman, regularly attended my lectures in our old rooms at Burnside Hall. These efforts were, however, very imperfect, and could not be expected to succeed unless followed up with more definite provision for the work, and were not long

continued. In 1870, when the University appealed to its friends for additional endowment, at a meeting held in the College library, in February of that year, the Rev. Dr. Wilkes moved a resolution to the effect that the University should, as early as possible, extend its benefits to women. The resolution was carried unanimously, and our late Chancellor, Judge Day, pledged himself that it should receive attention. It was in pursuance of this resolution that on my return from England in the autumn of the same year, I endeavoured to enlist the leading ladies of the city and our college professors in the scheme for a Ladies' Educational Association, similar to those then recently established in the mother country. This association has since that time been one of the recognized institutions of the city, and has done an incalculable amount of good; though in recent years, more especially since the institution of the High School for Girls and of the Examinations for the Associate in Arts and Senior Associate established by this

\* A Report presented to the Corporation of McGill University, October, 1884.

University in conjunction with the University of Bishop's College, there has been a growing demand for a more definite and systematic training, which those who had been active in connection with the Ladies' Association and the examinations for women, felt must soon be supplied. As an early indication of the feeling of thoughtful and educated ladies, I should not forget to mention the Hannah Willard Lyman Memorial Fund, founded by pupils of that eminent educationist, and placed in the hands of this University, in anticipation of the establishment of a college for women under our auspices. Further indications were the endowment of the Trafalgar Institute as a college for women by the late Donald Ross, and the bequest of the late Miss Jane Scott; though these were not in immediate connection with this University. The means for carrying out our wishes did not, however, appear to be available; and when, last year, the Rev. Dr. Murray brought the subject before the Corporation, by his resolution in favour of the admission of women, there seemed no nearer prospect of effective action than at any previous period. In these circumstances, the Corporation, after collecting by means of a committee a certain amount of information, in my opinion wisely determined to wait for still further facts and developments before committing itself to any decisive action. There was the more reason for this, inasmuch as very partial success had attended the admission of ladies to the classes in some of the universities in this country, while in the University of Toronto the subject was actively discussed, and Dr. Wilson, President of University College, had taken strong ground against the method of mixed classes. Some of the best models for imitation seemed also to be those in use in the mother country, respecting which our inform-

ation was very imperfect, and to some extent contradictory. In connection with this decision, I proposed, in visiting Great Britain, to study in as great detail as possible the methods in operation in that country, and to report on my return as to their applicability to our circumstances.

#### EDUCATION OF WOMEN IN BRITAIN.

In Great Britain, there can be no question that the movement for the higher education of women has become one of the most popular of the day; and in the interval between my visit of 1870 and that of 1883, the progress in this direction had rivalled that in popular education connected with the institution of board schools, and that in technical education arising from the founding of the numerous local colleges of science and art. All of these are products of the last ten or fifteen years, and unitedly they are effecting a stupendous educational revolution. Perhaps no indication of the importance attached to the higher education of women in England could be more impressive than the character of the meeting of the convocation of Oxford, in May last, for the final vote on the admission of women to the higher examinations, at which I had the pleasure of being present. The meeting was said to be one of the largest on record, and the Sheldonian Theatre was crowded with spectators of the highest class, who welcomed with acclamation the declaration of the result of 464 votes in favour of the new regulations to 321 against. Yet the question at issue was merely that of extending to women the privileges already granted by the University of Cambridge; and the number of students in the two Halls attached to the University of Oxford does not exceed fifty, though under the new arrangements it will probably increase.

In considering from a practical point of view the provision for the

higher education of women, two subjects specially attract our attention. *First*, the Means and Methods of Educational Training, and *Secondly*, the Examinations and Distinctions to which education leads. These are no doubt closely connected, since education without any examinations or degrees is deprived of its most valuable tests and *stimuli*, and since examinations tend to guide the efforts of educators; while on the other hand examinations without adequate means of genuine education become mere inducements to cramming. These two departments of the work may, however, be considered separately, with some advantage in so far as the clearness of our conceptions is concerned.

#### GENERAL METHODS AND RESULTS, IN BRITAIN.

The most general statement that can be made with reference to the educational side of the question in the mother country, is that the training of woman in the higher subjects is everywhere based on the curriculum of the colleges for men. At first sight it would appear that courses of study still somewhat hampered with mediæval precedents, and largely controlled by the requirements of the examinations for learned professions, would not be perfectly adapted to the education of women in our time. But though this may be admitted in the abstract, in practice it is felt that it is better for the interests of women that they should attain to the standard established as the result of experience, and accepted as sufficient in all cases of educational and other employment where a liberal education is required. It thus happens that the ladies insist on having the same course of study and being subject to the same examinations with the male students. At the same time they avail themselves fully of those exemptions and options

which are connected with honour studies, and which now give so great a range of possible training to the senior student. In this way there can be no doubt that experience will settle the precise lines of study most desired by and suitable for women; but the experience is scarcely of sufficiently long duration fully to determine this, and in the meantime much of this discussion as to the capacity of women for the intellectual work required of men, and as to possible injury from their being subjected to it, may be set aside as purely theoretical, or may be left to be solved by the judicious practical trials of experienced educators, and by the good sense of the lady students themselves. The last report of Girton College, Cambridge, which is one of the older college for women, gives, however, some interesting figures on this point. The number of students of the College who have taken Degree Certificates of the University since its establishment, stands as follows:—

Mathematical Tripos.....	24
Classical Tripos.....	28
Moral Science Tripos.....	9
Natural Science Tripos.....	15
Historical Tripos.....	6
Theological Tripos.....	1
Ordinary Degree.....	24
	—
Total .....	107

The report of Newnham College, which has not been so long in operation, and reaching up only to 1883, is as follows:—

Mathematical Tripos.....	5
Classical Tripos.....	10
Moral Science Tripos.....	9
Natural Science Tripos.....	9
Historical Tripos.....	11
	—
Total .....	44

showing a somewhat larger proportion in favour of Natural and Moral Science, and History.

These lists show that the women distribute themselves over the honour subjects in the same manner with

men, and that their tastes and capacities lead them quite as much to the older mathematical and classical studies as to the more modern honour subjects, the proportion of successful candidates for mathematical and classical honours being in the Girton list, to those for all the other subjects as 52 to 31, and in the Newnham list 15 to 29, or in both 67 to 60.

It is worthy of note that no less than forty-seven of the ladies in the Girton list had become professional teachers, and most of them in high departments of the profession, while only one is noted as having entered any other profession. This is a fact which indicates the prevailing determination of educated women to the profession of teaching, and the probability that this profession will ultimately fall largely into their hands. I have not the figures for Newnham, but have reason to believe the proportion there is quite as large.

#### SEPARATE OR MIXED EDUCATION.

In Britain, as in this country, the question of separate or mixed education of the sexes has been much discussed; but in this, as in other matters, the practical and free genius of the English people has set itself to work out the problem in real life, instead of debating it in a theoretical manner, and consequently we find a number of experiments in progress. These may be classified under three heads: 1st. What is sometimes called in this country "co-education," or the education of both sexes in mixed classes; 2nd. Separate education in colleges specially for women; and 3rd. Intermediate or eclectic methods, in which the two first are combined in various proportions. The co-existence of these different methods has the good effect of enabling parents and students to make a choice of systems, and to avail themselves of that which they prefer, without estab-

lishing anything more than a friendly rivalry between the different kinds of institutions.

I found the method of mixed classes in successful operation in University College, London, and in University College, Bristol, in both of which women are admitted freely into the ordinary classes. I did not hear of any serious practical difficulty, except in the case of the French class at Bristol, in which a separation had become necessary, but this was attributed rather to the number of students than to any serious failure in discipline.

In addition to the cheapness and facility of this method, it was claimed for it by its friends that it fitted women better for the struggle of life in competition with men, and was thus suited to those who required this hardening process, because in the present social condition of England they would have to earn their own subsistence. It does not appear, however, to be commending itself to the taste of women generally, as the number of women availing themselves of it has of late years diminished rather than increased, and in Owens College, Manchester, where it was attempted under what seemed favourable circumstances, it has been abandoned. In London its success has evidently depended greatly on the prestige of University College, and on the existence of several good colleges for ladies alone, which allow those who prefer the separate system to pursue their education in this way. Some facts which came to my knowledge would lead me to infer that the education in mixed classes may be more dangerous to the health of young women than that in separate classes, but this may depend rather on the circumstances of those who enter these classes than on the system itself.

The method of education in separate colleges for women is carried out in the great college of Cheltenham,

which has as many as 500 pupils and students: in Bedford, North London and Milton Mount Colleges and in the King's College classes in London, and it is also to be pursued in the great college founded by the late Mr. Holloway, whose buildings are being erected at Windsor. I had much pleasure in visiting the Cheltenham College and in conferring with its principal, Miss Beale, one of the most zealous and able of the educationists of England, and who has brought this institution into the highest state of efficiency almost without extraneous aid. The college has an admirable building, which is eminent among English educational structures for the excellence of its arrangements for heating and ventilation; and in many respects it resembles the great American colleges like Vassar and Wellesley, except that it receives young girls and gives them a preparatory education, so that it embraces all grades of classes from those of an ordinary school up to those preparing for the honour, B.A. of the University of London, to which its students go up for their degrees. The class studying for the B.A. at the time of my visit was only twelve in number, the greater part of the students being content to pass in some of the previous examinations. Last year it sent up eight successful candidates for the B.A., and fifteen for the intermediate, formerly known as the first B.A. examination. Its teachers are ladies, some of them graduates of London, and the whole establishment is pervaded with an air of refinement and Christian influence quite different from that in ordinary colleges for men. The students do not board together in the college, but in separate houses, each under the care of a lady recognized by the college, and capable of superintending the studies of the students, or having a tutor for that purpose. Other colleges of this kind, though not so large

as that at Cheltenham, are conducted on similar principles, and a large number of the students who annually take degrees of the University of London are from institutions of this class.

The third method, which may be characterized as intermediate or eclectic, is that pursued at Girton and Newnham Colleges, Cambridge; Somerville and Lady Margaret Halls, Oxford, the Women's Department of Owens College, Manchester, and the classes of the Edinburgh Ladies' Educational Association. As existing at Cambridge and Oxford, which have taken the lead in this method, it is merely a development of the same system of separate colleges attached to the University, which is pursued in the education of men. Colleges for women come in as an ordinary feature in such an arrangement; and as it is usual for male students to pursue the greater part of their studies in their colleges under tutors, and to take advantage of intercollegiate or university lectures only to a limited extent, it naturally follows that the same rule should apply to the colleges for women.

I had the pleasure of visiting Girton, Newnham, Somerville Hall and the Women's Department of Owens College, and of conferring with Miss Louisa Stevenson, the Secretary of the Ladies' Association of Edinburgh. I am under special obligations also to Miss Bernard, the Principal of Girton, to Miss Helen Gladstone, the Vice-Principal of Newnham, to Miss Shaw Lefevre and Miss Haigh, of Somerville Hall, and Miss Wilson, of the Women's Department of Owens College, for kindness in answering my questions and in explaining the plans and regulations of those institutions; while I had also opportunities of discussing their methods and results with leading members of the universities with which these colleges are connected.

Newnham College, which may be taken as an example, has two halls, the South and North Hall, on the opposite sides of a road, at Newnham, a suburb of Cambridge. It is managed by a council of ladies and gentlemen, and is sustained by an association known as the Association for promoting the higher education of women. The resident staff consists of a principal, vice-principal, three lecturers and a secretary, all of whom are women. The Principal has special charge of the South and the Vice-Principal of the North Hall. Besides the resident staff there are a number of teachers, some of them lecturers and fellows of colleges and others ladies, engaged by the College to lecture to its students, and representing the subjects of mathematics, classics, moral science, natural science, history, divinity, English literature and modern languages. Students must be eighteen before entering. The course of study is based on the requirements of the University examinations, and all students are advised to take honour subjects. In pursuing some of these, it is expedient for them to attend the public lectures of certain of the professors of the University, and to this extent mixed education is allowed in

the senior years. The full course extends over nine to twelve terms, that is three or four years, and all students in residence must take the regular course, though certain courses of lectures are open to women, not students of the College, on obtaining permission of the Council. The buildings accommodate eighty students, and are plain, neat and well planned. Each student has one room, with a curtained recess for a bed. There are a library, study-rooms, class-rooms, and chemical and physiological laboratory, and a garden and lawn are attached to each hall for recreation. The students who attend classes in Cambridge, walk into town in all weathers, and wear boots and garments suited to the work. I had the pleasure, by request of my friend, Prof. Hughes, of delivering a short extempore lecture on the questions relating to *Eozoon* to a class of about twenty students, one-third of them ladies, in the Woodwardian Museum; and I found that the lectures of Professors Adams, Cayley, Dewar, Harcourt, Liveing, Lord Rayleigh, Seeley, Stuart and others, are open to the students of the women's colleges in their senior years.

(To be continued.)

## HINTS TO A COUNTY MODEL SCHOOL CLASS.\*

BY EDWARD SCARLETT, INSPECTOR PUBLIC SCHOOLS, COBOURG, ONT.

YOUNG LADIES AND GENTLEMEN ABOUT  
TO ENTER THE TEACHING PROFESSION.

I AM pleased to have the honour of welcoming you to our County Model School, where you will further prepare yourselves for the important work upon which you are about to enter.

The various vocations arising from a division of labour in civilized society require careful preparation for the right performance of the duties connected with them; and the success of any individual in any important calling is in direct proportion to the power of observation, energy and skill which it may be his pleasure to exercise. Nine-tenths of the failures of professional men of to-day are due to

\* An Address delivered to the candidates at the opening of the County Model School at Cobourg, on Tuesday, Sept. 9th.

a lack of innate perception and aptitude, the possession of which is peculiar to success in every calling in life, and to none more than to Public School teaching, on which depends the gravest and most momentous results.

You have come here to avail yourselves of the benefits of a training school,—an Institution of which we are justly proud, a credit as it is to provincial enterprise and local intelligence. The object will be not only to teach, or, rather, to improve you in the best methods of organization, school-government and the art of imparting instruction, but also to ascertain who possesses the genius of a live teacher. The last I hold to be the highest function of a training school, either Normal or County Model, as the teacher's certificate should now be a sufficient guarantee to trustees that the bearer is a teacher, and to the exact extent represented on the face of such certificate.

The influence you may exert for failure or success rests largely with yourselves. If you are of the right stamp, if you are a natural teacher, the best results will follow. Your school will be very much as you are, polite or vulgar, neat or untidy, thoughtful or otherwise—very much as you may direct. The manner of the teacher is better than gold to a section. Without seeing the teacher, I can obtain a very good photograph from the manner of the children, the appearance of the school-room and its surroundings. Again, show me a school-house, its furnishings and equipments, and I will tell you what kind of people live in the section.

In regard to visiting the homes of children under your supervision, I cannot direct you other than that it is especially necessary that you should be familiar with the home influences and circumstances of each child attending your school, in order the

better to understand how to deal with individual cases when difficulties arise. Consider the circumstances of a pupil before you are too exacting or severe. You may not find it the best policy to have pet visiting places. However if you think that the welfare of a section would be better promoted by what would please the parson best, let your communication be "yea, yea," or "nay, nay," for "Were't done when 'tis done, then 'twere well it were done quickly."

You will find it to your advantage to read some good school journal in order to make you familiar with new methods of instruction, conversant with the doings of the educational world, and cognizant of the changes peculiar to our present transition. Do not be anxious to adopt every new plan in teaching that you see or read about. Preserve your individuality, and do not take charge of school as a second edition of somebody else. It is quite common to imitate the weaknesses of people, and less natural to imitate what is most to be admired in them. This is why I regard the bearing of a teacher as a matter of paramount importance.

Children are very imitative; and the school-room exercises a powerful influence over habits, manners and tastes. I would not recommend you to acquire the habit of lecturing, when a few words will express what you wish to convey. The best taught schools in our country to-day are in the hands of teachers who talk but little. Your object should be rather to keep your pupils busy than to appear to be very busy yourselves. Less talking, more teaching, and more thoughtful work on the part of pupils, is what we are looking for. It is not so much what teachers do for pupils as what pupils do for themselves that gives potency and progress to our Public Schools.

Many of you are comparatively

young, and perhaps do not know how to value good health. I do not know that I could give a more wholesome recipe than faithful discharge of duty, plenty of out-door exercise and clear conscience. I would have you give especial attention to the instruction given by the principal and his assistants, to prepare cheerfully whatever lessons may be assigned, to watch

critically the teaching done during the term, to acquit yourselves creditably, and so to conduct yourselves that in time to come it may be a pleasure to those in any way associated with this institution to refer to the class of 1884.

I again welcome you to our Model School, where you have my warmest wishes for your welfare.

### SULLY'S "OUTLINES OF PSYCHOLOGY."

BY PROF. R. ADAMSON.

MR. SULLY'S contributions to Psychology have already secured for him so distinct a place as one of the most able and successful students of the science that a reviewer of his latest work is absolved from the pleasant task of merely general eulogy. It needs not to be said in many words that in the "Outlines of Psychology" ample evidence is afforded of the writer's power of acute analysis and felicitous statement, and that the reader will find in it not only a valuable compendium of much new work but also rich material for further reflection. Nor does it seem needful to offer any opinion as to the comparative merit of the book viewed in relation to such similarly planned treatises as may formerly have been accessible to the English student. It goes without saying that Mr. Sully's book, coming as it does at a time when psychology is occupying an unusual amount of attention and the material of the science is constantly on the increase, must take a position distinctly in advance of its predecessors in the same line. It embodies researches of a novel description, and it brings before the student views and lines of inquiry the importance and significance of which have been but recently recognized.

At the same time the circumstances which give to Mr. Sully's volume its fortunate position, as representing in compendious form an immense amount of new work in psychology, have other consequences and impose weighty obligations on the writer of a systematic treatise. It is an old theorem that form and matter go together, and certainly, in respect to any science, it is rarely possible for its material to increase largely in quantity without a change taking place in the fundamental notion, principle or method, which animates the whole and gives it a special place in the wide domain of knowledge. The period which has been so rich in detailed psychological work has been one of continued discussion in regard to the exact nature, the conditions, even the possibility of a science of psychology. The many treatises on psychology which represent that work offer to the student a very chaos of conflicting views in respect to all the fundamental problems of principle and method, and a teacher of psychology finds that his hardest, though perhaps not his least profitable, task is to give such an initial statement of the nature of his facts as shall be consistent and capable of development. That there are special grounds

of difficulty in taking the first steps in psychology is a well-recognized and much deplored truth, and one might add that it is likewise peculiar to psychology that the liminal difficulties cannot be evaded without the most disastrous consequences to the body of the exposition. In the objective sciences, that is, in those portions of knowledge in which the material is, so to speak, one-sided, in which no fact is contemplated save under the form of something capable of being presented as an object to a cognitive mind, it is possible to separate the strictly scientific difficulties from so-called metaphysical problems by mere reference to the marked difference of treatment. But it is one of the problems which the psychologist has to handle *in limine*—whether his facts can be viewed as objects merely, and if he be wise he will not allow himself to be misled by any shibboleths of the tribe of science. Terms like “orderliness,” “uniformity,” “law,” have but a formal significance, and must not be supposed to carry with them any decision of the real difficulty as to the nature of the phenomena within which order, uniformity, and law are to be manifested.

Psychologists of a former generation used often to include in their treatment a chapter on the difficulties which originated in the terminology of their science. They rarely exhausted these difficulties, and perhaps there would be no more useful section in a modern scientific treatise on the subject than that which should submit to the most careful treatment the sources of ambiguity in the terms inevitably employed in the investigation. Language, though rich, is far from rich enough to furnish equivalents for all the shades of significance that may call for expression, and, in tracing the development of so enormously complex a fact as the individual mind, the psychologist has

constantly to be on his guard against the erroneous identifications of different phenomena that are likely to arise from the employment of identical terms. Words always imply the stage of intelligence in which quite definite recognition of object and objective connection has been acquired, and cause us therefore serious perplexity when we are called upon to express either a simple phase of thought, or a merely abstracted portion, or the complex fact of recognizing an object.

It only remains to be added, that the vast extent of the material which the psychologist has to handle makes systematic treatment unusually hard; and perhaps it would not be unfair to say that, whether or not a science of mind be possible, it does not yet exist as a fact. In face of the phenomena of mind, psychology is at present much in the position in which mechanics was to the complicated forms of material change prior to the disclosure of the simplest laws of moving bodies. We are probably only on the way towards arrangements of our facts into relatively simple and complex, and are yet far from the stage at which systematic development of the whole is practicable. It is in view of the general problems arising from the exceeding complexity of the psychological data, the great difficulty of defining their nature, and the close relation of the inquiry to other lines of philosophical investigation, that one must examine any new presentation of the science; but before asking how far Mr. Sully's volume advances our insight, a word may be permitted on certain minor ends which the work may serve and probably is intended to serve. It is a text-book, that is, it offers a general introduction to the vast subject, an introduction suited to a first study; and further, it includes special reference to the theory of Education. In both respects, while the book gives much

that is valuable, much that cannot be got elsewhere and that is nevertheless indispensable, it appears to leave something to be desired. For the student who is beginning psychological work it is at once too long and too short—too long, because it has endeavoured to include almost every special line of investigation, too short, because it has been found necessary to refrain from the complete, exhaustive treatment of even cardinal difficulties. In my opinion, it is far more important that the student should be brought by careful and many-sided treatment of the more prominent phases of mental life to realise the general nature of the subject, than that he should be introduced to the special researches that have grown up in connection with each point in the complex history of mind. Such special researches have their value only when carried out on a well-secured basis, and they are even apt to mislead when taken up too soon. The considerations involved in them can only be appreciated by a fuller handling than is appropriate to a textbook, and brief reference is likely to convey a false impression of their exact nature. I do not say that what Mr. Sully gives us, in regard, *e.g.*, to the mechanism of sensation and to movement, is not in itself of high value, but merely that it does not seem material of a kind to be profitable to the student. On another feature of the book in which it bears on the wants of the student, the unity of conception or method implied in it, I shall presently comment; and I would add the expression of a wish, which will probably be shared by other readers, that Mr. Sully had found it possible to extend largely his bibliographical references.

I am in entire agreement with Mr. Sully in his remarks on the connection between Psychology and theory of Education; and certainly, were one

to draft a course of instruction for the training of teachers, Psychology should occupy an important place therein. I would add that, in my judgment, the study of the problems peculiar to the theory of education is of the highest value for the psychologist. These problems compel him to dwell on the gradual development of the mental life, and bring before him in a very suggestive way the variations in the nature of each phase of that life due to its development. But if a writer proposes to go beyond the general bearing of psychology on educational work, which is involved in the very conception of a regular order of mental development, he must, I think, take in more than Mr. Sully has found compatible with the limits of his treatise. He must be prepared to compare in detail the general rules of educational practice and the materials of education with his psychological doctrines. Only so can he attain the desired end of correcting and illuminating educational method. The short sections appended to the several chapters, in which Mr. Sully makes specific the reference to education, are too brief to represent all that is implied in his psychological analysis, and suffer moreover from being so broken up. Mr. Sully, however, may be encouraged to do what he is eminently fitted for, to deal systematically with educational theory, and we should gladly hail such a treatment.

Turning now to the work as representing a complete statement, in elementary fashion, of the facts of mental life, one is naturally attracted by the general arrangement of its parts, a feature by no means so external as it might seem. A brief introductory chapter on the Scope and Method of Psychology, a chapter supplemented to some extent by three Appendices, is followed by three chapters on Mental Operations and

their Conditions, on Mental Development, and on Attention, which form in conjunction the real introduction, the general treatment of mind as a whole. Then, following to some extent the traditional rubrics, come six chapters (v.-x. inclusive,) on Intellect, passing in review, successively, Sensation, Perception, Reproductive Imagination (memory), Constructive Imagination, Conception, Judgment, and Reasoning. Two chapters are devoted to the Feelings, simple and complex, and two to Mind as active or striving, Will and Voluntary Movement, Complex Action and Conduct. It does not seem unfair to say that the arrangement adopted is largely a compromise between the view which, starting with the unity of mind and the intimate connection of its fundamental features, endeavours to follow genetically its development into specially marked phases, and the view of the older empirical psychology, which fastened upon the specific differences of the developed phases and endeavoured to lay down for each certain generalizations or laws. To recognize the first view at all is something gained; to give a thorough statement of its implications, to carry it out systematically, and to bring it to bear upon the empirical generalizations of the older psychology, is a task which we think Mr. Sully is continually approaching in his treatment, but which he has not successfully carried out. The most valuable sections of his work are those in which he approaches, the task most closely, the chapters, *e.g.*, on Mental Development and on Attention, and portions of the chapters on the Emotions and on Will; the least satisfying are those in which he keeps more closely to the older forms of expression, (the chapters on Perception and Imagination, and particularly those on Thought (Conception, Judgment and Reasoning). The difference between the views, a

difference very imperfectly indicated by a brief statement, is so radical that such a constant struggle between them as I seem to perceive in Mr. Sully's exposition, is almost certain to weaken the effect of the whole presentation, and to make it to some extent a failure. Highly as I rate the value of Mr. Sully's volume, and much as I admire not only the completeness of knowledge which enables him to muster so many isolated facts but also the acuteness with which he treats a multiplicity of single problems, it does not seem to me that he succeeds in giving one complete, consistent view of the whole phenomena of mind.

The apparent conflict of views to which I have referred undoubtedly connects itself with and depends on the omission from Mr. Sully's volume of any full discussion of the point of view from which the facts of mind are to be treated, *i.e.*, of psychological method. One can understand the reasons which might weigh with a writer to induce him to omit the discussion, especially in the case of a text-book; for certainly the problem that has to be attacked is of unusual subtlety and complexity. But unfortunately the peculiar nature of psychology renders it quite impossible to dispense with the laborious work of definition and explanation, and an exposition where one can only gather imperfectly and from isolated parts the general idea of the whole on which the writer proceeds, must find itself embarrassed at various points and have always a certain misleading tendency. Mr. Sully fully recognizes that psychology has something peculiar, and invariably couples his description of it as a natural science with some qualifying remark; wherever he has to deal with the advance in complexity of the mental life his handling implies a more profound conception of the nature of the facts than is for-

inally enunciated; but he leaves the explicit statement unsaid, and the evil consequences seem to me to be apparent in more than one special disquisition in his volume.

For one would not demand a special treatment of the scope and method of psychology were the only result to be the more accurate classification of psychology in relation to natural science and philosophy, though even with that much would be gained. The pressing need is for a clear and unambiguous explanation of what the thinker takes to be the characteristic, peculiar features of the facts he proposes to systematize, an explanation which is but the explicit statement of the kind of consideration that he will apply to the several concrete phenomena as they successively present themselves in the course of his exposition. The difficulties in the way of defining one's point of view are so great; it is so easy to adopt a mode of speech that is radically unsound; it is so imperative that the one method should be consistently carried out—that the formal discussion of method seems to be imposed as an indispensable obligation on every expounder of psychological science. When one compares the various treatises that represent the cultivation of psychology since the Kantian era, one is struck by the enormous difference in detail that spring from fundamental differences of methodical view, and impressed with the conviction that an immense amount of labour must yet be expended in merely clearing the way for a sound view.

Mr Sully emphasizes the position that Psychology is a science, and that the psychologist must proceed after the recognized scientific method to classify his facts, to refer them to their conditions, and to reduce the complex mass to general laws or order. With all this one can have no quarrel, for nothing is implied as to

the nature of the facts and no one would question that if the facts are to be known, are to be reduced into the systematic form of a known body of truths, the processes to be applied are those of knowledge. The difficulties arise with the next step, when a statement, however brief, is offered as to the nature of the facts. Here Mr. Sully leaves us in some obscurity. He uses the characteristic of *inner* experience as marking off the facts of mind from those of nature, and he lays stress upon Introspection as the mode by which inner experience is brought before the thinking mind. Now it does not seem to me that the distinction of inner and outer experience will carry us very far, and it is certain that the distinction is far from being so clear as might at first glance appear. Outer experience, Mr. Sully is well aware, is just as much a problem for the psychologist as that which is contrasted with it. And if we turn the opposition into the more objective phrase, outer and inner facts, we are left without any data by which to determine the precise nature of the latter. The contrast between inner and outer facts as the psychologist treats it is a highly complicated and involved act of mind, and we can hardly afford to start with it as our most elementary distinction. Nor will the negative mark, non-occupancy of space avail much. It may be possible in the course of psychological analysis to explain how it comes about that the individual distinguishes his own mental life from the larger world and characterises it as opposed radically to the extended, space-occupying things known to him; but, if we are to start with this feature, we must express it in such terms as shall show its true place in the history of the individual's mind. The term Introspection, finally, has this of danger in it, that it inevitably leads one to regard the facts of mind as presenting

exactly the same formal aspect, aspect as known fact, to the introspective observer that external facts offer to him when percipient. They are taken to be isolated, separable objects, *inner* in nature, but connected in ways indistinguishable with the observable connections of natural facts. One might even question whether the term Introspection should be allowed to hold the place it does in psychological treatises. It will hardly be maintained that it is by a special act the individual comes to know that he has a mental life, a life which he distinguishes from so-called external things; and if it be said, that nevertheless it is by introspection he obtains a scientific knowledge of this life, one must point out that the term indicates then no new unique process, but simply concentration of attention on that which is given in memory. It certainly becomes possible for the individual to reflect definitely on his own mental existence as contrasted with the stream of events taken to be objective, and we can trace the steps by which the power is gained; but there needs no new term to indicate the fact.

The few indications given by Mr. Sully of the main conception on which he proceeds do not allow him, I think, to attain any very clear discrimination of the province of psychology from other branches of philosophy. In fact were one to press to their conclusion the expressions regarding inner experience and psychology as a science, they would warrant one in saying that psychology had no relation at all to philosophy, and that it stood on its own basis as a treatment in scientific fashion, of a body of specially characterized facts. Such a conclusion would be unfortunate, though one should deprecate the inclusion in psychology of certain problems not uncommonly dragged in, and should maintain that a distinction

can be indicated sufficient at once to give a clear ground for psychological analysis and to connect it with general philosophy.

It appears to me that if we proceed towards a determination of the exact nature of psychological material and start, as we must do, with broad currently accepted distinctions, we arrive inevitably at the conception of the individual conscious subject as that which gives unity to all the phenomena of the so-called inner life.

We cannot express a fact of mind otherwise than through terms which imply the peculiar reference to the individual subject and the distinction between the state of the individual and that which is, as we should put it, the content of the fact. Our analysis of the conditions under which the sense of individual mental existence comes about may force upon us the conclusion, that in the complex mechanism through which it is realized there are the possibilities of affections which we could hardly describe in similarly precise terms, but we interpret these only through the analogy of the mental existence in which the individual is aware of himself and has opposed to him a relatively objective system. By objective, I may note, there is not implied *extra-organic*: the dualism which starts with mind and things seems to me not only wholly misleading but wholly needless for psychological analysis. A thing, in the sense of an extra-organic object, is an extremely complex determination of the individual's thought, and we can trace genetically how the characteristic features come to be added on to the perfectly general opposition of individual consciously existing and that which is *object* for him.

When we work backwards and endeavour to indicate the full nature of this ultimate fact, we are brought, I think, to see that the current separa-

tion of Knowing, Feeling and Acting does injustice to the unity of mind. Briefly, one would say there can be no sense of individuality, no consciousness of self as a mental existence, save through the intimate union of knowing, feeling and acting. Knowing when we view it *in abstracto*, implies solely, as its formal and general characteristic, the dual opposition between knower and known, an opposition not of two entities or facts, but an opposition which is contained in and makes the essence of the act of knowing. But so far there is given nothing beyond mere generality, and we might analyse knowledge to any extent without discovering in it aught that would serve as adequate foundation for the conception of the individual self. Only in activity is there individualizing force, and only through feeling which accompanies every change of mental being is there effected a junction between the striving or impulse that is the secret of individual life and knowing which makes that life conscious and intelligent. The threefold cord of conscious life we may subject to isolated treatment, and in the course of its development the relative proportions of its factors exhibit the most wonderful varieties, but its unity is the indispensable fact with which in tracing the history of the human mind we have to start. Such a conception allows us not only to render quite precise the relation of psychological analysis to other branches of philosophy, but serves to determine the course of psychological exposition and to illuminate its separate problems. It is through and in the conscious life of the individual that all the thinking and acting which may form the material for other treatment is realized, and with the content of that thought or action the psychologist, as such, has not to deal. Where we isolate the content and treat it as having a quasi existence *per*

*se*, we are in the attitude of objective or natural science. Where we endeavour to interpret the significance of the whole, to determine the meaning of the connective links which bind it together, we are in the attitude of philosophy. But when we regard the modes through which knowing and acting are realized in the life of the individual subject we are in the position of the psychological inquirer. It is the sole and the whole business of the psychologist to trace the history of the conscious life of the individual subject, and it is in the notion of the individual subject that he will find the limits of his treatment. In parts of his work, as before said, Mr Sully does approach this view, but he does not always remain true to its guidance.

Were we to adopt as our principle in psychological exposition this notion of the individual conscious subject, we should find that the course of exposition was determined for us. The conditions under which the mental life of the individual is possible would form the matter for the first general division of the treatment, and we should be able to carry with us from this general treatment propositions that would find their special application in the analysis of more complex phases. The three chapters of Mr Sully's book, already signalized (chs. ii.-iv.), seem to me to correspond in part to this general treatment, but he has not succeeded in conveying so clearly as could be desired a representation of the elementary constituents of mind, and he does not consistently apply even what is given. I shall take one or two special matters to illustrate what I imagine would follow were the more complete conception carried out.

Mr. Sully rightly gives to Attention a place as a general fact, and under that head treats fully and instructively of the conditions under which the

"self-direction of the mind" is brought about. But he seems to be uncertain as to what attention is in itself and gives only metaphors in explanation. Now closer inspection of the numerous facts he adduces might have led him to the just conclusion that attention is not in one sense an additional fact, something over and above the content of mental life to which, as one popularly expresses it, attention is given, and also that the precise significance of attention, the component parts, will vary according to the stage of mental development. If we bear in mind that the individual self-consciousness contains always the three factors, knowing, feeling and striving, that it is constantly altering, that at each stage there becomes more definite the notion of self, and that at each moment the empirical self may present special features, there is no difficulty in regarding attention as the term to indicate the definite, momentary connection of any given content of the mental life with the sense of individual being. The difference between attention and consciousness would then simply be, that in the former the given fact has such concomitants as connect it for the moment in a special way with the prevailing contents ("the ruling cluster of ideas," as Volkmann puts it in the passage quoted by Mr. Sully) of the individual's self-consciousness. It is by a slow process that there grows up so definite and habitual a "cluster of ideas" (constituting self in opposition to other things) that voluntary concentration becomes possible. Indeed the distinction between the so-called involuntary and voluntary modes of attention is to be regarded as one of degree only.

There is one general consequence of the view taken which is so important in its bearing on isolated problems that it may here be briefly stated. Nothing that we can call a

state of mind is ever simple. We may therefore dismiss as frivolous the inquiry whether the mind can be in more than one state at a time, and look with distrust upon all the modes of speech which imply that the mental life consists of a series or train of states. We shall even qualify the old rule of attention which Mr. Sully quotes with approval, *pluribus intentus minor est ad singula sensus*, and say that it is utterly false when taken without due explanation, and altogether valueless with it. And when we proceed to the analysis of highly-developed phases of mental life we must be on our guard not to neglect such useful hints as the general view supplies to us. In examining, e.g., the important portion of knowledge that is commonly called sense-perception, and taking for isolated treatment the conditions under which affection of the bodily mechanism results in sense-perceptions, we must not allow the phraseology we employ to induce us to accept sensations, or sensuous atoms or shocks, or whatever they may be called, as facts of the mental life. Mr. Sully's treatment of sensations, full and painstaking as it is in reference to the special researches that have yielded so much knowledge of the mechanism of sense, lacks the clear determination of these as mere elements, factors of the unique state of knowing, and is, moreover, perplexed by the want of a general statement correlating the several parts. His view of perception is difficult to grasp, and it would have added to the value of his exposition had he quite marked off the problem of localisation from the discussion of the other characteristics which he assigns to perception. It might be well did psychologists agree to employ the term *Intuitions* to indicate that aspect of the percept in which it is regarded merely as sensuous content *plus* the additional feature of space-determination. But

both in regard to localisation and in regard to the additional characteristics of the percept. Mr Sully's account would have been improved by following more deliberately the genetic method, and including a fuller treatment of that which seems to me the key of the whole process, our determination of the body. The predicates by which we assign specific meaning to the so called external thing are entirely relative to the body, and what we call the *reality* of a perceived thing has no significance save when viewed in relation to the reality of the body. Our apprehension of an external thing is an excessively complex fact, but we can trace with considerable success the mode in which out of the primitive opposition of self and object there gradually grows up on the one hand the more definite conception of the empirical self, and correlatively, on the other hand, the determination by ever new features of that which is not self.

The propositions that there is no reality save as the counter term of the real activity of self, and that the reality of the external thing perceived is a more complex determination relative to the recognized reality of the body, throw light on many perplexing points of special psychology. Thus, e.g., Mr. Sully seems to me uncertain with respect to the nature of Belief, and to be inclined to regard it as a unique fact, influenced by the influencing Knowledge, Feeling and Will, but distinct from them. At the same time, he thinks that knowledge is on its subjective side believing, that is to say, would substitute belief for knowledge as the main fact of mind. No doubt the conditions of belief are numerous, and, as with all other facts of mind, differences will appear according to the complexity of the stage of mental life at which belief is being

viewed. But the connection between belief and the notion of reality points the way towards an explanation of its nature and its relations to the other facts of mind. Reality has more meanings than one, and what is called external reality is but one species. All of them signify, however, the opposition of self in its momentary phase, of self recognized as real, and of the correlative term, whatsoever that may be—a term the nature of which is the content of the individual's knowledge at the moment. Now, the recognition of the reality of self is not a simple fact, either of knowing, or of feeling or of acting, but a compound of all three. Belief is the special name for the sense of reality which accompanies each recognition of self as in opposition to some determined object. So long as the difference between the mental life and its surroundings is obscure or imperfect, so long does "primitive credulity" lead the individual to take as real whatsoever enters into his conscious experience. So soon as memory enables him to distinguish between the momentary phase of his experience and its continuous existence, so soon is there possible a distinction between that which is believed in as real and that which is determined as ideal. The numerous features by which external reality becomes for us a fact of experience give additional complexity to belief, and allow us to draw the familiar distinctions between perception and imagination which we are accustomed to take as exhausting the opposition of real and ideal. I do not say that perceiving and imagining have the same content so far as knowledge is concerned, and that the one is accompanied, by belief which is wanting to the other, for every characteristic of the total state affects the content, but only that in the one

the elements for determining reality are given and that in the other they are absent. The elements themselves vary much in the course of development, but, so far as external reality is concerned, always relate definitely to the body. It is because the feelings and the will enter so potently into the determination of the body as a known fact, that belief may be so readily described as a kind of feeling or even as an active state.

To Mr. Sully's treatment of Imagination the main objection I should have is his tendency to look upon the ideas as separate images, entities of some peculiar kind, and to disregard the important consideration that they are always ideas of something, that is to say that here we have repeated the complex fact of a mental state in which is given the opposition between the subject and the content represented. Language is hard, and it is difficult to avoid saying that the mind has ideas, as though ideas were things which the mind contemplated, and yet the expression is most misleading. The mind, one would rather say, is its ideas. It is only through memory and reflection that we come to distinguish our mental life as a unity and to contrast with it the separate phases as something belonging to it. But on this and on many other topics suggested by the chapters on Imagination, I cannot now remark.

It is with some satisfaction that one sees the small space allotted by Mr. Sully to the account of the Laws of Association. As commonly formulated these laws are most delusive, and the attempt to apply them in their crude form has only resulted in failure. We have in them empirical generalizations founded on observation of highly complex phenomena of mind which, as so stated, are wholly inapplicable to the problems that psychology has attempted to solve by their means. Recent writers, especially Wundt, but

in part also Steinthal, have approached the subject in a more comprehensive way and distinguished between the elementary modes of connection in the mental life and the conditions under which is matured experience suggestions come about. What we require specially to keep in view in approaching the problem is that the mental life does not form for us a string of separate parts (a consideration, by the way, which should lead to a considerable revision of the ordinary explanations of Memory), and that phrases such as "calling up an idea" are mere metaphors. Each separate fact of conscious experience stands out momentarily from the vast complex of the individual mind and, as one says, receives so much attention, but it is always accompanied by this complex, and the question what determines the train of thought, what causes us, as we say, to think of something else, is really the question what causes attention to include this or that at the moment. The motives are infinitely numerous, and vary indefinitely in character in successive stages of individual development; for the most part, indeed, they are distinctly what would be described as logical; but the essential fact is the movement of attention as expressed in the view taken of the part more immediately under consideration. It would require more detail than can here be given to show how the currently accepted Laws are taken in under this more comprehensive view.

The last point to which I can call attention is the treatment of the various forms of Thought, contained in chs. ix. and x. Here in particular I seem to notice the effects of the view which rewards the complex and unique fact of knowing as though it were but an object, one among others, with the same singleness of nature that is peculiar to the content of external perception. Mr. Sully takes the class-

notion or concept as through it were a fact to be observed, differing from the idea of the particular in being relatively poorer in marks, and resembling for the most part the generic image. Not only would one doubt the whole supposed process of beginning with particulars and passing to the general, not only would one hesitate much in describing the class-nation as the special type of conception, but one must entirely reject the reading of the general notion which is satisfied with regarding it as a kind of fainter image or faded picture. Fainter image or faded picture may, in truth, exist as parts of the complete act of conceiving,—parts which ought not, however, to be viewed as having a quasi-objective existence,—but the act of conceiving is itself, as the very name and common logical terminology force upon us, a complex operation, in which distinct and emphatic recognition is present of objects as opposed to the thinking subject, and in which the attention is turned upon the relations of content which these objects exhibit. A general notion is the knowledge of something, and cannot even be described in such a way as to avoid the ultimate dual reference. It is no matter of surprise, but a simple consequence of the way in which our conscious life develops, that the amount of concrete imagery implied in the act of conceiving should be infinitely varied, and

that signs or symbols, which are possible only for thinking intelligence, should be capable of taking the place of specific representations. On the whole, however the chapters on thought and its processes are those in which Mr. Sully's keen faculty seems to have been least exercised, and perhaps the problems included therein have less interest for him than for others.

It would unduly extend this notice were all the subjects suggested by the latter portion of the book to be noted, however briefly. The psychology of the Feelings and of the Will is in a very inchoate state, and I can only say that I think Mr. Sully's contribution there of every high value. I do not make very clear to myself his account of the Will, and I should gladly have seen a more thorough discussion to the various phases through which our impulsive or striving nature passes in its development. I wish, too, that Mr. Sully had not said even the word that is here said on that famous bugbear, Free-will.

I cannot conclude without the general remark that though difference of principles makes me dissatisfied with Mr. Sully's exposition as a whole, I am not insensible to the high merits of his work. Many portions, particularly where the analysis of some rather concrete phenomenon is under inspection, seem to me of the highest order.—*Mind*.

WHY BOYS DISLIKE TO LEARN TRADES.—The old system is, in the main, responsible for the aversion that such large numbers of boys manifest for learning trades. The first year a boy in a blacksmith shop, for instance, is put to the roughest and most disagreeable work. He is made to do a thousand-and-one things that will be of no use to him when he grows up, and have nothing to do with making him a skillful mechanic. He knows this and naturally rebels and wants to do something that will be of benefit to him. He is brought

to feel that to be a good blacksmith, he requires much brawn and little brains. That he obtains an erroneous idea of the trade he is trying to learn we all know, but, nevertheless, this impression is apt to become fixed in his mind from the character of the work he is put to do. Is it any wonder that he looks with envy on the boy behind the counter or in a lawyer's office, and longs to get away from an employment which has become irksome?—*The Blacksmith and Wheelwright*.

## UNIVERSITY WORK.

## MATHEMATICS.

ARCHIBALD MACMURCHY, M.A., TORONTO,  
EDITOR.

[The questions received from W. J. Robertson, M.A., St. Catharines, will appear next month.]

## PROBLEM.

FROM FEBRUARY MONTHLY.

9. A Bill upon which 576 members voted was lost on a division; subsequently, the same members voting, it was carried by a majority half as large again as it was originally lost by, and the majority in the latter case equalled the number of those who first voted for the Bill. Find how many members changed their minds.

9. Let  $x$  be number who voted for the Bill, then  $576 - x$  is number who voted against the Bill, so  $576 - 2x$  is the first majority, and  $(576 - 2x) \frac{3}{2}$  is the second majority.

Per question

$$\begin{aligned} (576 - 2x) \frac{3}{2} &= x \\ x &= 216 \end{aligned}$$

So on first division 216 voted for and 360 against, or there was a majority of 144 against the Bill, and therefore the majority on second division was 216 for the Bill; so that the number who changed their minds is

$$\frac{144 + 216}{2} = 180.$$

## UNIVERSITY OF TORONTO.

ANNUAL EXAMINATIONS, 1884.

## Junior Matriculation.

## PROBLEMS.

Examiner—W. J. Loudon, B.A.

1. If three circles touch each other in any manner, the tangents at the points of contact pass through the same point.

2. If the circumference of one circle pass through the centre of another, any two chords of the second drawn from the point of intersection so as to cut one another in the said circumference will be equal.

3. A straight line meets the produced sides of a triangle  $ABC$  in  $A', B', C'$  respectively, prove that the triangles  $AB'B', AC'C', A'C'C', A'B'B'$  will be proportionals.

4. Solve the equations—

$$\left. \begin{aligned} y^2 + z^2 + yz &= a^2 \\ z^2 + x^2 + zx &= b^2 \\ x^2 + y^2 + xy &= c^2 \end{aligned} \right\}$$

5. If  $3 + \sqrt{-1}$  is a root of  $x^4 - 6x^3 + 13x^2 - 18x + 30 = 0$ , find the other roots.

6. If  $a, b, c$  be roots of the equation  $x^2 + qx + r = 0$ , form the equation whose roots are

$$ab + \frac{1}{ab}, bc + \frac{1}{bc}, ca + \frac{1}{ca}.$$

7. Solve the equation— $\tan(\cot x) = \cot(\tan x)$ .

8. If  $x \cos(\phi + \theta) + y \sin(\phi + \theta) = a \sin 2\phi$  and  $y \cos(\phi + \theta) - x \sin(\phi + \theta) = 2a \cos 2\phi$ , then  $(x \sin \theta - y \cos \theta)^2 + (y \sin \theta + x \cos \theta)^2 = (2a)^2$ .

9. Show that the area of a triangle is  $\frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2} \left( \frac{a^2}{\sin A} + \frac{b^2}{\sin B} + \frac{c^2}{\sin C} \right)$

10. If  $a, b, c$ , the sides of a triangle, be in  $H. P.$ , then

$$\frac{\sin \frac{A}{2}}{\sin \frac{C}{2}} = \sqrt{\frac{\cos B - \cos A}{\cos C - \cos B}}$$

11. Find for what values of  $a$  and  $c$  the expression  $(a+c^{-1})^{\frac{1}{2}} + (c+a^{-1})^{\frac{1}{2}} > 2\frac{3}{2}$ .

12. Prove that the sum of the cubes of three even numbers in  $A. P.$  is divisible by 24.

13. Show that the square described about a circle is  $\frac{3}{4}$  of the inscribed duodecagon.

14. If  $f(x) = e^x - 1$ , and  $\phi(x) = e_x + 1$  show that  $f(x) \log \frac{1}{4} [f\{\phi(x)\} + \phi\{\phi(x)\}] = \phi(x) \cdot \log \frac{1}{4} [\phi\{f(x)\} + f\{f(x)\}]$ .

ARITHMETICAL PROBLEMS.

By Leo. B. Davidson, Head Master Glenallan School.

1. If  $1\frac{3}{4}$  of ( $A$ 's money -  $\frac{1}{2}$  of  $A$ 's money) =  $2\frac{1}{2}$  of ( $B$ 's money +  $\frac{B$ 's money}{4}), compare  $A$ 's money with that of  $B$ .

Ans. 25 : 8.

2. The population of a city increased by  $\frac{1}{4}$  of itself in each year for five years. How much more than double the original population did it become in that time?

Ans.  $4\frac{1}{2}$ .

3. A person buys  $\frac{2}{3}$  of a property which afterwards rises in value by  $\frac{1}{2}$ . He then sells  $\frac{2}{3}$  of his share for \$1,600. Find the value of the property.

Ans. \$2,500.

4. A farmer takes to market 1,269 pounds of oats and peas, mixed equally by measure. He sells the oats for 40c. per bushel, and the peas at 70c. How much does he receive?

Ans. \$14.85.

5. A 5 franc piece is worth 4s.; and a Prussian bank note of \$5, containing 150 groschen, is equivalent to 18 $\frac{2}{3}$  francs. Reduce £14 7s. to Prussian dollars and groschens.

Ans. 95 dols.; 20 gros.

6.  $B$ , after paying  $A$   $\frac{3\frac{1}{2}}{4}$  of  $\frac{4}{3\frac{1}{2}}$  of  $\cdot 22$  of  $\cdot 50\dot{5}$  of \$18 found that he had  $\frac{1}{2}$  of  $\frac{1}{3}$  of  $\cdot 21$  of  $\cdot 3$  of  $1\frac{1}{4}$  of  $22 \cdot 857142$  of what  $A$  then had.  $A$  had \$12 at first. What had  $B$  at first?

Ans. \$10.

7. I buy a farm of 150 acres, I sell  $\frac{2}{3}$  of it for  $\frac{2}{3}$  of the whole cost, and the remainder at \$40 per acre, thus gaining \$900 on my bargain. What did I give for the farm?

Ans. \$6,000.

8. What decimal of 4 oz. Avoir. when added to 2 oz. Troy will give 4 oz. Avoir.

Ans 45142857.

9. A contractor undertakes to gravel a road  $\frac{3}{4}$  mile long in 20 days and employs 25 men. At the end of 15 days he finds he has finished 5 fur. How many men may he discharge on the evening of the 15th day?

Ans. 10 men.

10. Suppose 1 gal. of water to weigh 145.25 oz. Troy, and 1 pint of water to contain 34.56 cub. inches, find the weight of a cub. ft. of water in ounces. Avoir.

Ans. 996 oz.

11. A plate of silver 3 inches square and  $\frac{1}{8}$  inch thick, is extended by hammering so as to cover uniformly a surface of 7 sq. yds. Find its present thickness.

Ans.  $\frac{1}{16}$  inches.

12. A gentleman has three fields. The first contains 3 acres, the second contains 5 acres 3 sq. per., and the third contains 6 acres 3 rods 11 sq. per. Find in rods the frontage of a square lot containing the same area as the three fields.

Ans. 49 rods.

CLASSICS.

G. H. ROBINSON, M.A., TORONTO, EDITOR

UNIVERSITY OF LONDON.

Matriculation Examination: June, 1884.

LATIN GRAMMAR AND COMPOSITION.

Examiners—James S. Reid, Esq., LL.M., M.A., Dr. Leonard Schmitz, F.R.S.E.

Decline both in the singular and in the plural *recens volnus, miles iners, istac salix*; and in the singular only (marking the genders) *grando, lis, obses, guttur*.

2. Give the positives corresponding to *ditior, frugalior, pessimus, citimus, proximus, senior*.

3. Write down the supines in *-um* belonging to *seco, solvo, sperno, cerno, cingo, lacesso, cogō, redimo*.

Write down the following words, viz. :—

(a) 2nd pers. sing. imperat. of *amplector*.

(b) 2nd pers. sing. imperf. subj. of *poitor*.

(c) 2nd pers. plur. perf. subj. act. of *pango*.

(d) nom. sing. masc. fut. part. of *prandeo*.

(e) 1st pers. plur. imperf. subj. of *fiō*.

(f) 2nd pers. sing. fut. ind. pass. of *reicio*.

(g) nom. sing. masc. perf. part. pass. of *stringo*.

5. How do you represent in Latin "the city of Rome," "I am weary of life," "my name is Marcus?"

6. What are the meanings and ordinary constructions of *licet*, *macte*, *haud scio an*, *penes*, *iuxta*, *tamquam*, *utinam*?

7. What is meant by "the sequence of tenses"? State and illustrate the ordinary rules relating to it.

[N.B.—Particular importance is attached to the correct rendering of these sentences].

(a) It is not to my interest to run away.

(b) My house cost more than yours.

(c) Cæsar said he was sorry that he must invade Italy.

(d) I want to see whether my enemies will be so foolish as to run headlong into danger.

(e) So far as I am concerned, tribunes, I would have been glad to learn what you have to say, had I not feared to disobey the senate.

(f) I have no doubt that you will condemn the culprit to exile rather than to death.

LATIN.

I. Cicero: *De Amicitia* and *In Catilinam I*.

Translate into English:

A.

Sæpissime igitur . . . voluntarium.

B.

Sed plerique . . . sed etiam verentur.

C.

Quæ cum ita sint . . . tacitorum perspicis?

II. History and Geography.

1. State what you know of C. Laelius, the chief speaker in the "De Amicitia."

2. What view does Cicero take of the political action of Tiberius Gracchus? Mention some considerations which might be urged on the other side.

3. What was the character of young Scipio, and what were the circumstances of his death?

4. What was the date of Catiline's plot, and what its purpose, according to Cicero? Mention the circumstances of the time which helped to make Catiline formidable.

5. Explain the allusions in the following extracts (which need not be translated):—

(a) *Quis autem est qui Tarquinium Superbum, qui Sp. Cassium, Sp. Maelium non oderit?*

(b) *Numne, si Coriolanus habuit amicos, ferre contra patriam arma illi cum Coriolano debuerunt?*

(c) *Dico te priore nocte venisse inter falcarios, in M. Laecæ domum.*

6 Explain clearly the position of the following places, viz: Etruriæ fauces—Praeneste—Comitium—Agrigentum—Cumæ—Forum Aurelium—Tarentum.

7. What did the Romans understand by *Italia*?

III. Passages for translation from books not prescribed.

1. Cn. Lentulus consul, cum in contione de Magni Pompei nimia potentia quereretur, adsensusque ei clara voce universus populus esset, "adclamate" inquit, "Quirites, adclamate, dum licet; iam enim vobis impune facere non licebit."

2. In nemus ire libet, pressisque in retia cervis

Hortari celeres per iuga summa canes,  
Aut tremulum excusso iaculum vibrare lacerto

Aut in graminea ponere corpus humo.  
Sæpe iuvat versare leves in pulvere currus  
Torquere et frenis ora fugacis equi.

3. Diogenes Syracusis, cum olera ei levanti Aristippus dixisset "si Dionysium adulari velles, ista non esses," "immo," inquit, "si tu hæc esse velles, Dionysium non adularere."

## MODERN LANGUAGES.

Editors: H. I. STRANG, B.A., Godesch.  
W. H. FRASER, B.A., Toronto.

## UNIVERSITY OF LONDON.

Matriculation Examination: June, 1884.

## GERMAN.

Examiners.—Prof. Althaus, Ph.D., Rev. C. Schoell, Ph.D.

[Three sight passages were set for translation into English of which the candidate was required to attempt not more than two.—Eds.]

## II. Grammatical Questions

[Not more than six of the following questions are to be answered.—Three in Group A. and three in Group B.]

## A.

1. Decline in both numbers *dieser tüchtige Beamte, dasselbe alte Schloss, solche hohe Tugend.*

2. State the respective genders of nouns ending in *-heit, -ling, -niss, -schaft, -thum, -sal.* Give instances, and write down their genitive singular and nominative plural.

3. Give the second person singular of the present and imperfect, both indicative and subjunctive, and the past participle, of *sinken, dacken, laden, schaden, werfen, ausschneiden, überleben, abweichen.*

4. Classify the verbs of the strong conjugation, giving two or three examples in each class. Also state whether there are any irregular verbs belonging to the weak conjugation.

5. Give the derivation of *Spruch, Band, Tracht, Brand, Ankunft, Kunst.*

## B.

1. Mention some verbs which govern two accusatives, and some which govern the accusative of the person, and the genitive of the remoter objects.

2. Supply the prepositions required after the verbs *sich verlassen, nachdenken, urtheilen, sich besinnen, abhängen.*

3. Give instances of the accusative as used to denote time.

4. Explain what is meant by the terms "grammatical subject" and "logical subject."

5. Translate: He left without taking leave. He came running. We have learned to value what is good.

## FRENCH.

Examiners.—B. P. Buisson, Esq., M. A. Prof. Charles Cassal, LL.D.

[Three sight passages for translation into English were set of which the candidate was required to attempt not more than two.—Eds.]

## 11. Grammar.

N.B.—Answer only six of the following questions.]

1. Parse *avait voulu, se pressait, allaient, fit, ouvrir* (Ext. A.); and write down the present and past participles of *se transmettaient, soutiens, ouvrir, vivais, mourrai* (Ext. A.)

2. Conjugate the present indicative and present subjunctive of the verbs *croyait, dire, tenait, lit, répondrait, se tait* (Ext. B.).

3. Write down (a) the present participle, (b) the preterit definite (*parfait défini*), (c) the future, 2<sup>d</sup> pers. sing. and plur., of *s'espacient, joué, allongé, souffrais, firent* (Ext. C.).

4. Form interrogative sentences (in two ways) with the following: "*L'empressement du peuple le touche.*" "*Ce Pitt gouverne avec des menaces.*" "*Je ne souffrais pas trop.*" *Personne ne soupçonnait la gravité de mon état.*"

5. "*14 Juillet, 1870,*" write the date in full; also *July 1st* and *July 2nd, 1884*; *XIXth century*; *chapter XX*; *page 200*, this book has 2,200 pages.

6. Give a list of the personal conjunctive pronouns and state their respective positions in a sentence. Instances.

7. Distinguish between *l'un l'autre, l'un et l'autre, l'un ou l'autre, ni l'un ni l'autre, toute autre.*

8. Write in full  $\frac{1}{2}$ ,  $\frac{2}{3}$ ,  $\frac{1}{10}$ ,  $\frac{1}{100}$ ,  $74\frac{1}{2}$  per cent., and give the respective meanings of the indeterminate numbers *huitaine, neuvaine, douzaine, quinzaine, vingtaine, cinquante, centaine, millier.*

9. Give the respective genders of *génie, silence, bouche, France, pensées, politesse, fleurs* (Ext. A.); *conviction, foi, avenir, société* (Ext. B.); *juillet, êtres, personne, rose, nuit* (Ext. C.)

10. Give the respective etymologies of *la* (art.), *la* (pron.), *là* (adv.); *lui, leur, les, eux, ceux, ce, sur, dessus, dans, dedans, en* (pron.), *en* (prép.), *très.*

## NATURAL SCIENCE.

H. B. SPOTTON, M.A., BARRIE, EDITOR.

## VALUE OF NATURAL SCIENCE IN EDUCATION.

BY BROWN AYERS.

IT is no part of my object in the following brief consideration of this question to enter into any prolonged comparison of the relative advantages of the languages and the sciences in a scheme of Education; on the other hand, I wish to be distinctly understood as advocating an arrangement of studies that will tend to give the breadth as well as depth of scholarship that should characterize the educated man of the present day. Nevertheless, I believe that I can say, without a fear of contradiction by any well-informed critic, that the study of language, as such, and of related subjects undoubtedly occupies too prominent a place in our present educational schemes. Science is only just now beginning to be given something like her proper place in the educational world; not only the science that deals with the physical universe in which we live, but also the science that investigates the workings of life, and, even in the languages and records of the past, shows us the hand of God working always in the line of progress.

It is pertinent to the matter in hand to inquire what is or should be, the true aim of education. I think all will agree that the formation of true manhood—moral, intellectual and physical—should be its highest aim; and the educator that takes the highest view of his profession will keep this aim always before him, and will not allow himself to be drawn aside from it by any considerations of imaginary practical benefit, no matter under what attractive guise they may present themselves to him. I would not be understood as discouraging the study of practical affairs—far from it; but fortunately, those things that are the most truly practical

are capable of being made to fall most perfectly into line with our highest aim. A man is something more than a mere money-maker. He is a man, made in the image of God, and our duty as educators is to develop this latent image until it shall show forth as a worthy specimen of the Creator's handiwork.

When once we are agreed upon what should be the object of education, it should not take us long to decide upon what should be its method. Fortunately, God gives us a revelation of this method in every child that is born into the world. It takes but little observation of a busy child to see that His method is a method of observation and experiment, and the ceaseless activity and unflagging interest show how thoroughly it is adapted to the needs of the unfolding intellect. Nature is the school in which the little one begins its studies, and Nature is the school in which it should go on. As simple as this seems, it is remarkable how little it is appreciated. It has been well said that the laws of Nature are the thoughts of God. Strange that men should ever weigh the thoughts of God against the thoughts of men! It is truly surprising to see the apathy of most men in regard to a knowledge of Nature. In the words of Herbert Spencer: "Men who would blush if caught saying Iphigenia instead of Iphigenia, or would resent as an insult any imputation of ignorance respecting the fabled labours of a fabled demi-god, show not the slightest shame in confessing that they do not know where the Eustachian tubes are, what are the actions of the spinal cord, what is the normal rate of pulsation, or how the lungs are inflated? While anxious that their sons should be well up in the superstitions of two thousand years ago, they care not that they should be taught anything about the structure and functions of their own bodies

may, would even disapprove of any such instruction. So overwhelming is the influence of established routine! So terrible in our education does the ornamental override the useful!

"Sad, indeed, it is to see how men occupy themselves with trivialities, and are indifferent to the grandest phenomena—care not to understand the architecture of the Heavens, but are deeply interested in some contemptible controversy about the intrigues of Mary Queen of Scots!—are learnedly critical over a Greek ode, and pass by without a glance that grand epic written by the finger of God upon the strata of the earth!"

Of those not scientists who favour science in a scheme of education, the majority do so on utilitarian grounds only. While the advantages of knowledge of the applications of science to practical affairs are obvious, what a degraded view is taken of the universe of God, when its study is only tolerated because thereby we may put money in our purses! Nature is truly a revelation of the Creator, and seek where we may, we fail to find in its study anything that is not ennobling: can as much be said of other subjects? Science is the torch that enables us to peer deep into the hidden mysteries of Omnipotence, "for the invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made."

A rational scheme of education then should give due place to scientific study, and the fact should be well recognized that in the choice of a method we must not go astray from the one that Nature herself points out to us. By a method that is truly experimental and inductive, we seem to go slowly but what we learn we know. By reversing the method of Nature we will do more harm than good. In a subject as extensive as is any one department of science, little real progress can be made with scanty resources and limited time. A science is certainly deserving of at least as much study as a language. What results can be expected when the study of a subject like physics or biology is limited to one year? The study

of Nature should commence at the mother's knee, and should continue uninterrupted to manhood—and, to reach the highest results throughout life. Let the same time be given to physics that is now given to Latin and the results will then be comparable.

In considering the order in which the study of the science should be taken up, there is little difficulty to be encountered. It has been well remarked by Bacon that physics is the mother of sciences, and this is most plainly true; for no knowledge can be real that is not based on a proper understanding of the properties of bodies and the actions of forces. A study of elementary physics (including some elementary chemistry), then, should precede that of all other sciences. Some branch of biology would probably be best suited to follow—for example, elementary animal and vegetable physiology. Secondary, physical sciences like astronomy and geology, and such sciences as psychology and political economy, could be taken up at convenience. For the purposes of the general student, a thorough elementary knowledge of these would probably suffice, but it should never be forgotten that the full study of some one science is necessary for the best results.

Not the least among the benefits to be derived from the thorough study of some branch of science, is the salutary moral effect of such study. Nothing tends so much as science to cultivate independence of thought and self-reliance, and to give a firm faith in the necessary connection of cause and effect. Nothing so tends to destroy superstitions and replace them by reason, and to instil a deep love of truth and reverence for the Creator. Nothing can be more satisfying to a mind created in the image of its Maker than the contemplation of the hidden beauties of Nature, and the perception of those laws and principles whose author is God. Let us hope, then, that the time is not far distant when our schools and colleges will give a place to science at least equal to that given to language—not because it may prove useful in practical affairs, but because it is truth.—*Louisiana Journal of Education.*

## SCHOOL WORK.

DAVID BOYLE, TORONTO, EDITOR.

## HOW FAR SHALL I HELP THE PUPIL?

It is always a very difficult question for the teacher to settle "How far shall I help the pupil, and how far shall the pupil be required to help himself?" The teaching of nature would seem to indicate that the pupil should be taught mainly to depend on his own resources. This, too, I think, is the teaching of common sense. Whatever is learned should be so thoroughly learned that the next and higher step may be comparatively easy. And the teacher should always inquire when he is about to dismiss one subject, whether the class understands it so well that they can go on to the next. He may, indeed, sometimes give a word of suggestion during the preparation of a lesson, and by a reasonable hint save the scholar the needless loss of much time.

But it is a very great evil if the pupils acquire the habit of running to the teachers as soon as a slight difficulty presents itself, to request him to remove it. Some teachers, when this happens, will send the scholar to his seat with a reproof, perhaps, while others, with a mistaken kindness, will answer the question or solve the problem themselves, as the shortest way of getting rid of it. Both these cases are generally wrong. The inquirer should never be frowned upon; this may discourage him. He should not be relieved from labour, as this will diminish his self-reliance without enlightening him, for whatever is done for a scholar without his having studied closely upon it himself, makes but a feeble impression upon him, and is soon forgotten.

The true way is, neither discourage inquiry nor answer the question for the pupil. Converse with the scholar a little as to the principles involved in the question; refer him to

principles which he has before learned and now lost sight of; perhaps call his attention to some rule or explanation before given to the class; go just as far as to enlighten him a little, and *put him on the scent*, then leave him to achieve the victory himself. There is a great satisfaction in discovering a difficult thing for one's self, and the teacher does the scholar a lasting injury who takes this pleasure from him. The teacher should be simply suggestive, but should never take the glory of the victory from the scholar by doing his work for him, at least not until he has given it a thorough trial himself—*D. P. Page in Teacher.*

## SCHOOL EXAMINATIONS.

"I believe that the greatest obstacle in the way of teaching to-day is the standard of examinations. The cause is not far to seek. The standard of the work has a powerful influence on the work itself. What should examinations be? The test of real teaching—of genuine work. Teaching mental activity so as to develop the mind in the best possible way, and at the same time leads to the acquisition of that knowledge which is most useful to the mind and its development. Examinations, then should test the conditions and progress of the mind in its development.

"If I am not mistaken, the examinations usually given simply test the pupil's power of memorising disconnected facts. Take, for illustration, the innumerable facts of history; of these, that which a child can learn in a course of four or five years' vigorous study, would be as a drop of water to the ocean. It would be an easy matter to set an examination of ten seemingly simple questions in history for Mommsen, Curtius, Droysen, Bancroft, and other eminent historians,

which they would utterly fail to pass. How, then, can we judge of a child's knowledge by asking ten questions? The same can be said of geography and the natural sciences. Examinations should find out what a child does know, and not what he does not know.

"The testimony of countless good teachers has been uniform in this respect. When asked, 'Why don't you do better work?' 'Why don't you use the methods taught in Normal Schools, and advocated by educational periodicals and books?' The answer is, 'We can not do it. Look at our course of study. In three weeks or months these children will be examined. We have not one moment to spend on real teaching.' No wonder that teaching is a trade and not an art—no wonder there is little or no demand for books upon the science and art of teaching. The demand fixed by examiners is for cram, and not for art; and so long as the demand exists, so long will the teacher's mind shrivel and dwarf in the everlasting treadmill that has no beginning or end."—*Talks on Teaching, by Col. Parker.*

## SCHOOL MANAGEMENT.

### CLASS MANAGEMENT.

#### *Attention.*

Attention is that power of the mind by which the mind directs its thoughts voluntarily to some one object to the exclusion of all others. Mental power increase in proportion as the mind acquires the power of exact, rapid, penetrating and prolonged attention. Teaching power is determined by the ability to secure and hold the attention. Learn the means by which it can be secured and held.

#### *Recitation.*

In the recitation the teacher tests the work of his pupils and ascertains their progress. He guides and directs their powers, arouses their enthusiasm, and inspires them. Here he measures their minds and determines the help that may be necessary to make them successful students. 1. What are the objects of a recitation? 2. How are those

objects attained? 3. What preparation should the teacher make for each recitation? 4. What preparation should the pupil make?

#### *Questioning.*

The teacher who best understands this art will in general succeed best.

1. Adaptation of questions. Children are expected to learn "what" of things; boys and girls the "what and how" of things; youth and manhood the "what, how, why and whence" of things. The questions should be arranged with reference to these facts

2. Objects. (a) To properly direct the efforts of the learner; (b) to detect and correct errors; (c) to test the preparation of the lesson; and (d) to bring out the essentials of the lesson.

3. Plan. (a) Question the entire class, and call on one to answer or receive class answers. (b) Put the questions to individual members of the class, in alphabetic order, in class order, to inattentive members. (c) Which of the above methods is the best? Which should not be used? (d) Should the teacher prepare his own questions, or use the text-book questions?

4. Form of questions. (a) Questions should be concise and clearly stated. (b) They should be adapted to the subject as well as to the pupil. (c) They should give a complete sentence for an answer. (d) They should not be leading as, "The world is round, is it not?" (e) They should not indicate the answer as, "Did Columbus discover America?" (f) They should not be of the alternative form as, "Is the world round or square?" (g) They should not quote a part of the answer as, "Arithmetic is the science of what?" (h) They should not indicate the answer by language, emphasis, inflection or expression.

NOTE.—This chapter has been selected from Baldwin's and from Raub's School Management. Either of those books will give the necessary information on this subject. We should also recommend Fitch's "Art of Questioning," and "How to Secure Attention." The price of each is fifteen cents, and can be obtained from any dealer in school supplies.—*Ex.*

## EDUCATIONAL INTELLIGENCE.

## THE PROTESTANT TEACHERS' ASSOCIATION OF QUEBEC.

COWANVILLE, *October 9th, 1884.*

The Convention was called to order in the Town Hall at ten o'clock by the President, the Hon W. W. Lynch, and there were about three hundred present, there being, besides the teachers, about a hundred residents of Cowanville and the neighbouring village of Sweetsburg in attendance. Amongst those who were noticed present and who arrived during the day were the Hon. G. Ouimet, Superintendent of Education; Dr. R. W. Heneker, Chancellor of the University of Bishop's College, Lennoxville; Rev. E. I. Rexford, Secretary of the Protestant Committee of the Council of Public Instruction; Dr. F. W. Kelley, Secretary of the Association; Dr. Harper, Head Master of the Quebec High School; Principal Robins and Dr. McGregor, of the McGill Normal School; Mrs. Holden, Lady Principal of the Dunham Ladies' College; Mr. H. Curtis, Head Master of the St. Johns' High School; Inspectors McGregor, McLaughlin, Hubbard and Magrath; Mrs. Morton, ex-Lady Principal of the Girls' High School, Montreal; Mr. McIntosh, Principal of the Granby Academy; Mr. C. A. Humphrey, Head Master of the Royal Arthur School; Mr. E. T. Chambers, Head Master of the British and Canadian School; Mr. R. M. Campbell, Head Master of the Ann Street School; Mr. Howard, Principal of the Berthier Grammar School; Mr. Walton, Principal of the Waterloo Academy; Mr. Hobart Butler, Principal of Bedford Academy; Rev. Mr. Ker, of Quebec; Rev. Ernest King of Levis; Mr. R. J. Hewton, Principal of Hatley Academy; Mr. Masten, Principal of the Coaticooke Academy.

The meeting was opened with prayer by the Rev. Ernest King, after which the minutes of the last annual meeting, which were taken as read, were confirmed. The President then called upon Mr. George Howard, Principal of Berthier Academy, to read the first paper, which was on the subject of "School Discipline." The importance of securing proper order was of course taken for granted. The teacher's task was essentially a difficult one, and it was advisable, by the maintenance of order without loss of time, to devote all his energies to imparting instruction. Disorder could be prevented by a system of close surveillance,

but this policy carried to an extreme taught pupils to lose faith in themselves, and deprived them of their manliness; it tended to make sneaks of the boys, who grow up to be men who do not know when their honour was assailed. It also defeated one of the chief aims of teaching, namely, to discover faults for the purpose of correcting them. Liberty, however, was a very different thing from leisure, and freedom of action should be regulated by the principle of cause and effect; that "As a man sows, so shall he reap." It was better to cultivate a feeling of honour and self-respect among the pupils and then a boy guilty of any offence would be afraid of incurring the censure of his fellows. In the matter of punishment, the severity of former times was to be deprecated, while the modern tendency to be too lax was equally injudicious. Corporal punishment was useful in certain cases, and the system of keeping-in after hours, though violently opposed by injudicious parents, was of great value; one special objection to it was that the teacher himself was punished along with the offender. The best of all methods, however, to maintain order, was to keep the pupils busily and pleasantly engaged at all times.

Play in Connection with School Work was the subject of the second paper, read by Mr. Walton, of Waterloo Academy. Mr. Walton claimed that in the present day, when the high-pressure system of education was in vogue, and the intellectual faculties were being stimulated and cultivated at the expense of the physical powers, it was high time to sound a note of warning to those who believe that the duty of the teacher is confined to the expansion of the mind alone. Properly equipped play-grounds, of sufficient extent to allow all the pupils to engage in healthful exercise should be in connection with every school, and the teacher should himself, or herself, join in the games of the pupils, thus encouraging the development of vigorous, healthy bodies, which would tend to make happier and better men and women.

The President here said that it would be a proper recognition of the interest taken in practical educational matters by the Superintendent of Education to have him welcomed on arrival, and he would appoint a committee, consisting of Dr. McGregor, Inspector McGregor, Inspector Magrath, Mr. Hobart

Butler, and Mr. Masten, to await the arrival of the train and escort the Hon. Mr. Oumet to the hall. On entering the hall he was received with applause, and invited to a seat on the platform. Teachers' Preparation of Lessons was a paper on great practical value to teachers, who were shown the advantage of carefully going over the lessons at home preparatory to coming before the class. Teachers were too often in the habit of spending their evenings in marking exercises of children, which was to a great extent a loss of time, and if this time were spent in careful preparation of future lessons and methods of imparting instruction, they would find it much more valuable.

The President, on the behalf of the people of Cowansville and Sweetsburg, expressed great satisfaction at so large an attendance of teachers, and said that while they would not perhaps be able to give them all the accommodation they could wish, they would do all in their power to make their stay amongst them as pleasant as possible.

After some announcements had been made, the Convention took recess.

#### AFTERNOON SESSION.

The convention resumed at two o'clock, when the President invited the members to inspect a collection of authorized school-books, published by Dawson Bros., of Montreal, and which could be seen in an adjoining room.

The President then appointed the following committees:—

Audit Committee:—Messrs. Walton and Curtis.

Committee on Resolutions:—Dr. Robins, Dr. Harper, Inspector Hubbard, Inspector McLaughlin, Mrs. Holden, Miss McDonald, and Messrs. Masten, Elliott, Howard and R. M. Campbell.

Committee on Nominations and Place of Meeting:—Dr. McGregor, Inspector McGregor, Inspector Magrath, Mr. Butler, Rev. Mr. Ker, Mr. Dixon, Miss Abbott and Miss G. Hunter.

Miss McLean, of Granby, then read a valuable paper on "A Few Hints on Teaching Oral Geography."

Dr Harper congratulated Miss McLean on the practical nature of her paper, and after some remarks by Mr. Masten, of Coaticook, and Dr. F. W. Kelley, the Treasurer, Mr. C. A. Humphrey, read his annual report, which showed, after paying the expenses of the past year, a balance on hand of \$50.95. The number of members registered at the Convention last year at Lachute were as follows:—14 honorary, 1 associate and 86 ordinary members; total 101.

Dr. Harper expressed the opinion that some small sum should be granted by the

Government in order to aid in bringing together a collection of school apparatus for the use of the teachers in Convention assembled, as teachers generally had no opportunity of seeing these large collections of apparatus. If some such collection could be gathered together it would be of great advantage to the teachers.

The President said he would, as a friend of the Association, be very happy to be the medium through which they might make an application to the provincial treasurer, to place a limited sum at their disposal for that purpose.

#### A PLEA FOR SCHOOL COMMISSIONERS

This was a most interesting and racy paper read by Mr. J. P. Noyse, of Waterloo, in the course of which he said that the school commissioners had found themselves very greatly embarrassed by the character of the school law, which required codification and simplification, and gave instances where it had been very difficult, if not almost impossible, to decipher the marginal notes. He also thought that more advantage should be taken of local effort in the organization of schools, and favoured the district system of organization, as compared with the municipal system that obtained here, urging strongly that local effort would be much more successful in securing good schools. He also complained of the slowness of action on the part of the Protestant Committee of the Council of Public Instruction. The whole paper was a very lengthy one.

Dr. Robins said that two matters were referred to in the paper, the first of which was the need of revision of the school law. There was no doubt that there was much difficulty in the way of understanding such a multiplicity of school enactments, but with regard to the marginal notes, he must say that he had been able to understand these mysterious illusions, and they had been a great help to him. But one point raised by Mr. Noyse lay at the foundation of the whole of the school work, and if nothing else had been done than draw attention to this, it was worth all the time spent by the author—a gentleman learned in the law—in preparing his paper. It was that, so long as our school system in the Province of Quebec was founded upon school municipalities, it would never stand on a level with the district system that was in vogue in the neighbouring Province and in several States across the border. Under the municipal system the school board very often, in order to avoid all sectional difficulties and troubles, would agree to give a fixed remuneration to all the teachers in the municipality, no matter how much more efficient one teacher might be than the others, whereas if we had

the individual or district system under which the parents themselves would be called upon to determine the remuneration of the teacher, and any other improvements which were thought necessary in the interest and well-being of the school, they would increase the teacher's salary or, the value of the teacher being known in the districts around, he or she would be sought after. Under a system like that there would be an immediate advance in the remuneration of our teachers, as well as in the character of our school buildings. He gave a personal reminiscence of his own early teaching days in support of the argument that we must have a system in which the parents played a more important part than they did at present. He alluded to the fact that the school commissioners of Montreal were not elected by the people themselves, and said that they had always been fortunate in having very worthy men selected for them to occupy that position; and although, if the election had been left with the people themselves, they might not have chosen men of such high social and educational standing, still they would have taken more interest in school matters, and by and by they would have selected the very best men they could find. In conclusion, he challenged the fact that our dissentient schools stood on a higher level and paid better salaries to teachers than the schools of the municipalities.

Inspector McLaughlin favoured the municipal or town system, as it placed the school board above local influence.

Inspector Hubbard held the same view.

After some remarks by Mr. R. M. Campbell, Rev. Mr. Rexford hoped that at the next session of the Legislature there would be a revision of the school law. In view of the reasons given in favour of the direct system, it might be worthy of note that in places where the district system was now in vogue they were urging the advantages of the municipal system, and he would therefore like to give the matter further attention and study before giving a decided opinion upon the matter. He instanced a case where, under the municipal system, a school board offered \$13 a month to all teachers, whether experienced or beginners, and they had to pay their own board at that.

After some remarks by Mr. Howard and Dr. Kelley, Mr. Noyse instanced Waterloo as an example of the advantages of the local or district system as contrasted with the general municipal system.

Mr. Wardrope, of Sutton, spoke at some length on the subject, saying, among other things, that the millenium could not be far off when they heard a lawyer talking about simplifying an act of parliament.

#### WOMEN'S EDUCATION.

Mrs. Holden, Lady Principal of Dunham Ladies' College, then read a most interesting and able paper on "The Education of Women," at the conclusion of which some remarks upon it were made by Chancellor Heneker, Dr. Robins and Dr. Harper, all of whom paid a high compliment to the character and ability of Mrs. Holden's paper. The Convention then took recess.

#### THE EVENING MEETING.

The Convention resumed at eight o'clock in the evening, the President in the chair, at which several addresses were delivered.

Mr. L. L. Chandler, Mayor of Cowansville, first read the following

#### ADDRESS OF WELCOME:

*To the President and Members of the Provincial Association of Protestant Teachers of the Province of Quebec.*

On behalf of the corporation and citizens of Cowansville, I have much pleasure in extending to you a hearty welcome on the occasion of this your first meeting in our village.

The corporation have placed at your disposal for the purposes of your meetings and deliberations, the hall in which we are now assembled, and I am happy to say the citizens of both Cowansville and Sweetsburg have most cordially offered the hospitality of their homes to such members of the Association as may not otherwise find accommodations.

The cause of education must ever be of interest to every citizen of this Province who wishes to see its great resources developed, its political institutions maintained, and our Province occupy the position to which she is entitled as an important part of our vast Dominion.

The people of Cowansville, and in fact of the Eastern Townships generally, have watched with interest the great services which your Association have rendered to the cause of education in this Province, and I assure you that it is the most sincere wish of our citizens that the members of the Association may find the present meeting as pleasant as it will be profitable to yourselves, and beneficial to the great cause of education, in the promotion of which you are engaged.

The President then called upon the Secretary, Dr. Kelley, who in a neat speech returned thanks on behalf of the Association for the hearty welcome and cordial hospitality that had been extended to them by the residents of Cowansville and Sweetsburg.

## THE PRESIDENT'S ADDRESS.

The President, Hon. W. W. Lynch, said:—*Ladies' and Gentlemen*,—The duty which devolves upon me of addressing you as President of the Association of Protestant Teachers of the Province of Quebec, is an exceedingly agreeable and welcome one for various reasons, some of which are personal to myself and others of a much more important, because of a public character. In the first place, I cannot but rejoice that this opportunity is afforded me of publicly returning thanks, my warmest thanks, indeed, for the signal honour conferred upon me in my election for the second time as President of this Association, a body distinguished as much by the learning, the zeal and the self-sacrificing spirit of its members, as it is by its public usefulness and the important part it is called upon to play in connection with that great factor of national progress and prosperity—the education of the people. I might have wished that this honour had been bestowed in some more deserving quarter, upon some other labourer in the vineyard, or some other well-wisher of the good cause, who was more intimately connected with educational work than I am, seeing that years have elapsed since I was able to actively engage in it. At the same time, let me say that I have never ceased to cherish the liveliest and the warmest interest in that work which, to my mind, is not only the most honourable and ennobling in man everywhere, but the most needful, especially to a young country like this. My heart has been ever in it, and whenever the opportunity has offered, it has always given me special pleasure to identify myself with it. In the second place, ladies and gentlemen, I cannot look upon this splendid meeting, upon the magnitude as well of its numbers as of its power for good, without recalling the small beginnings of this Association, and feeling a thrill of pride and satisfaction at the agreeable contrast. I can recollect the time, now a good many years ago, when the gatherings of this Association were much less attended, and when its influence for the great work which it has undertaken was less potent; but its leading spirits were as zealous and as earnestly devoted to its furtherance then as now, making up in those admirable qualities for what they lacked in numbers and importance in the public eye. Years passed on, and from an humble annual gathering of teachers interested in the advancement of the instruction of our youth the Association has, I rejoice to say, grown and prospered, assuming the proportions of a great and permanent institution with its foundations laid deep in the sympathies and intelligent convictions of the community.

Its annual meetings, too, have kept pace with its onward march in other respects. They are no longer the humble and unnoticed gathering of a handful of the teaching body that I just a minute ago represented them as they used to be in the past. They may be now more truly likened to the annual sessions of a great educational congress, where not only the teaching body but all interested in the noble cause of the education of the people and all the national, moral and material blessings flowing therefrom, meet to compare notes and to deliberate intelligently and exhaustively for the public good. Indeed, I believe it would be impossible for me to assert too strongly the importance to which this Association and its meetings have rightfully attained in the public estimation. But, before dwelling further on this feature of the body over which I have the honour to preside, it is my painful duty at the outset to put on record my high sense of the very great loss which this Association and the cause of Protestant education have suffered by the death of our lamented fellow-labourer, the late Mr. F. W. Hicks, who was for so many years the zealous, efficient and obliging Secretary of the Association. Many of the teaching body will, I am sure, remember with gratitude various acts of kindness received at his hands. To our deeply regretted friend this Association is largely indebted for its present gratifying status. Let me express the earnest hope that his good old father may yet be spared to us for many years, not only to enjoy the repose to which his long services as a pioneer in the educational cause so worthily entitle him, but to give us the inestimable benefits of his ripe experience and sound judgment. I would wish, too, to take this opportunity to allude briefly to the high honour recently conferred upon one who I think should be justly designated as the leading spirit in our educational movements during the last twenty-five years—a distinction of which the knowledge was first conveyed to his many friends by the mouth of His Excellency the Governor-General, at the recent meeting of the British Association of Science at Montreal. Need I say, ladies and gentlemen, that I refer to Sir William Dawson, the man of all others who stands pre-eminent among the leaders, not only of educational reform, but of scientific research, and whose name is almost a household one in these respects not only here, but wherever the English language is spoken the world over. I am sure I act only as the imperfect echo of all, when I say that the teaching body in this Province recognize in the distinction conferred upon this great and good man the desire of Her Majesty to mark her appreciation of worth wherever it may

be found, at home or abroad. He came to us from the sister Province of Nova Scotia, now some years ago—known, it is true, to science and educational work; but it remained for him to build up here in the Province of Quebec the fabric of that illustrious, that world-wide reputation of which we are all so justly proud. He is one of ourselves, ladies and gentlemen, and that which he has accomplished others may also accomplish by a proper use of the same means. Our prayer is that, with his new honours, there are new fields of usefulness open before him and that he may be long spared, as well to preside over the important institution whose marked success is so much due to his wise guidance and exertions, as to give the benefit of his valuable counsel to the movers in educational work as efficaciously as in years past. Nor can I allow so auspicious an occasion as the present to pass without referring to the distinguished body of scientists who left us a few days ago after a visit, of which the Montreal meeting was the great central feature. That visit, ladies and gentlemen, marked a new era in our history, not only from the scientific, but the political point of view. It demonstrated the glorious fact that scientific research knows no paltry bounds or limits, and that he who gives expression to a new truth in this great world of thought, whether from the classic halls of Cambridge, of Oxford, or of some other of the far-famed European universities, is proud to meet as on a level with himself the co-worker, who may be feebly making an effort in the same direction in what was once termed the wilds of our Canadian home. From a political point of view, also, that meeting furnishes food for much careful thought and deliberation. It leads naturally to the conclusion that, if the leaders of science from all parts of the British Empire, can meet on common ground to discuss great scientific truths, or the glimpses of those yet in embryo, there is or should be no good reason why the leaders of men, and of political parties, the statesmen desiring the highest good of humanity in general, may not meet and discuss the great principles which have for their object the amelioration of their common race, and the advancement of its civilization. The results of that Montreal meeting will be most beneficial, and it is to be hoped that it is not the last time we Canadians shall have the pleasure of welcoming such illustrious guests to our shores.

Another event of more recent occurrence commends itself to our notice, ladies and gentlemen, and I am glad to be afforded an opportunity of referring to it, especially in the presence of such a large body of ladies as I am pleased and proud to see before me at

this moment. I allude to the recent gratifying announcement that, through the munificent gift of Hon. D. A. Smith, the authorities of McGill University have been enabled to provide facilities for the higher education of women. To this young country, this is a new work and one which will open up a new field of whose limits it is impossible just now to form anything even like a faint conception. Leading educationalists everywhere have long discussed the important question of the higher education of women from every possible point of view, and in some countries plans have been devised to give practical effect to various suggestions. But it remained to our country, Canada—to us here in the Province of Quebec, thanks to the munificence of one of our millionaire princes, to afford the means for at length realizing long cherished aspirations on the subject, and, if I were permitted to surmise, I would dare to say that Sir William Dawson took no insignificant part in bringing about so pleasing a result. Now, ladies and gentlemen, turning to other matters, let me remark that it is not my purpose to discuss the value of any of the excellent papers already submitted for your criticism, or to anticipate the work of those who are to follow me. But, as last year, in an open letter addressed to your secretary, I took occasion to express the hope that more than the usual amount of attention would be given to the discussion and consideration of the question of elementary education, I must be excused if I crave your permission to revert to this most important topic now. No one more than myself prizes the value to be attached to a university course, and I would strongly advise every young man and, I may now say, young woman, who desires to fit himself or herself for the higher intellectual walks of life, to spare no effort to enjoy the very highest training which our present excellent university institutions enable him or her to command. But this blessed privilege must, owing to circumstances, be confined to a very few young people. The masses of them must be content, as they now are, to enjoy the advantages which our elementary, and at most, our academy system, places at their disposal or within their reach. It becomes therefore a matter of the most pressing moment that the education, which these systems offer, should be of the most practical kind possible. Our young men and women, the sons and daughters of our farmers, that class of our population upon whose training and intelligence must rest very largely the future prosperity of this young country of ours, require to have the means of receiving in the most practical way and in the shortest time that education which will enable them to worthily discharge the

duties devolving upon them in after life. I use the expression "the shortest time" with regret. I use it, however, because the fact exists and cannot be controverted, that this important class of our youth are necessarily obliged so to say, to snatch their education at such periods of time as the exigencies of their duties at home will permit. Let us then seriously consider whether our present system is the best adapted to the situation, or that we can make use of! Might it not be well to enquire whether we are not attempting too much in some directions and too little in others? I hesitate about expressing the opinion that an effort is being made to increase the number of certain so-called superior educational institutions to the detriment of a true elementary system more in correspondence with the requirements of the masses of our people, in other words, that the tendency is in the direction of higher education, which under the circumstances must be limited to the few. It must not be imagined that, in the matter of education generally, we are retrograding in this province. On the contrary, we are making most commendable progress. I do not intend, ladies and gentlemen, to worry you with details, but I do desire to place before you and the public some proof of a nature to warrant me in the assertion that this progress is as real as I have assumed it to be gratifying. I quote from the annual report for 1883 of the superintendent of education, wherein I find that, in 1867, when we started under confederation, our primary schools only numbered 3,355, while in 1882-83 they had increased to 4,404. Within the same period our model schools increased from 318 to 333 and our academies from 190 to 246. In 1867, the pupils attending the primary schools were 156,820, and in 1882-83, 170,858. The attendance at our model schools showed during the same period an increase from 22,700 to 26,378, and at our academies, from 26,010 to 38,278. But there is one salient feature of these important statistics which has particularly struck me. In 1867 the number of our male teachers was 608 as against 497 in 1882-83, a somewhat lamentable falling off, it must be admitted. On the other hand, however, a marked increase has to be noted in the number of female teachers which was only 2,969 in 1867 as against 4,448 in 1882-83. But our educational progress becomes more manifest when we turn to the figures showing the increase in the number of our school municipalities and school houses, as well as in the contributions of our population for school purposes. In 1867 our school municipalities only numbered 749, in 1882-83 they had attained to 1071. In 1867 we had only 2,969 school houses as against

4,864 in 1882-83, and there was contributed by the ratepayers for education generally, \$2,809,739 in 1882-83, as against \$1,313,149 in 1867. Our position, the Protestant position I mean, is undoubtedly a peculiar one. But I have had special opportunities of judging, and I now wish to say that I believe the majority are disposed to deal with us in the fairest and most conciliatory spirit. We have the almost entire direction of our educational institutions under the control of a superintendent of education whom in my official capacity I am happy to welcome here to-night and whose broad and liberal views are well known, ably assisted as he is, among others, by a gentleman who is no stranger to this association, I refer to your former secretary, Mr. Rexford. The Protestant Committee of the Council of Public Instruction is composed of a body of men who wish well to the cause of education, and who devote themselves unremittingly to the task that lies before them. I know that there is a disposition, as there always is in matters of this kind, to criticize at times the management of this body. But, when the multiplicity of difficulties that surround them are taken into account, I think that much credit is due and will be freely and generously given them for the zealous manner in which they work. They have made very considerable and praiseworthy progress, for instance, in the mode of distributing the superior education money. Formerly, it was entirely a matter of political favour so far as our academies and high schools were concerned. Now, the system of inspection of our academies, High Schools and Model Schools, has, I rejoice to say, permitted the accomplishment of a great deal, and, if in no other way, it has had the effect of apportioning the superior education money according to the merits of the respective institutions. The reports of the inspectors establish beyond a doubt that very considerable improvement is being made in the matter of higher education and I only trust that the incentive which the committee desire to offer may have the effect of leading to still further improvement in that direction. If I might be permitted an observation, it is this, that I would like to see our academies or High Schools—for the terms are really convertible—confined to our large rural centres. Our population is sparse and a multiplication of this class of schools can only serve to impair those which should be really maintained. Possibly much could be done in this direction, if more of these higher schools were under the control of our regularly constituted school boards who would see to a proper system of gradation, and to that which is not less important, the payment to the teachers of a regular and

sufficient salary. While speaking in this connection, ladies and gentlemen, I may perhaps be permitted to express the hope that the day is not far distant when our universities liberally endowed through the benefactions of their own students who have attained distinction in different spheres of life and from other friends of education, will find themselves in a position to decline to receive further aid from the State. When this occurs a very considerable impetus can be given so far as increased grants are concerned to our academies and Model Schools, which, in their true light, should be regarded as the nurseries of the universities. I may also remark that the time will come when further improvements in the mode of distribution of the superior education money will have to be made. I have always felt the very great inconvenience which results from what is now a necessity, that is, that a uniformity is not maintained and that a school this year receiving aid to an extent sufficient to place it upon a fitting of usefulness is the following year, through no fault of its own—neither of the teachers nor of the directing body—deprived of a very considerable sum, upon which possibly its existence depends. Again at the present time the population, I mean the relative Protestant population of counties, are not considered in the distribution. I do not believe that any good results flow from rapid and sudden changes often made without proper deliberation and upon an imperfect basis; but I do sincerely hope that the time may come when we can have a system of county schools, those of the one vying with those of the other. This, of course, would entail a county system of school inspection and a county high school with model schools in each township—the Model School being the stepping stone from the elementary school to the County High School and the latter, in its turn, the stepping stone to the universities. This plan, whenever realized, will necessarily throw additional burthens upon the ratepayer and I know that this is not always popular; but I have sufficient confidence in my fellow-citizens to believe that, if they can be convinced that great and satisfactory results are likely to accrue from any improvement in our educational system, they will be quite prepared to endorse it and to assume their share of the burthen which such an improved system will necessarily carry with it. Reverting now, ladies and gentlemen, to our elementary schools, I can only repeat what I said on this important subject ten years ago, when I had the honour to first preside over this Association, namely, that I very much fear that sufficient interest is not taken in this much needed and eminently useful class of schools, considering the circum-

stances of our situation—that sufficient care is not bestowed on the choice of persons to direct them, and that their value should not be measured by the yearly contributions in the way of taxes. The necessity of securing good teachers for these schools and of paying them adequately, is to my mind the chief consideration, the key of the whole situation—and until these desiderata are attained, until our people come to appreciate more the worth of those to whom they can safely commit the care of their children at that tender age when the impressions received are most lasting, we cannot hope to see any great improvement take place. In this connection, I rejoice to know, however, that one of the subjects, the harassing subjects, that formed the topic of debate for so many years, has no longer a *raison d'être*. Its usefulness has, so to say, gone. The system of boarding round has disappeared, never to be revived. There is another subject, ladies and gentlemen, which I consider of paramount importance and to which I desire to allude, I mean our Normal Schools. I believe that they are a necessary adjunct of our school system—that without them we can hardly expect that any serious or real improvement can take place in the character and training of our elementary school teacher. I know that a feeling exists—and it is proper and right that it should be so—on the part of our high and Model Schools that they are quite as competent to properly fit students for elementary school diplomas as are our Normal Schools. I do not intend to discuss the relative competency of the one or of the other. I give them both every credit for earnest devotion to the work in which they are respectively engaged. But the one is essentially a training school while the other is only partially so from necessity. May we not look forward to the time when our present Normal system can be extended in its mission of usefulness so that its terms of training at the central point may be shortened and that the remainder of the scholastic year may be devoted to some system, like that inaugurated by our esteemed friend, the Protestant secretary of the Education Department, where teachers and those proposing to teach can meet and receive instruction in the profession. I merely mention the idea as a crude one which has often occurred to my mind and which would not only produce—it seems to me—better results as far as uniformity in the qualifications required of our elementary school teachers are concerned, but would show younger ones that of which many of them, have often felt seriously the want, that is, to know how to teach. Ladies and gentlemen, I have prolonged these remarks somewhat beyond the limit I had fixed for

myself at the start. It is not my purpose, any more than it is my right, to take part in the discussions which form the objects and constitute the great usefulness of a body like this; and I trust that I will be pardoned if in anything I have said, I have given the slightest cause for dissatisfaction. I am here, in the first place, because of the honour you have conferred upon me in making me again your president; secondly, because of the identity I shall always wish to maintain with you, and lastly, because of the great interest I take in all that pertains to true educational progress in this Province. I am or rather desire to be a Canadian in every sense of the word, and as such I believe it to be my duty on every occasion that offers to contribute

my services, humble though they may be, to any movement having for its aim—the amelioration of the social position of my fellow-citizens. We have as a people made great and almost surprising advances in our material prosperity and it is to be desired that these advances should always continue and, if possible, in increasing ratio. But if that prosperity is to be a sound and substantial one, is above all things necessary that our people should increase in a cultured and enlightened intelligence; and this can only be attained through an educational system, which will progress with the prosperity that looks to it for maintenance and support.—*Montreal Gazette Report.*

(To be continued.)

## COMMUNICATION.

### HIGHER EDUCATION OF WOMEN.

To *Editor of THE EDUCATIONAL MONTHLY:*

SIR,—I hope you will allow me to set you right as to the true attitude of those who have for years past been advocating the admission of women to University College. What we have been working for was not co-education, but the higher education of women. Some of the promoters of the movement may prefer co-education to separate education as a matter of principle, but if they do I am not aware of the fact. If the Legislature of this Province had years ago offered to establish an institution for women of a standard as high as that of University College, I have no doubt the efforts of women to get into the latter would have ceased.

You are well aware that no such offer was ever made, and that there is not at the present time any college in existence, except University College, which is in a position to give female undergraduates of Toronto University the tuition they need in the higher years of the course. Other colleges admit women, and all honour to them for doing so; but the course in Victoria and the course in Queen's is quite different from the course in Toronto University and College.

You express your preference for a Girton or a Newnham in Toronto, and no doubt some of the women who desired admission to University College share this feeling. Unfortunately, however, a Girton costs money, and even the original institution of that name in Cambridge has had a precarious struggle for existence in spite of high fees, wealthy backing, and an abundance of teaching power to draw upon in the immediate neighbourhood. In London, in spite of greater opportunities and facilities than we have in Toronto, the authorities of University College have for years admitted women to the ordinary lectures and classes. In Owen's College the separate classes for women are not likely to be kept up beyond the period for which they are endowed—some three years from this time. Dr. Eliot, of Harvard, says co-education has only one decent plea to support it—economy. Even if this dictum were true the plea is so strong that Harvard itself, in spite of Dr. Eliot's stalwartism, will before long yield to it. Women desiring a real University education will not go to colleges established for them unless they are convinced that the standard is as high as it is in men's colleges; and the authorities of colleges will not long persist in duplicating their staffs, and

appliances for the sake of keeping the sexes apart.

I need hardly add that you have understated the number of women in attendance at University College. Instead of three there are seven, all taking honour work, and next term there will be several others. But were it otherwise the movement could not be said to have failed, for those who want to attend lectures have now an opportunity of doing so, and this is all that the movement aimed at accomplishes. Nobody ever sup-

posed that women would go to college unless they desired to do so. Those who are determined to stay out until they get a Girtton or a Newnham had better look to their friends to organize a movement in their interest. Meanwhile it is rather too much to ask women who can see no harm in listening to lectures along with men to sacrifice themselves out of respect for a feeling of repugnance which they either do not share or are willing to crucify. WM. HOUSTON.

*Toronto, Nov. 10.*

### CONTEMPORARY LITERATURE.

FIRST PRINCIPLES OF NATURAL PHILOSOPHY, by Dr. Avery. Sheldon & Co.: New York and Chicago, 1884.

THIS is a book for use in common schools. The author states that especial care has been taken to provide simple experiments which do not require expensive apparatus. Teachers will find this book helpful from its supplying useful material for the talks in elementary physics which every instructor should occasionally have with his classes.

THE TOPS OF THE MOUNTAINS; Gen. viii. 5. London: Rivington & Co., 1884.

THIS little book, evidently the work of a scholar, has for its subject the "Dispersion of the Nations, in the Early Twilight of History." Passages in Old Testament Scripture are frequently cited as the ground of the author's views. We have pleasure in commending the work to Canadian scholars who take an interest in its fascinating theme, not only for the valuable information it contains, but for its concise and scientific style of reasoning.

NATURAL LAW IN THE SPIRITUAL WORLD, by Henry Drummond, F.R.S.E., F.G.S. (For sale by Messrs. Williamson & Co., Toronto.)

DURING the holiday season we had the opportunity of reading and meditating upon

this remarkable book. Without attempting a review of it, for the space at our disposal would not suffice to deal adequately with its merits, we shall content ourselves with stating that the author's explanations of the great problems of life, death and eternity, and of the harmony between religion and science, are not only of surpassing interest, but full of encouragement and consolation. He will be a rare reader who can rise from the perusal of this volume with other language than the words "One thing I know, that whereas I was blind now I see." We heartily recommend the book to the notice of the thoughtful reader.

GOOD BEHAVIOUR; an Elementary Reader for Public Schools. Cheney & Clapp: Brattleboro', Vt., 1884.

WE are indebted to the author, Gen. J. W. Phelps, of Guilford, Vt., for a copy of the seventh edition of this work, which he modestly refers to as a compilation. Like many another educator, the author feels that one of the great missions—would that we could truthfully add, one of the most successful missions—of the Public School is to civilize the growing nation, to teach the great laws of kindness, unselfishness and unobtrusiveness, which are broken every day on our streets and in our homes; not the least frequent offenders being children whom we can reach through

the schools. With the single exception of some few references to "republican schools," there is scarcely a sentence in "Good Behaviour" which might not be made familiar to every scholar in the land. And in the absence of any Canadian text-book on the subject, we commend it to the notice of teachers. They will know how to use it. A paragraph will do for a dictation lesson. Some sentence may be written on the blackboard. Another will serve as an exercise in writing or composition; and we venture to say that many a boy and girl will remember the spirit and lesson of the words long after the form has passed from his memory. We add a few quotations:—

"None but coarse natures will withhold kindly respect from foreigners. The well-bred child would not even stare at them; and much less would he ever dream of assailing them with insulting words or missiles." "Scandal is not only an offence against good manners, but it is a moral wrong." "All local phrases, affectations of foreign accent, mannerisms, exaggerations and slang are inadmissible in good society." "Good breeding is always perceived and appreciated, even by those who are not accustomed to it themselves." "One should ever be more careful of the things of others than of those which belong to himself."

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COLLINS' ROUND HAND WRITERS. William Collins, Sons & Co. (Limited): London, England.

THE objects of this series of copy books are stated to be:—1. To give the pupil an intelligent idea of the manner in which the letters of the alphabet should be formed. 2. By repeating the (copy) line in the centre of the page, to provide the pupils with the means of comparing their own work with the correct copy, and thus leading them to an accurate reproduction of the model. 3. To familiarize the pupils with the ordinary arithmetical forms. 4. To secure a well-formed round-hand style of writing, suitable for correspondence and every kind of business."

The second and fourth of these objects are kept consistently in view throughout. The first is carried out only so far as the small letters are concerned, and then not with the same scientific method as in "Beatty's New and Improved Series," published by the Canada Publishing Company, or in the "Mercantile" series, published by Copp, Clark & Co. of this city; while no attempt is made to teach the formation of the capitals systematically, since they are introduced as they occur in the alphabet. The third object is so imperfectly accomplished that it does not merit mention as one of the distinctive features of the series. It is a good rule with teachers of writing to give most practice on those letters that are difficult of formation, such as *k* for example. Yet this letter receives little attention, while the capital *Z*, which is not difficult to make, seems to be the favoured letter. The series consists of fifteen books, the first eight of which are devoted to the teaching of text and half text. The remaining seven contain some fine specimens of the round-hand which is the distinctive feature of the series. Any one who learns to write after the style of these books will have a hand that he who runs may read. We have seen nothing equal to it for plainness and legibility in any recent series. Everything, even rapid writing, is made subordinate to the carrying out of these objects. For example, the up stroke of the loop letters, such as *h*, *b* and *l* in the copies before us, cannot be made without lifting the pen at the point where the two strokes of the loop cross, owing to the fact that jog or very awkward curves occur at that point. It is far better to have these loops made as in the series published in this city to which we have referred, with a sagging curve, though at some sacrifice of plainness. Another feature worthy of commendation in these books is the absence of superfluous strokes. Samples of specially ruled exercise books for arithmetic and dictation accompany the series. The mechanical execution of the whole is excellent, and compares favourably with the compiler's work, the paper, too, being well selected for the work for which it is intended.

LESSONS IN ENGLISH. ELEMENTARY COURSE, PUPIL'S EDITION.

LESSONS IN ENGLISH. ELEMENTARY COURSE, TEACHER'S EDITION, by the Brothers of the Christian Schools. Toronto: Timms, Moore & Co., 1884.

THE aim of the writers as stated in their preface is to teach the elements of English grammar, composition and literature from a practical standpoint. They hold that a good teacher profits by every occasion that oral exercises with his pupils afford, to give examples of purity and dignity of language, and to correct mistakes made in speaking. They attach much value to the indirect teaching of language, and to what Hart calls incidental and unconscious lessons in grammar. They lay down the propositions that the teaching of language should be properly graded, and should be varied and active, and should be so directed as to accustom the pupil to composition, and that the system should be rational, and the teaching moral. Hence the lesson in English is made the occasion of imparting some knowledge of geography, history, hygiene, natural history, with not a little teaching that is purely dogmatic. The plan adopted has been laboriously and consistently followed throughout. As to the merits of the plan there will be differences of opinion. The plan is largely synthetic: first, the definition, then the example and illustration, and finally the question. For ourselves

we prefer in language, as in other subjects, the analytic method. We believe it is possible for all terms to be taught by experiment. Every pupil has an outfit of words and sentences which the judicious teacher can use for the purpose of teaching formal grammar, and this analytic method we conceive to be the only right way. We would not for instance define *vowel* and declare that a, e, i, o, u, and sometimes w and y are vowels, and desire a pupil to say this. We would analyze words and try to teach pupils to discriminate sounds from the start, let them see the difference and then supply the name, giving the reason for it, if there is a reason. And so on with all the definitions. In this work we can hardly say that the formal grammar is abreast of the present state of linguistic knowledge. Unfortunately Goold Brown is taken as an authority. Since the days of that laborious compiler the science of language has made great advances, and definitions and classifications that were accepted as settled in his time are now quite abandoned. There is more real scientific knowledge of English in one of Morris's primers than in Goold Brown's ponderous tome. We can heartily recommend, however, those portions of the book relating to composition and phraseology. As a whole, the book is a work of much merit, and with the revision of the formal grammar, it would merit very high praise. The printers have done their work admirably.

### EDITORIAL NOTES.

WE direct the attention of our readers to the prospectus of THE MONTHLY for 1885, and our new clubbing rates. We offer unsurpassed facilities for obtaining an abundant supply of good literature at the cheapest rates.

WE have again to thank friends for contributions, albeit thus far unused. In order to make room for the very interesting account of the proceedings in convention of our brethren

in Quebec, we are obliged to hold over notices of meetings in Ontario, and other educational intelligence.

It is difficult to see any good reason for the differentiation in the new certificate curriculum of mental arithmetic from arithmetic proper. If there is any reason apart from the existence of text-books on the subject, why not add mental algebra, mental euclid

and yea, also mental philosophy, all abstract subjects and to be done rapidly without slate and pencil?

THE admirable treatise "Reading in the Primary Schools" which appeared in our September and October numbers was prepared for the supervisors of the Boston schools, by Col. Francis W. Parker, of Quincey fame. His name did not appear on the tract, and we were therefore unable to give him credit for his valuable effort. We are happy to unite the author and the book too long separated, and to introduce them once more to our readers.

THE desire to do something for orthoepy in the Public Schools, is to be commended though the means to be taken to improve the pronouncing of words can hardly be considered quite satisfactory. Good pronunciation is not to be learned from books, and even if it were it would be better to send students at once to the dictionary. Its charm does not consist in the due observance of accents, and not much good will come from consulting such a sign-manual as the one prescribed, unless it be re-written.

It would appear from various hints in recent official utterances that an effort will be made by the Department of Education for Ontario to direct the profession, either by examination or otherwise, to the literature that should occupy their attention during spare hours. If the various school curricula are what they should be, if the examinations are in the right direction, and if habits of independent enquiry are fostered by our school methods, it is difficult to understand why the Department should feel it necessary to encroach upon the teacher's leisure and pursue the paternal in government so far as is now proposed. It would be wiser to see that the schools do their duty and leave shallow methods of literary culture to the superficial.

WE would respectfully ask our friends to assist us in pushing the circulation of THE MONTHLY. It is of the utmost con-

sequence to the profession that there should be in the country a worthy and useful organ of the teaching fraternity wholly unconnected with any publishing house and untrammelled by official or departmental connections. THE MONTHLY fills the bill, and we repeat, it has no end to serve but the good of the profession. We have recently received most gratifying proofs of the value of THE MONTHLY to the profession and the public generally. Our signal aim in the coming year will be to make the publication more worthy of the confidence of all interested in education and general culture. THE MONTHLY has still work to do, and it will perform it with the same courage, energy, and efficiency, as has characterized its efforts in the past.

WE gladly afford Mr. Houston the opportunity he seeks to explain his attitude in reference to the higher education of women in this Province. We are glad to find that he is not an advocate of co-education at the Provincial University, and that he is only desirous of assisting women to obtain their undoubted rights. We may regret that he and the friends for whom he speaks in their zeal for women's rights, refuse to accept the logical consequences of their acts and prefer to take refuge under the shield of expediency, but we need not necessarily quarrel with their methods if only the result be satisfactory. What the result of the experiment now being forced into trial at University College will be, remains to be seen. We can only hope it will be good. The question at issue is not to be settled by the number of young ladies in attendance. The conditions of the problem are not affected because there were only three in attendance at the opening of term, and a dozen are in prospect now. Meantime we commend to the consideration of Mr. Houston and all other readers the views of President Wilson and Principal Dawson, as found in other columns.

THE recently formed Inter-Collegiate Missionary Alliance has fully established its *raison d'être* by its first annual meeting

lately held in Toronto. Substantial benefit, it is felt, must accrue from earnest discussion by the theological students of the different churches of the necessities of the missionary field and the best methods of work. Only those religions which are missionary appear likely to survive in these days; and equally evident does it seem, that, if Christianity is to be soon dominant and universal, it is by a union of forces for its propagation. May it not be added, that the Christianity which seeks points of union—to centre on the Cross—rather than points of difference, is, in itself, the purest and most potent? The Alliance meets with almost universal favour. Every principal branch of the Protestant Church among us is represented in its membership, and clergymen of all names vied with one another, at the recent meetings, in hearty commendation of its aims and methods. The fact that a few extreme separatists have sounded an alarm gives emphasis to what we have just said. They alone may lose by an increase of brotherliness. But the stand-off, "I-am-holier-than-thou" spirit is foreign to our soil, as it is to the truest Christianity.

THAT learned philosopher so intimately connected with the teaching profession by ties of brotherhood and official relationship, Professor George Paxton Young, of Toronto University, whose remarkable discoveries in higher algebra were recently described in THE MONTHLY, has followed up his investigations by further investigations that have not only surprised but delighted the mathematical world. At a crowded meeting of the Canadian Institute, Toronto, on the 1st instant, he demonstrated the solvability of equations of the fifth and sixth degree, a problem that has hitherto baffled the ingenuity of the mathematicians and which some able scholars have laboured to prove to be insolvable. Professor Young has thus performed another incredible feat: he has eclipsed his fame as a metaphysician by his skill as a mathematician. *Apropos* of mathematics, we observe that Professor Young recently took occasion publicly to pay a tribute of recognition to the brilliant achieve-

ments in mathematical investigation of Mr. Inspector Glashan, Ottawa. Praise from such a source is praise indeed. We trust that the Minister of Education will adopt Professor Young's suggestion and find means to secure for Mr. Glashan an opportunity for the full development of his extraordinary talents. At the same meeting Professor Loudon, also of Toronto University, communicated to the Institute, the results of his recent inquiries into the theory of thick lenses. He was able to show a method for developing by easy steps Gauss' theory, and rendering the study of that most important and practical subject—optics—less difficult. Professor Loudon's discovery will be of great practical utility. If there is any lingering doubt of the ability of young Canadians to fill chairs in the Provincial College, that doubt will now be dispelled by the discovery made by Professor Loudon in his chosen field of study.

SAYS an old Chinese proverb: "A falsehood, a hundred years old, has still its sucking teeth." It seems that the epithet of "godless," applied to University College, well-nigh a generation ago, is not to be got rid of. Indeed, the calumny which it embodies is still diligently circulated, and occasionally, as in a recent communication to the press, finds violent public enunciation. The learned President, Dr. Wilson, has replied with vigour to this latest slander. His statement ought to be conclusive. The retired president of University College is a clergyman of the Church of England. Other clergymen have been on the staff in recent years. The daily work of the College is opened with public prayer, and all resident students have, from the first, been required "to be present in the hall at daily morning and evening prayer, with reading of the Scriptures," except where parents expressly object on conscientious grounds. The majority of the non-resident students are housed in the various adjacent Theological Halls. An active Y.M.C.A. of 170 members exists within the college, and the Professors participate in its work. This Y.M.C.A. carried out last winter most of the religious as well

as secular instruction in the "Newsboys' Lodging," and engaged in Christian work in the hospital and elsewhere. On the morning of the last University Convocation, the President of the college, by special request of the graduating class, met with them in a devotional meeting prior to the taking of their degrees. The challenge is thrown out to the denominational universities to produce a similar band of 170 Christian wor' among their students.

We would hope that the "godless college" cry has not now a very large following. It is time that the last were heard of it. No Arts College in the Dominion can justly claim more of a Christian atmosphere than that over which Dr. Wilson, himself an eminent Christian worker, presides.

AN interesting controversy is raging in England over Mr. Inspector Fitch's Memorandum on Dr. Crichton Browne's Report on Over Pressure in Board Schools. In February last, Mr. Mundella, in response to a very acrimonious correspondence in the newspapers, appointed Dr. Crichton Browne to investigate the truth of the complaints. The Doctor visited the schools, and once or twice he was accompanied by Mr. Fitch. By April 30th Dr. Browne's Report was in the hands of the Vice-President of the Council, and quite ready to be produced for the confusion of the critics of the Education Depart-

ment. But the Department was unwilling to publish the document, for it was found that Dr. Browne's report was adverse to the views held by the Vice-President. At last, after much urging, Mr. Mundella published the report, and also, as an antidote to it, a memorandum by the very Mr. Fitch who accompanied Dr. Crichton Browne on his round of inspection. *The Schoolmaster*, which gives a full account of the controversy, does not hesitate to describe the memorandum as a most misleading document in more ways than one. The newspapers are making it very warm for Mr. Fitch, and are opening Mr. Mundella's eyes to the fact that over pressure does exist, and must exist as the inevitable result of examination under the provisions of the present code. The Education Department in England is suffering from official blindness. We have had a similar affliction in Ontario over this very question of over-pressure, consequent upon payment by results, and the darkness would have remained to this day if the teachers, aided by *THE MONTHLY*, had not dispelled it. Everywhere the official is the last to learn the truth about the schools. We hope the English Board Teachers, with whom we sympathize most deeply, will continue their agitation until the most pernicious dogma that has ever vexed the school system, Payment by Results, has been swept away. The example of Ontario should be some slight encouragement to them.

## EDITOR'S TABLE.

MESSRS. GINN, HEATH & CO., Boston, have in preparation a text-book on "Temperance," by the well-known author, Axel Justason.

D. APPLETON & CO. have almost ready for publication a new edition of John Stuart Mill's "Political Economy," with notes by Prof. Laughlin, of Harvard College.

THE tempting bill of fare for 1885 furnished by the *Century Co.*, New York, should secure many new readers for *The Century* and *St. Nicholas*, as well as retain the old.

A RECENT number of the London *Spectator*, contains a favourable notice of "Old Spook's Pass and other Poems," by Miss Isabella Valancey Crawford. Jas. Bain & Son, Toronto.

THE *Books and Notions* (monthly, 50 cents, J. J. Dyas, 20 Wellington Street east, Toronto), is a very readable serial, devoted to the interests of the Book, Stationery and Fancy Goods Trades.

THE Annual Circular of the Ontario Business College, Belleville, is a neat pamphlet

containing much interesting information concerning the rise and growth of a very prosperous and deserving institution.

"STOPS; or How to Punctuate," by Paul Allardyce (Thos. Whittaker & Co., London), is gradually finding its way into this country.

NEW announcements in the English "Men of Letters" series are a volume on John Stuart Mill by John Morley, and another on Carlyle by Sir James Fitz-James Stephen.

DR. EDWARD A. FREEMAN has been appointed Professor of Modern History at Oxford in the room of the Right Reverend William Stubbs, D.D., Bishop of Chester, resigned.

THE Christmas Number of *Harper's Magazine* promises to be a marvel of artistic beauty and literary excellence and variety. The old favourite seems to have discovered the perennial fountain of youth and beauty.

*Latine* (D. Appleton & Co., New York,) again appears after the holiday season, unique, bright and useful as ever. It furnishes a whole battery of arguments in favour of the ancient classics as an instrument of education.

THE November *Popular Science Monthly* contains "German Testimony on the Classics Question," by J. F. Fernald; "Origin of the Synthetic Philosophy," by Herbert Spencer, and "Pending Problems of Astronomy," by Professor C. A. Young.

"THE Ancient Empires of the East," by A. H. Sayce (Chas. Scribner's Sons, New York), is likely to supersede everything that has been written on the history of the ancient empires of the east as regards accuracy and the embodiment of the most recent facts.

MESSRS. SCRIBNER are about to publish a new volume by Canon Rawlinson, entitled, "Egypt and Babylon," and an important new work by Dr. Schliemann describing his researches which led to his discovery of the prehistoric palace of the Kings of Tiryns.

MESSRS. G. P. PUTNAM'S SONS announce—"How Should I Pronounce? or the Art of Correct Pronunciation," by W. H. P. Phyfe. Mr. Ayres will not have all the field to himself, and the critics have long since decided that he is too inaccurate to have that distinction.

TEN thousand extra copies of the November *Century*, containing General Beauregard's article on "Bull Run," were called for by the public. Of the December number, containing General Leo Wallace's paper on "Fort Donelson," 150,000 copies are printed.

THE *Atlantic* for November contains a great variety of interesting papers among which may be mentioned "Bichbrook Mill"

by John Greenleaf Whittier; "Stephen Dewhurst's Autobiography" by Henry James, and "The Song of the Silenus," by Samuel V. Cole. Again we mention an admirable feature in this magazine, "The Books of the Month."

UNDER the title *The Book Worm*, John B. Alden, New York, sends out for 25 cents a year a little magazine containing tid-bits from his published works so daintily served that the reader will be tempted to buy the whole volume. We have already spoken of the literary revolution which Mr. Alden has accomplished in producing the best works at an insignificant price.

WE can hardly commend to those of our readers wishing something new to read the love letters of Bulwer. From the specimens going the rounds of the newspapers it will be easy to see that they are disgusting, inane and silly. The executrix of the dowager Lady Lytton who has inflicted these letters upon the world in order to retaliate for the unkind things related in the Bulwer Biography of that unhappy lady has mercifully withheld the answers to the hundreds of amatory epistles. They must all have been of a piece.

FAR different is the volume, "Carlyle in London," recently given to the world by Mr. Froude. We now know the worst that can be said of Carlyle and that worst is not very bad after all. Carlyle is a great favourite with teachers, and they will gladly read the concluding volume of the memoirs of a man, of whom his biographer says: "In no instance did he ever deviate even for a moment from the strictest lines of integrity." The work is of absorbing interest and gives us a rare opportunity to see the world of politics and literature through the eye of genius.

THE *Eclectic*, for November, contains its usual rich variety. Eighteen selected articles from the British reviews and magazines; the literary notices, foreign literary notes and miscellany make up a capital number. "What Dreams are Made of," by Dr. Andrew Wilson, we have from the *Gentleman's*; from the *Contemporary*, "The Conflict with the Lords," by Prof. Goldwin Smith; "Sea Stories," by W. Clark Russell, the latter a sharp critique on "Land Lubber" writers, who venture on nautical "yarns," and an earnest plea for poor Jack, whose condition, despite palace stean hips and philanthropic Plimsolls, is still anything but a desirable one; in the *National Review*, Wm. J. Harris makes a strong plea for "Protection, from the Workman's Point of View."