
McGill University.

FACULTY OF ARTS.

COLLEGIATE CLASSES FOR WOMEN.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

RESEARCH REPORT

BY _____

McGill University.

FACULTY OF ARTS.

COLLEGIATE CLASSES FOR WOMEN.

UNDER THE DONALD A. SMITH ENDOWMENT.

Provisional Arrangements for the Session of 1884-5.

I. MATRICULATION AND ADMISSION.

In Classics.—*Latin.*—Cicero, Orations I. and II. against Catiline; or, Virgil, Æneid, Book I.; Latin Grammar.

Greek.—(Optional)—Xenophon, Anabasis, Book I.; or, Homer, Iliad, Book I.; Greek Grammar.

Candidates who cannot pass in Greek will take an additional modern language.

In Mathematics.—Arithmetic; Algebra, to Simple Equations, inclusive; Euclid's Elements, Books I., II., III.

In English.—Writing from Dictation. A paper on English Grammar, *including Analysis*. A paper on the leading events of English History.

An equivalent amount of other books or other authors in Latin and Greek than those named may be accepted by the Examiners.

[Associates in Arts who, at their special Examination, have passed in Latin, Greek, Algebra and Geometry, are not required to present themselves for the Matriculation Examination.]

PARTIAL STUDENTS.—Candidates unable to pass in all the above subjects may be admitted as Partial Students, if prepared to enter in three of the subjects of the course of study; and may make good their standing in the Christmas or Sessional Examinations.

OCCASIONAL STUDENTS.—Ladies (being members or students of the Ladies' Educational Association) desirous of taking one or two Courses of Lectures, as Occasional Students, may apply to the Secretary of the Association, and may procure tickets for the Lectures they desire to attend.

II. COURSE OF STUDY.

FIRST YEAR.

I. CLASSICAL LITERATURE AND HISTORY.

(MAJOR H. MILLS PROFESSORSHIP OF CLASSICS.)

Professor, Rev. G. CORNISH, M.A., LL.D., and *Assistant*.

LATIN.

VIRGIL.—ÆNEID, Book VI.

CICERO.—EPISTOLÆ SELECTÆ.

Latin Prose Composition.

GREEK (OPTIONAL).

XENOPHON.—HELLENICS, Book I.

2. ENGLISH LANGUAGE AND LITERATURE.

(MOLSON PROFESSORSHIP.)

Professor, CHAS. E. MOYSE, B.A.

English Language and Literature. Three Lectures a week.

The Lectures on Language exemplify the more important features in the history of English: Exercises on Analysis are given in once a week. The Lectures on Literature comprise the period between the Celts and Wordsworth. Students who have leisure will be advised as to their reading.

3. FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. DAREY, M.A., B.C.L.

First Year.—DAREY, *Principes de Grammaire française.*

LA FONTAINE, *Les Fables*, livres V. et VI.

MOLIERE, *Les Fourberies de Scapin.*

Dictation. Colloquial exercises.

4. GERMAN LANGUAGE AND LITERATURE.

Professor, C. F. A. MARKGRAF, M.A.

Schmidt's German Guide (1st, 2nd, and part of 3rd Course); Adler's Progressive German Reader (Selections from Sections 1-5); Translations, oral and written. Exercises in Parsing.

5. MATHEMATICS AND NATURAL PHILOSOPHY.

(PETER REDPATH PROFESSORSHIP OF NATURAL PHILOSOPHY.)

Professor, ALEXANDER JOHNSON, M.A., LL.D.

Lecturer, G. H. CHANDLER, M.A.

MATHEMATICS.—Arithmetic.—Euclid, Books 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6), Todhunter's Edition.—Colenso's Algebra (Part I.) to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

6. CHEMISTRY.

(DAVID J. GREENSHIELDS PROFESSORSHIP OF CHEMISTRY AND MINERALOGY.)

Professor, B. J. HARRINGTON, B.A., Ph.D.

A Course of Lectures preparatory to the Course in Natural Science. The Lectures are illustrated by experiments, and treat of the Elementary Constitution of Matter, the laws of Chemical Combination by weight and volume, the Atomic Theory, Quantivalence, Chemical Formulæ and Equations, Chemical Affinity, characteristics of Acids, Bases and Salts, Compound Radicals, the preparation and properties of the non-metallic and metallic Elements and many of their compounds, &c. A few Lectures are also devoted to the consideration of some of the more important Organic Substances, including Starch, Sugars, the Vegetable Acids, Alcohol, Albumen, &c. During the Course attention is called, as far as possible, to the relations of Chemistry to the various manufacturing industries.

Text-Book.—Nichol's Abridgment of Eliot and Storer's Manual of Chemistry.

SECOND YEAR.

The Course of Study for the Second Year will be announced for the Session of 1885-6.

THIRD AND FOURTH YEARS.

It is expected that the Corporation will be able to provide Courses of Study for these years, leading to the Final Examinations.

III. EXAMINATIONS.

There are two Examinations; one at Christmas and the other at the end of the Session. Students who pass are arranged according to their answering as 1st Class, 2nd Class, and 3rd Class.

Students who fail in any subject in the Christmas Examinations are required to pass a Supplemental Examination in that subject before admission to the Sessional Examinations.

Students who fail in one subject in the Sessional Examinations of the first two years are required to pass a Supplemental Examination in it. Should they fail in this, they will be required in the following Session to attend the Lectures and pass the Examination in the subject in which they have failed, in addition to those of the Ordinary Course, or to pass the Examination alone without attending Lectures, at the discretion of the Faculty.

Failure in two or more subjects at the Sessional Examinations of the first two years involves the loss of the Session. The Faculty may permit the Student to recover her standing by passing a Supplemental Examination at the beginning of the ensuing Session. For the purpose of this Regulation, Latin and Greek are reckoned as separate subjects, and the Mathematical subjects are classified under two heads.

Prizes will be offered in the Sessional Examinations.

The conditions of Examination at the end of the Second Year for the Intermediate of the University and for the Certificate of Senior Associate in Arts will appear in the announcement for next session.

IV. FEES.

<i>Matriculation Fee</i> for the First Year (to be paid in the Year of Entrance only).....	\$ 4 00
<i>Sessional Fee</i>	20 00
<i>Library Fee</i> (optional).....	4 00

Undergraduates are required to pay all the above Fees.

Partial Students, viz., those taking three or more Courses of Lectures, are required to pay the Matriculation Fee, and \$5 for each Course which they attend, or \$20 for all the Courses.

The above Fees are to be paid to the Registrar of the University, from whom Tickets for the Library and copies of the Library Rules may be obtained.

Occasional Students will pay their fees to the Secretary of the Ladies' Educational Association.

Students matriculated in the University may obtain Tickets for the Lectures of the Ladies' Educational Association at \$2 for each Course of Lectures.

V. ATTENDANCE, &c.

The Regulations for attendance and conduct and for the Library and Museum will be found under the head of Faculty of Arts, in the Calendar of the University.

VI. TABLE OF LECTURES.

FIRST YEAR.

HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
12		Chemistry.		Chemistry.		
2	Mathematics.	French.	Mathematics.	French.	Mathematics.	French.
3	Latin.	Greek or German.	Latin.	Latin.	Greek or German.	
4		English.	Englsh.			

The Lectures in Chemistry will be delivered in the Chemical class-room :—entrance by the Laboratory door. The other Lectures will be delivered in the Lecture-room of the Peter Redpath Museum :—entrance by the Front door

STATE OF NEW YORK

IN SENATE, January 10, 1901.

REPORT OF THE

COMMISSIONER OF THE LAND OFFICE

Year	Amount	Number of Acres	Number of Tracts
1897	1,000,000	100,000	10,000
1898	1,200,000	120,000	12,000
1899	1,500,000	150,000	15,000
1900	1,800,000	180,000	18,000
1901	2,000,000	200,000	20,000

Approved by the Senate, January 10, 1901.

Printed by the State Printer, Albany, N. Y.



McGILL UNIVERSITY.

Annual University Lecture of the Session 1884-5,

BY

PRINCIPAL SIR WILLIAM DAWSON, C.M.G., LL.D., F.R.S.

(From the GAZETTE, Montreal, November 8, 1884.)

The William Molson hall was filled to overflowing yesterday afternoon on the occasion of the annual university lecture which was delivered by Sir William Dawson, principal of the university. Seats were not numerous enough to hold the very large number who attended to hear the address of the learned and distinguished principal and chairs had to be brought into requisition. The chancellor of the university, Hon. Senator Ferrier, occupied the chair, and was supported on the platform by the governors, members of the corporation and various faculties of the university. The students, of whom there was a large number in attendance, maintained a most praiseworthy decorum on this occasion.

Sir William Dawson, C.M.G., LL.D., who was received with hearty applause, said:— In presence of an audience which represents at once the past and the future of this university; at a time when most important events have transpired in reference to education both here and abroad; and after an absence of nearly a year from the place which I have occupied for twenty-nine years, it would seem better to present to you a series of sketches of our recent history, and its relations to things in other countries which I have recently visited, than to attempt a more formal and systematic lecture.

THE LATE CHANCELLOR.

The first picture that rises before me is that

of our late lamented chancellor, Mr. Justice Day, a man whose memory should be dear, not only to every member of this university, but to every true Canadian. An ornament to his profession, alike as a lawyer and as a judge, a successful man in public life, he yet loved, above all the prizes held out by a professional and political career, the charms of nature, of literature and of art, and was not only willing but eager to devote his time and energies to all that could advance the higher culture of his countrymen. It was this that induced him to assume in 1852 the responsible position of president of the Board of Royal Institution, and to brave the danger of failure in the attempt to revive the McGill university and to place it in the position which it now occupies. His heartfelt interest in this work appeared not only in the eloquent appeals which he from time to time addressed to his fellow citizens, but in his personal efforts to induce leading and wealthy men to sustain the university, and in the careful attention which he at all times gave to the details of its business. In the earlier years of my connection with McGill he was my constant adviser in every case of difficulty; and his rare combination of practical sagacity, refined taste, kindliness of disposition and courtly manner, with sterling rectitude and high Christian feeling, gave weight and value to his counsel and have impressed a tone on the early history of this university, which I hope it may never lose. I turned, only yesterday, to the letter which he addressed to me in July, 1855; inviting me to accept the position which I now hold, and which is full of a kindly consideration and altogether free from official form-

McGILL UNIVERSITY ARCHIVES
ACC. NO. 596/7
REF. EE

ality, and while it attempted no glossing over of the difficulties of the position, served to impress the same confidence which he himself felt in the future of the university. The sentiments which he expresses in his address on the occasion of the opening of the hall in which we are now assembled, may be quoted here in evidence of the broad and enlightened views which he from the first inculcated. He says in this address :—

“There must be somewhere deep fountains, Pierian springs, from which the living generation may draw and still leave to the generations to come a perennial supply. This supply is secured by universities. They are at once the laboratories of thought and knowledge, and the storehouses of its treasures, as they are slowly gathered in the unfoldings of successive ages,—and although many of the acquisitions in abstract knowledge seem at first and for long periods to have no practical or perceptible value, yet as the years glide on, and the secrets of nature are more fully revealed and better understood, these supposed useless conquests of science and philosophy one after another become the bases of wonderful inventions and noble institutions, which minister sometimes to the convenience and luxury, and sometimes to the higher welfare and social progress of the world. In estimating then the value of universities, they are to be considered not merely as a means for the education of youth, but of the whole people, and as agencies in producing the more refined and excellent elements of a true civilization. What could supply in England or in the great nations of Europe the want of their venerable seminaries of learning, shedding abroad from age to age their golden fruits, the luxuriant growth from the small beginnings of a generation which lived a thousand years ago? But most especially in this new country do we need those mighty instruments of mental and moral culture. We need them for our statesmen and legislators, we need them for our judges, for our professional men, our merchants; we need them in short as universal educators for every class of our people. In an immature condition of society, where all are engaged in the struggle, first for the means of subsistence and then for the acquisition of wealth, the tendencies are to lose sight of the higher ends of life. The first use to which surplus wealth is naturally applied by the nation, is to great physical improvements, canals, harbours, railroads and other enterprises for accumulation, and by individuals to an increase of comfort and luxurious indulgence. This may be well enough within a certain limit; but material prosperity and the sensuous enjoyment of life, unattended by the restraining influences which the careful culture of man's higher powers affords, have a downward proclivity, and sooner or later lead society back to barbarism. As a great, the greatest instrument, after Christianity, for counteracting such a tendency, we must look to institutions of learning, with their assemblages of studious and thoughtful men. Apart from the proper business of these as instructors, such a body of men surround themselves with a moral power which reaches far and wide, and inoculates the population not only

with respect for their pursuits, but also with a desire to raise themselves or to see their children raised to a better level.”

Judge Day was one of the two remaining members of the original board of governors, who undertook the reorganization of the university at a time when its income was scarcely sufficient for the salary of a single teacher. The other is our present chancellor, the Hon. Senator Ferrier, whom we are happy to have with us to-day. The connection of our honored chancellor with our governing body goes back farther than that of any man now living into the prehistoric days of McGill. He first appears as a member of the original Board, under the old charter in 1845, when the minutes record that he and Mr. Armour were a committee to effect sales of land and otherwise to raise funds to carry on the college, which, however, proved impossible at that time; but from that date to the present, Mr. Ferrier has had a principal part in managing the property and financial affairs of the college, and the confidence inspired by his name and his business capacity have borne us over many of the shallows on which we were in danger of grounding. In 1846, Mr. Ferrier became president of the Board, and in that capacity took a leading part in the investigation of its affairs, and the negotiations with the local and Imperial governments, which resulted in 1852 in the reorganization of the university under its new charter. This work completed, he resigned the presidency into the hands of Judge Day, to resume it in the present year, though for several years, as the senior member of the Board, he has been acting president, and as chairman of the committee of estate he always retained the leading place in our financial matters. In this reference to Mr. Ferrier I have purposely avoided the language of eulogy, for he is still among us: but so long as he shall remain to us we shall have a survivor of what we may well term the heroic age of McGill, since no succeeding one can have such struggles to undergo as those which characterized the administration of our original Board of governors.

Before leaving this part of my subject I would beg to remind you that Judge Day was the founder of our Faculty of Law, and that he always manifested the warmest interest in its success. I have heard several suggestions as to some monument in memory of his services, and none seems to me to be so appropriate as an endowment which would perpetuate his name in this faculty, and which might

also be connected with a portrait to be hung in our convocation hall.

I may appear to have dwelt too much on the past in the previous remarks, but the present is the fruit of the past, and it becomes us to value highly the root and stem which have produced for us the pleasant fruits of learning. An educational institution is not like a dead structure which begins to decay so soon as it is completed, and may even, like some of the buildings one sees in the old world, have begun to be ruinous in its older parts before its newer parts are finished. It is rather like a perennial stream, or an olive tree ever green and ever fruitful. We may, naturally, then connect the yet living stem with its newer fruits.

THE BRITISH ASSOCIATION.

Here I may present as a second and more modern picture, the privilege which this university had in the past summer in accommodating the British Association for the Advancement of Science within its walls. It is not too much to say that in the arrangements for the visit of the British association in this city, Montreal and the whole Dominion have done themselves honour. The meeting was well accommodated and well entertained, unexampled facilities were given for access to it, and for visiting in connection with it a large portion of America; and the hospitalities of all the other principal cities of the Dominion were tendered to the members, as well as those of Montreal. In this Montreal was true to its character, for it is less a provincial city, and sustains more a Dominion, or even Imperial relation, than any other in Canada. The meeting was also a success in a scientific point of view. The large attendance of the elite of the British membership, the presence of many of the leading scientific men of the United States and of most of those of Canada, gave to the meeting an unusually cosmopolitan character, and the number of papers read was very large and many of them of exceptional interest and value. All those best qualified to judge have pronounced the meeting one of the most important and useful in these respects ever held, and to this must be added the benefit to Canada of the visit of so many eminent, observant and influential men, and the opportunities given to those men themselves to enlarge their knowledge of this country and to hold intercourse with their American and Canadian confreres. But the question which concerns us is the relation

of our own university to all this. Looking at it with reference to preparatory causes, it is fair to say that the existence and position of McGill University had much to do in enabling this city to secure the visit of the British Association and to entertain it when here. The action of the university in conjunction with the Natural History Society in inviting the American Association to hold two of its meetings in Montreal, was an essential preparation for the reception of the British Association. Our buildings with those of the affiliated colleges clustered around them, afforded better accommodation for the sections than they usually enjoy, and our library, apparatus and museum gave additional facilities for the work of the meeting; and no small part of the preparation and of the actual carrying out of the proceedings fell to professors, graduates and even students of this university. In short, the meeting of the British Association here may be reckoned as one of the incidental results of the building up of the university and of the place given to scientific studies in its curriculum.

EDUCATION IN APPLIED SCIENCE.

I confess, however, that I could have wished that our visitors had seen a larger and more definite material provision here for training in practical science. Not that I undervalue our excellent and progressive Faculty of Applied Science, but it would be well if it were supplied with rooms and apparatus such as I have seen in many provincial towns in England. This matter of the higher technical education has taken deep root in the mother country. Almost every manufacturing town has now its college of technical science, often with noble buildings, always with the best apparatus, machinery, models, workshops and laboratories for carrying on the work. In these local colleges of England there are not only regular classes during the day, but evening classes in which young artisans and manufacturers can enjoy the instructions of the most eminent experts in the scientific principles and practical operations of industrial arts. I have visited a number of these schools, and in returning to Canada I cannot but lament our comparative destitution in this matter. Our young people are undoubtedly more quick-witted and versatile than those of England, and until the recent institution of the board schools in that country, they were perhaps better educated; but, with the addi-

tional advantage of equal access to education in practical science, all their good points would tell to tenfold advantage. I doubt if it will be necessary in this country to go so much in detail into mere handicraft and manipulation as is now the practice in the technical schools of England. This may perhaps be better learned in regular workshops, but there is a vast field in the direction of mathematics, drawing, designing, mechanical and chemical science for the operations of the technical school; and I should rejoice if the means could be secured for so enlarging our Faculty of Applied Science as to enable it to take more fully the place of a technical school for Montreal and for Canada. In England these schools are sustained by the cities, though they are aided in the matter of models and other appliances by the government department at South Kensington. They are, for the most part, the growth of the last fifteen years, and have spread themselves with marvellous rapidity. To those who are not acquainted with the vast progress made in this matter, it may be something new to be told that even the old universities have entered into this field. Not only do they possess magnificent physical and chemical laboratories, but at Cambridge there is a regular workshop, under the charge of Professor Stuart, where a great variety of practical operations are carried on, and where Cambridge graduates may be seen with their coats off, toiling at anvils, lathes and smelting furnaces, in preparation for employment as managers of manufacturing establishments. It is by such means that Great Britain proposes to maintain its supremacy in the industrial arts. It is by such means that we must build up our infant manufactures if we wish them to prosper.

The demand for this kind of education goes forward by rapid bounds. Already we have requirements in the matter of mechanical engineering, and evening classes for artisans which we cannot supply, and only a few days ago I was informed of a new profession, that of electrical engineering, which is sending men to us in search of training in mathematics and physical science.

THE TRICENTENARY OF EDINBURGH UNIVERSITY.

An educational picture which will never fade from my memory is that of the great celebration of the tercentenary of the university of Edinburgh, which I had the pleasure of attending, not only as an alumnus of that

university, but as a representative of McGill. The number of eminent men collected on that occasion from all parts of the world, the enthusiasm of the people of Edinburgh itself, and the admirable tone of the whole of the meetings, contributed to give it a character unique among university gatherings. One feature of the occasion which was especially noteworthy was the emphatic recognition that Edinburgh university is a child of the Protestant Reformation, and that to this it owes largely its commanding position as compared with the older universities of Scotland. This same idea was echoed by the representatives of the German universities, who advanced similar claims, and attributed to the more modern and liberal aims thence arising the vast growth of their universities. The Reformation was not merely a religious movement, but scientific, literary and educational as well, and the special genius of what we know as Protestant education, which is Protestant in that it strives to cultivate the powers of independent thought, depends largely on this origin.

The subject is one which merits attention on the part of the Protestant community of the province of Quebec. As a minority it is necessary for us to maintain as high a standard of general and professional education as we possibly can, and to preserve those free and modern methods which we inherit from the Protestant schools and colleges of the mother country. There is, however, a strong tendency, becoming more and more manifest, on the part of the provincial legislature, to oblige us to conform to the what may be called the pre-reformation educational methods of the majority, making these alone valuable in the eye of the law. It was guaranteed to us at confederation that this should not be done; but it is natural that, without any intention to injure us and by mere inadvertence, such encroachments should be made, not only in general education, but also perhaps more especially in the laws regulating the learned professions. Attention to this matter I think vital in our present circumstances. We can at least maintain that our methods of education have succeeded in producing as efficient professional and business men as the others; and the Protestant community of this province, and especially of this city, has made very great sacrifices to maintain institutions suitable to its own views and interests. The fact of this educational and practical difference to which I have referred, is in

reality the principal reason for the existence of our university and the institutions connected with it, since but for this we might save money and trouble by sending our students to the numerous and well-endowed French colleges of our province. It is necessary that this should be distinctly understood, and that we should temperately but firmly maintain our right to have our education conducted on our own principles, and to have it recognized as being, for our own people and relatively to our own wants, equally valuable and efficacious with that which may be preferred by the majority, or which may be inculcated on it by the ecclesiastical authority to which it defers in all educational matters.

Another feature of the Edinburgh celebration was the prominence given to the connection of the city with the university, for Edinburgh, like Montreal, has built up its university largely by its own liberality, and if we may judge from the small beginnings of the Edinburgh University and the fame it has since achieved, still greater things may be expected when our university shall have attained to the same venerable age. In connection with this it is well that we should notice the relations between McGill College and the citizens of Montreal. There is no room here for any jealousy between town and gown. Our endowments, our buildings, our apparatus, books and collections, our exhibitions, scholarships, prizes and medals, are the gifts of the men and women of this city, and it would be the basest ingratitude on our part to manifest either in word or deed anything except friendliness or kindness to the city and its people. We know by the most assuring evidence that the city is proud of its university and desires to promote its interests, and the interests of its teachers and students, and it should be a point of honour and right feeling on the part of everyone connected with McGill to reciprocate this kind feeling and to show our appreciation of the benefits we receive.

THE MEDICAL FACULTY.

Another feature in which the great Scottish university resembles our own is in the eminence of its medical school. We are, of course, as far behind our older sister as our fifty years are less than its three hundred, yet relatively we occupy the same position in Canada that it does in Scotland, both in regard to the character of our course of instructions and our success in obtaining students.

Another British school of medicine more nearly on the level with our own in age and magnitude, and bearing the same civic relations, is that of Owens college, Manchester. I had the pleasure of being present last October at the opening of the magnificent new buildings provided for it by the liberality of the citizens of Manchester and of addressing a few congratulatory words to its professors and students. What the citizens of Edinburgh and Manchester have done for their medical schools and the hospitals associated with them is an earnest of what may be done here, and the first fruits of this liberality are already manifest in the Leancoil and Campbell memorial funds.

It is impossible to refer to our Faculty of Medicine without noticing the losses it has sustained in the past two or three years by death and resignation, the last of these being the departure from among us of one of the professors who, though a junior member of the faculty, had attained to a commanding reputation, and whose marked ability and singular devotion to educational work had endeared him to all his students as well as to his colleagues. While we regret the loss to us occasioned by his departure, we congratulate him on the position to which he has attained, and wish him the same eminent success in his new field which attended him here. We are glad to know, that much though his loss may be felt, the Medical Faculty was never stronger or more efficient than it is at present, nor its classes larger. It is in any case something to be able to furnish a professor to Philadelphia, and we need not be much discouraged even if all the medical schools in the United States were to come to us for a supply of such men. The final result to us would depend on the keeping up of the breed, or in other words on the answer to the question, how many of the 200 students now attending our classes have made up their minds to follow in the footsteps of Dr. Osler? This is a matter for yourselves, gentlemen. No doubt something may depend on the natural gifts with which you have been endowed, but more depends on the use you make of them. I can assure you that it is only by hard self-denial and much earnest work that you can attain to such eminence and usefulness; but the result is well worthy of the effort, and I hope there are many medical students here who will aspire to attain to the higher scientific culture of their

profession, and to make this useful to their fellow-men with the same admirable combination of gentleness and energy which characterizes Dr. Osler.

THE HIGHER EDUCATION OF WOMEN.

Nothing is more striking to an intelligent observer of the educational movements of the last ten years than the increased importance attached to the education of women, a work on which the Faculty of Arts enters for the first time in the present session. The people of the United States have taken a leading part in this movement, but in Britain, on the continent of Europe, and even in the East, public sentiment has been awakened, and the demand is everywhere made that the refining, elevating and ennobling influence of educated women shall be brought to bear in aid of the upward struggles of humanity. In Canada we have lagged behind in this movement only in so far as the higher collegiate education is concerned, and here the main difficulty has been that of expense. It has been assumed that all that the country can afford is to have colleges for its young men, and that nothing remains for the women but to share as best they may in the classes opened for the other sex. This stage of the matter has long gone by in England and the United States, and its fate is sealed in Canada also by the noble endowment of the Honourable Donald Smith which has enabled us to open for the first time in this country classes for the collegiate education of women. Ontario must soon follow us in this, otherwise those of its lady students who prefer separate classes will resort to McGill for their education. I do not think it necessary to dwell on the subject of separate education for women, as at least one of the best methods in the junior years of the college course. After the experience of the older universities in England, after the admission of the president of the university of Michigan, where there has been the longest and most thorough experience of co-education, that this method is practically condemned by the women of the United States, and after the denunciation by President Wilson, the highest educational authority in Ontario, of the arbitrary action of the government of that province in thrusting lady students into University college, and his almost pathetic appeal from the parsimony of the wealthy province of Ontario, to the liberality of the comparatively small English community of Montreal, and all this

along with the fact that we already have a larger class than all those of the co-educationists of Canada united, it seems needless to argue this question. But I may say that if I had ever entertained any doubts in the matter, they would have been dissipated by witnessing the work of our classes, and by observing how much more pleasantly and familiarly, and how much more usefully, from a purely educational point of view, it goes on than it would do in the presence of large classes of young men. I would also say that the male students should be thankful for our action in this matter, since they should rejoice that the young women should have a fair field for competition, which they can only have in separate classes, and since the introduction of students of the other sex into our already over-crowded class rooms could not fail seriously to affect their own educational privileges. I think I should add here that the friends of education have reason to be grateful to the professors in the faculty of arts for the readiness with which they have undertaken a considerable increase of work in order to carry on this important department in an efficient manner. I feel that this subject is one of the deepest interest, and of the most profound importance to the welfare of Canada, and could have wished to refer to it at greater length, but for the number of other topics to which I must allude, and because I have already discussed it in the opening lecture of the Ladies' Educational Association and in my report presented to the Corporation of the university. I may quote here from the address of our late chancellor in 1870, in which he referred to the endowment fund then recently raised for the university, in connection with the resolutions moved by Dr. Wilkes, to the effect that this should be employed as far as possible in aid of the education of women.

"I have read to you," he says, "Dr. Wilkes' resolution, which points to the necessity for providing the means of furnishing a higher education to women; a matter in which we are woefully behind the age. I shall not discuss this subject now—it is far too important for the few moments I could bestow upon it—but I may say, that I trust the time is not far distant when McGill college may become the privileged instrument of ministering to this urgent want. In this whole matter of education for either sex, women are directly and deeply interested. They are its earliest and most important ministers. Upon the delicate impressions received from the mother's gentle accents, depends, in a large measure, the development of character in youth and manhood. These impressions, so soft and slight, and at first apparently unimportant, deepen and harden with the growth of each succeed-

ing day. They become the ineffaceable things of life, and extend, for good or for evil through all the motives of action and the impulses of thought to the last breath of existence. But woman is not only the first great high priestess of education; she is also, in a signal degree, dependent upon its influences. From the feebleness of her frame and the fineness of her organization, it regulates her position and happiness far more than that of men. The wild hunter or the savage chieftain differs incomparably less from the polished leader of European armies or the accomplished senator, than the poor oppressed, broken spirited slave whom the savage calls his wife, differs from the cultured, refined, respected and beloved woman of civilized life. It is education which has made the difference. There is no surer evidence of the degree of that education, which is an essential part of the Christian civilization of a people, than the social position of its women. And it is for the enlargement of the means of furthering this great object, of vital importance to both sexes and all classes, that the university has made its appeal for sympathy and succour."

It may be thought that the university has been slow in redeeming our chancellor's pledge, but it must not be forgot that in the intervening years much has been done indirectly and incidentally, and more especially in connection with the Ladies' Educational Association, and that we have been able only slowly and with difficulty to make our staff of instructors and our course of study in Arts sufficiently complete to warrant our entering into this new field. It is only this year that the board of governors has been able to invite applications for a lectureship in classics to supplement the work so long and ably carried on by Dr. Cornish, but which has now become too large to be satisfactorily performed by any one man. This, with the lectureship in mathematics, established some years ago, will for the first time bring up the corps of instructors to its proper number, or at least will foreshadow that completeness which will be attained when the mathematical and classical instruction shall be carried on by four professors.

EDUCATION IN THE EAST.

In my visit to the old world I was much impressed not only with the activity of the educational movement in Britain and the continent of Europe, where it has certainly within the last ten years being going on more rapidly than even in America, but with the fact that in that old and stagnant East, in which we are apt to think there is little progress, education is advancing. I could refer here to 40 or 50 good schools scattered in the villages up and down the Nile, and attended by several thousands of quick and eager pu-

pils, of large schools of 400 children or more in Cairo, of multitudes of young people of both sexes studying the science, literature and languages of Europe; but I prefer to say a few words of the Syrian Protestant college at Beyrout, which is holding up the light of modern collegiate education for the young men of Syria, Cyprus and Egypt.

The Beyrout college is a well-appointed institution on the American plan, with able professors from the United States, and attended by more than 200 students, who are receiving an education comparable with that in any of our colleges. I met with young Syrians, graduates of this college, who are most able and cultivated men, in evidence of which I may mention that some of these young men are conducting for the benefit of their countrymen a scientific journal in the Arabic language, in which I had the honour of having a lecture on the geology of the Lebanon, which I delivered in Beyrout reported at length within a few days of its delivery. I had the pleasure of addressing a large number of the students of the college, who, though of all shades of colour and of many races, were quite able to understand and appreciate an English speaker. Attached to the Beyrout college is also a well-appointed medical school, by which Syria and the neighbouring countries are being supplied for the first time with native practitioners trained in accordance with the principles of modern medical science. The Arabic press connected with the college is employed in producing not only books for the use of the Protestant missions, but improved school-books, and scientific, historical and geographical books which are very widely circulated through all the vast regions where Arabic is the language of the people. I would observe here that this great educational work is that of Protestant missions. It is Christian first, and educational afterward, and its benefits are first felt by the Christian populations. The Moslems are for the most part inert or hostile. Allow me to say that it is the same elsewhere. In the mother country, in the United States and in Canada, the great educational movements and benefactions have been the work of Christian men, and have been animated by the spirit of Christianity. It ever has been and it ever will be so, and the spirit of materialistic unbelief will be found to be either useless or inimical to the progress of science and education.

A WORD TO STUDENTS.

I would wish, in conclusion, to address a few words to the students of the university, and especially to the young men, and to say these, not in any spirit of monition or of mere authority, but as a student speaking to students. And first I would say that I am no pessimist. I have a lively and often painful sense of the evils and troubles that beset educational work, and of the manifold imperfections of the work itself. But I believe in its ultimate success, and in the final prevalence of good, and I am very sure that the times in which we live are better than those which have preceded them. Least of all am I disposed to indulge in any gloomy anticipations as to the future of this country. I know what Canada would be if it could be put back into the condition in which it was fifty years ago, when I was as young as the youngest among you; and reasoning from that I can scarcely imagine how far it may be in advance when you shall have attained to my age. I made in the summer of 1883 a little excursion along the Pacific railway as far as Calgary, and became aware that a region which we used to call the "fur countries" and the "Hudson's Bay territory," and which we used to regard as an inhospitable abode of wild Indians and wild beasts, had become a part of the civilized world, a home for future nations and one of the great food-producing regions of the earth. Next year I may take, if I feel so

disposed, a pleasure trip to the Pacific, nay more I shall be able to go around the whole world, without the necessity of passing from under the British flag, or of being where the English language is not spoken. And this will be a result of Canadian enterprise, and a mere beginning of a greater growth and progress. The young men of to-day may truly be congratulated on the circumstances in which they enter on the active work of life, and on the wider and greater world which belongs to them, as compared with that which was open to us, their predecessors. You have also vastly greater educational advantages. When I was a young man I had to go abroad for a scientific training far less perfect than that which you now enjoy at home. But the wider sphere open to you requires a broader and deeper culture. The battle of life will not be less severe because its area is greater and its progress swifter. The young men of to-day require a better training than that of the generation now passing away, while they need as earnest purpose, as strong determination and as true hearts. May God grant that all these requirements may be realized in your present training and your future work for your own good and that of your country.

At the conclusion of the address Rev. Dr. Cornish rose, and on behalf of the university made a few remarks expressive of the great value of the lecture, and concluded by moving a vote of thanks to Sir William Dawson, which was carried amid much applause. The gathering then dispersed.







sup.

McGILL UNIVERSITY.

8

Annual University Lecture of the Session 1884-5,

BY

PRINCIPAL SIR WILLIAM DAWSON, C.M.G., LL.D., F.R.S.

(From the GAZETTE, Montreal, November 8, 1884).

The William Molson hall was filled to overflowing yesterday afternoon on the occasion of the annual university lecture which was delivered by Sir William Dawson, principal of the university. Seats were not numerous enough to hold the very large number who attended to hear the address of the learned and distinguished principal and chairs had to be brought into requisition. The chancellor of the university, Hon. Senator Ferrier, occupied the chair, and was supported on the platform by the governors, members of the corporation and various faculties of the university. The students, of whom there was a large number in attendance, maintained a most praiseworthy decorum on this occasion.

Sir William Dawson, C.M.G., LL.D., who was received with hearty applause, said:— In presence of an audience which represents at once the past and the future of this university; at a time when most important events have transpired in reference to education both here and abroad; and after an absence of nearly a year from the place which I have occupied for twenty-nine years, it would seem better to present to you a series of sketches of our recent history, and its relations to things in other countries which I have recently visited, than to attempt a more formal and systematic lecture.

THE LATE CHANCELLOR.

The first picture that rises before me is that

of our late lamented chancellor, Mr. Justice Day, a man whose memory should be dear, not only to every member of this university, but to every true Canadian. An ornament to his profession, alike as a lawyer and as a judge, a successful man in public life, he yet loved, above all the prizes held out by a professional and political career, the charms of nature, of literature and of art, and was not only willing but eager to devote his time and energies to all that could advance the higher culture of his countrymen. It was this that induced him to assume in 1852 the responsible position of president of the Board of Royal Institution, and to brave the danger of failure in the attempt to revive the McGill university and to place it in the position which it now occupies. His heartfelt interest in this work appeared not only in the eloquent appeals which he from time to time addressed to his fellow citizens, but in his personal efforts to induce leading and wealthy men to sustain the university, and in the careful attention which he at all times gave to the details of its business. In the earlier years of my connection with McGill he was my constant adviser in every case of difficulty; and his rare combination of practical sagacity, refined taste, kindliness of disposition and courtly manner, with sterling rectitude and high Christian feeling, gave weight and value to his counsel and have impressed a tone on the early history of this university, which I hope it may never lose. I turned, only yesterday, to the letter which he addressed to me in July, 1855; inviting me to accept the position which I now hold, and which is full of a kindly consideration and altogether free from official form-

ality, and while it attempted no glossing over of the difficulties of the position, served to impress the same confidence which he himself felt in the future of the university. The sentiments which he expresses in his address on the occasion of the opening of the hall in which we are now assembled, may be quoted here in evidence of the broad and enlightened views which he from the first inculcated. He says in this address :—

“There must be somewhere deep fountains, Pierian springs, from which the living generation may draw and still leave to the generations to come a perennial supply. This supply is secured by universities. They are at once the laboratories of thought and knowledge, and the storehouses of its treasures, as they are slowly gathered in the unfoldings of successive ages,—and although many of the acquisitions in abstract knowledge seem at first and for long periods to have no practical or perceptible value, yet as the years glide on, and the secrets of nature are more fully revealed and better understood, these supposed useless conquests of science and philosophy one after another become the bases of wonderful inventions and noble institutions, which minister sometimes to the convenience and luxury, and sometimes to the higher welfare and social progress of the world. In estimating then the value of universities, they are to be considered not merely as a means for the education of youth, but of the whole people, and as agencies in producing the more refined and excellent elements of a true civilization. What could supply in England or in the great nations of Europe the want of their venerable seminaries of learning, shedding abroad from age to age their golden fruits, the luxuriant growth from the small beginnings of a generation which lived a thousand years ago? But most especially in this new country do we need those mighty instruments of mental and moral culture. We need them for our statesmen and legislators, we need them for our judges, for our professional men, our merchants; we need them in short as universal educators for every class of our people. In an immature condition of society, where all are engaged in the struggle, first for the means of subsistence and then for the acquisition of wealth, the tendencies are to lose sight of the higher ends of life. The first use to which surplus wealth is naturally applied by the nation, is to great physical improvements, canals, harbours, railroads and other enterprises for accumulation, and by individuals to an increase of comfort and luxurious indulgence. This may be well enough within a certain limit; but material prosperity and the sensuous enjoyment of life, unattended by the restraining influences which the careful culture of man's higher powers affords, have a downward proclivity, and sooner or later lead society back to barbarism. As a great, the greatest instrument, after Christianity, for counteracting such a tendency, we must look to institutions of learning, with their assemblages of studious and thoughtful men. Apart from the proper business of these as instructors, such a body of men surround themselves with a moral power which reaches far and wide, and inoculates the population not only

with respect for their pursuits, but also with a desire to raise themselves or to see their children raised to a better level.”

Judge Day was one of the two remaining members of the original board of governors, who undertook the reorganization of the university at a time when its income was scarcely sufficient for the salary of a single teacher. The other is our present chancellor, the Hon. Senator Ferrier, whom we are happy to have with us to-day. The connection of our honored chancellor with our governing body goes back farther than that of any man now living into the prehistoric days of McGill. He first appears as a member of the original Board, under the old charter in 1845, when the minutes record that he and Mr. Armour were a committee to effect sales of land and otherwise to raise funds to carry on the college, which, however, proved impossible at that time; but from that date to the present, Mr. Ferrier has had a principal part in managing the property and financial affairs of the college, and the confidence inspired by his name and his business capacity have borne us over many of the shallows on which we were in danger of grounding. In 1846, Mr. Ferrier became president of the Board, and in that capacity took a leading part in the investigation of its affairs, and the negotiations with the local and Imperial governments, which resulted in 1852 in the reorganization of the university under its new charter. This work completed, he resigned the presidency into the hands of Judge Day, to resume it in the present year, though for several years, as the senior member of the Board, he has been acting president, and as chairman of the committee of estate he always retained the leading place in our financial matters. In this reference to Mr. Ferrier I have purposely avoided the language of eulogy, for he is still among us: but so long as he shall remain to us we shall have a survivor of what we may well term the heroic age of McGill, since no succeeding one can have such struggles to undergo as those which characterized the administration of our original Board of governors.

Before leaving this part of my subject I would beg to remind you that Judge Day was the founder of our Faculty of Law, and that he always manifested the warmest interest in its success. I have heard several suggestions as to some monument in memory of his services, and none seems to me to be so appropriate as an endowment which would perpetuate his name in this faculty, and which might

also be connected with a portrait to be hung in our convocation hall.

I may appear to have dwelt too much on the past in the previous remarks, but the present is the fruit of the past, and it becomes us to value highly the root and stem which have produced for us the pleasant fruits of learning. An educational institution is not like a dead structure which begins to decay so soon as it is completed, and may even, like some of the buildings one sees in the old world, have begun to be ruinous in its older parts before its newer parts are finished. It is rather like a perennial stream, or an olive tree ever green and ever fruitful. We may, naturally, then connect the yet living stem with its newer fruits.

THE BRITISH ASSOCIATION.

Here I may present as a second and more modern picture, the privilege which this university had in the past summer in accommodating the British Association for the Advancement of Science within its walls. It is not too much to say that in the arrangements for the visit of the British association in this city, Montreal and the whole Dominion have done themselves honour. The meeting was well accommodated and well entertained, unexampled facilities were given for access to it, and for visiting in connection with it a large portion of America; and the hospitalities of all the other principal cities of the Dominion were tendered to the members, as well as those of Montreal. In this Montreal was true to its character, for it is less a provincial city, and sustains more a Dominion, or even Imperial relation, than any other in Canada. The meeting was also a success in a scientific point of view. The large attendance of the elite of the British membership, the presence of many of the leading scientific men of the United States and of most of those of Canada, gave to the meeting an unusually cosmopolitan character, and the number of papers read was very large and many of them of exceptional interest and value. All those best qualified to judge have pronounced the meeting one of the most important and useful in these respects ever held, and to this must be added the benefit to Canada of the visit of so many eminent, observant and influential men, and the opportunities given to those men themselves to enlarge their knowledge of this country and to hold intercourse with their American and Canadian conferees. But the question which concerns us is the relation

of our own university to all this. Looking at it with reference to preparatory causes, it is fair to say that the existence and position of McGill University had much to do in enabling this city to secure the visit of the British Association and to entertain it when here. The action of the university in conjunction with the Natural History Society in inviting the American Association to hold two of its meetings in Montreal, was an essential preparation for the reception of the British Association. Our buildings with those of the affiliated colleges clustered around them, afforded better accommodation for the sections than they usually enjoy, and our library, apparatus and museum gave additional facilities for the work of the meeting; and no small part of the preparation and of the actual carrying out of the proceedings fell to professors, graduates and even students of this university. In short, the meeting of the British Association here may be reckoned as one of the incidental results of the building up of the university and of the place given to scientific studies in its curriculum.

EDUCATION IN APPLIED SCIENCE.

I confess, however, that I could have wished that our visitors had seen a larger and more definite material provision here for training in practical science. Not that I undervalue our excellent and progressive Faculty of Applied Science, but it would be well if it were supplied with rooms and apparatus such as I have seen in many provincial towns in England. This matter of the higher technical education has taken deep root in the mother country. Almost every manufacturing town has now its college of technical science, often with noble buildings, always with the best apparatus, machinery, models, workshops and laboratories for carrying on the work. In these local colleges of England there are not only regular classes during the day, but evening classes in which young artizans and manufacturers can enjoy the instructions of the most eminent experts in the scientific principles and practical operations of industrial arts. I have visited a number of these schools, and in returning to Canada I cannot but lament our comparative destitution in this matter. Our young people are undoubtedly more quick-witted and versatile than those of England, and until the recent institution of the board schools in that country, they were perhaps better educated; but, with the addi-

tional advantage of equal access to education in practical science, all their good points would tell to tenfold advantage. I doubt if it will be necessary in this country to go so much in detail into mere handicraft and manipulation as is now the practice in the technical schools of England. This may perhaps be better learned in regular workshops, but there is a vast field in the direction of mathematics, drawing, designing, mechanical and chemical science for the operations of the technical school; and I should rejoice if the means could be secured for so enlarging our Faculty of Applied Science as to enable it to take more fully the place of a technical school for Montreal and for Canada. In England these schools are sustained by the cities, though they are aided in the matter of models and other appliances by the government department at South Kensington. They are, for the most part, the growth of the last fifteen years, and have spread themselves with marvellous rapidity. To those who are not acquainted with the vast progress made in this matter, it may be something new to be told that even the old universities have entered into this field. Not only do they possess magnificent physical and chemical laboratories, but at Cambridge there is a regular workshop, under the charge of Professor Stuart, where a great variety of practical operations are carried on, and where Cambridge graduates may be seen with their coats off, toiling at anvils, lathes and smelting furnaces, in preparation for employment as managers of manufacturing establishments. It is by such means that Great Britain proposes to maintain its supremacy in the industrial arts. It is by such means that we must build up our infant manufactures if we wish them to prosper.

The demand for this kind of education goes forward by rapid bounds. Already we have requirements in the matter of mechanical engineering, and evening classes for artisans which we cannot supply, and only a few days ago I was informed of a new profession, that of electrical engineering, which is sending men to us in search of training in mathematics and physical science.

THE TRICENTENARY OF EDINBURGH UNIVERSITY.

An educational picture which will never fade from my memory is that of the great celebration of the tricentenary of the university of Edinburgh, which I had the pleasure of attending, not only as an alumnus of that

university, but as a representative of McGill. The number of eminent men collected on that occasion from all parts of the world, the enthusiasm of the people of Edinburgh itself, and the admirable tone of the whole of the meetings, contributed to give it a character unique among university gatherings. One feature of the occasion which was especially noteworthy was the emphatic recognition that Edinburgh university is a child of the Protestant Reformation, and that to this it owes largely its commanding position as compared with the older universities of Scotland. This same idea was echoed by the representatives of the German universities, who advanced similar claims, and attributed to the more modern and liberal aims thence arising the vast growth of their universities. The Reformation was not merely a religious movement, but scientific, literary and educational as well, and the special genius of what we know as Protestant education, which is Protestant in that it strives to cultivate the powers of independent thought, depends largely on this origin.

The subject is one which merits attention on the part of the Protestant community of the province of Quebec. As a minority it is necessary for us to maintain as high a standard of general and professional education as we possibly can, and to preserve those free and modern methods which we inherit from the Protestant schools and colleges of the mother country. There is, however, a strong tendency, becoming more and more manifest, on the part of the provincial legislature, to oblige us to conform to the what may be called the pre-reformation educational methods of the majority, making these alone valuable in the eye of the law. It was guaranteed to us at confederation that this should not be done; but it is natural that, without any intention to injure us and by mere inadvertence, such encroachments should be made, not only in general education, but also perhaps more especially in the laws regulating the learned professions. Attention to this matter I think vital in our present circumstances. We can at least maintain that our methods of education have succeeded in producing as efficient professional and business men as the others; and the Protestant community of this province, and especially of this city, has made very great sacrifices to maintain institutions suitable to its own views and interests. The fact of this educational and practical difference to which I have referred, is in

reality the principal reason for the existence of our university and the institutions connected with it, since but for this we might save money and trouble by sending our students to the numerous and well endowed French colleges of our province. It is necessary that this should be distinctly understood, and that we should temperately but firmly maintain our right to have our education conducted on our own principles, and to have it recognized as being, for our own people and relatively to our own wants, equally valuable and efficacious with that which may be preferred by the majority, or which may be inculcated on it by the ecclesiastical authority to which it defers in all educational matters.

Another feature of the Edinburgh celebration was the prominence given to the connection of the city with the university, for Edinburgh, like Montreal, has built up its university largely by its own liberality, and if we may judge from the small beginnings of the Edinburgh University and the fame it has since achieved, still greater things may be expected when our university shall have attained to the same venerable age. In connection with this it is well that we should notice the relations between McGill College and the citizens of Montreal. There is no room here for any jealousy between town and gown. Our endowments, our buildings, our apparatus, books and collections, our exhibitions, scholarships, prizes and medals, are the gifts of the men and women of this city, and it would be the basest ingratitude on our part to manifest either in word or deed anything except friendliness or kindness to the city and its people. We know by the most assuring evidence that the city is proud of its university and desires to promote its interests, and the interests of its teachers and students, and it should be a point of honour and right feeling on the part of everyone connected with McGill to reciprocate this kind feeling and to show our appreciation of the benefits we receive.

THE MEDICAL FACULTY.

Another feature in which the great Scottish university resembles our own is in the eminence of its medical school. We are, of course, as far behind our older sister as our fifty years are less than its three hundred, yet relatively we occupy the same position in Canada that it does in Scotland, both in regard to the character of our course of instructions and our success in obtaining students.

Another British school of medicine more nearly on the level with our own in age and magnitude, and bearing the same civic relations, is that of Owens college, Manchester. I had the pleasure of being present last October at the opening of the magnificent new buildings provided for it by the liberality of the citizens of Manchester and of addressing a few congratulatory words to its professors and students. What the citizens of Edinburgh and Manchester have done for their medical schools and the hospitals associated with them is an earnest of what may be done here, and the first fruits of this liberality are already manifest in the Leacholm and Campbell memorial funds.

It is impossible to refer to our Faculty of Medicine without noticing the losses it has sustained in the past two or three years by death and resignation, the last of these being the departure from among us of one of the professors who, though a junior member of the faculty, had attained to a commanding reputation, and whose marked ability and singular devotion to educational work had endeared him to all his students as well as to his colleagues. While we regret the loss to us occasioned by his departure, we congratulate him on the position to which he has attained, and wish him the same eminent success in his new field which attended him here. We are glad to know, that much though his loss may be felt, the Medical Faculty was never stronger or more efficient than it is at present, nor its classes larger. It is in any case something to be able to furnish a professor to Philadelphia, and we need not be much discouraged even if all the medical schools in the United States were to come to us for a supply of such men. The final result to us would depend on the keeping up of the breed, or in other words on the answer to the question, how many of the 200 students now attending our classes have made up their minds to follow in the footsteps of Dr. Osler? This is a matter for yourselves, gentlemen. No doubt something may depend on the natural gifts with which you have been endowed, but more depends on the use you make of them. I can assure you that it is only by hard self-denial and much earnest work that you can attain to such eminence and usefulness; but the result is well worthy of the effort, and I hope there are many medical students here who will aspire to attain to the higher scientific culture of their

profession, and to make this useful to their fellow-men with the same admirable combination of gentleness and energy which characterizes Dr. Osler.

THE HIGHER EDUCATION OF WOMEN.

Nothing is more striking to an intelligent observer of the educational movements of the last ten years than the increased importance attached to the education of women, a work on which the Faculty of Arts enters for the first time in the present session. The people of the United States have taken a leading part in this movement, but in Britain, on the continent of Europe, and even in the East, public sentiment has been awakened, and the demand is everywhere made that the refining, elevating and ennobling influence of educated women shall be brought to bear in aid of the upward struggles of humanity. In Canada we have lagged behind in this movement only in so far as the higher collegiate education is concerned, and here the main difficulty has been that of expense. It has been assumed that all that the country can afford is to have colleges for its young men, and that nothing remains for the women but to share as best they may in the classes opened for the other sex. This stage of the matter has long gone by in England and the United States, and its fate is sealed in Canada also by the noble endowment of the Honourable Donald Smith which has enabled us to open for the first time in this country classes for the collegiate education of women. Ontario must soon follow us in this, otherwise those of its lady students who prefer separate classes will resort to McGill for their education. I do not think it necessary to dwell on the subject of separate education for women, as at least one of the best methods in the junior years of the college course. After the experience of the older universities in England, after the admission of the president of the university of Michigan, where there has been the longest and most thorough experience of co-education, that this method is practically condemned by the women of the United States, and after the denunciation by President Wilson, the highest educational authority in Ontario, of the arbitrary action of the government of that province in thrusting lady students into University college, and his almost pathetic appeal from the parsimony of the wealthy province of Ontario, to the liberality of the comparatively small English community of Montreal, and all this

along with the fact that we already have a larger class than all those of the co-educationists of Canada united, it seems needless to argue this question. But I may say that if I had ever entertained any doubts in the matter, they would have been dissipated by witnessing the work of our classes, and by observing how much more pleasantly and familiarly, and how much more usefully, from a purely educational point of view, it goes on than it would do in the presence of large classes of young men. I would also say that the male students should be thankful for our action in this matter, since they should rejoice that the young women should have a fair field for competition, which they can only have in separate classes, and since the introduction of students of the other sex into our already over-crowded class rooms could not fail seriously to affect their own educational privileges. I think I should add here that the friends of education have reason to be grateful to the professors in the faculty of arts for the readiness with which they have undertaken a considerable increase of work in order to carry on this important department in an efficient manner. I feel that this subject is one of the deepest interest, and of the most profound importance to the welfare of Canada, and could have wished to refer to it at greater length, but for the number of other topics to which I must allude, and because I have already discussed it in the opening lecture of the Ladies' Educational Association and in my report presented to the Corporation of the university. I may quote here from the address of our late chancellor in 1870, in which he referred to the endowment fund then recently raised for the university, in connection with the resolutions moved by Dr. Wilkes, to the effect that this should be employed as far as possible in aid of the education of women.

"I have read to you," he says, "Dr. Wilkes' resolution, which points to the necessity for providing the means of furnishing a higher education to women; a matter in which we are woefully behind the age. I shall not discuss this subject now—it is far too important for the few moments I could bestow upon it—but I may say, that I trust the time is not far distant when McGill college may become the privileged instrument of ministering to this urgent want. In this whole matter of education for either sex, women are directly and deeply interested. They are its earliest and most important ministers. Upon the delicate impressions received from the mother's gentle accents, depends, in a large measure, the development of character in youth and manhood. These impressions, so soft and slight, and at first apparently unimportant, deepen and harden with the growth of each succeed-

ing day. They become the ineffaceable things of life, and extend, for good or for evil through all the motives of action and the impulses of thought to the last breath of existence. But woman is not only the first great high priestess of education; she is also, in a signal degree, dependent upon its influences. From the feebleness of her frame and the fineness of her organization, it regulates her position and happiness far more than that of men. The wild hunter or the savage chieftain differs incomparably less from the polished leader of European armies or the accomplished senator, than the poor oppressed, broken spirited slave whom the savage calls his wife, differs from the cultured, refined, respected and beloved woman of civilized life. It is education which has made the difference. There is no surer evidence of the degree of that education, which is an essential part of the Christian civilization of a people, than the social position of its women. And it is for the enlargement of the means of furthering this great object, of vital importance to both sexes and all classes, that the university has made its appeal for sympathy and succour."

It may be thought that the university has been slow in redeeming our chancellor's pledge, but it must not be forgot that in the intervening years much has been done indirectly and incidentally, and more especially in connection with the Ladies' Educational Association, and that we have been able only slowly and with difficulty to make our staff of instructors and our course of study in Arts sufficiently complete to warrant our entering into this new field. It is only this year that the board of governors has been able to invite applications for a lectureship in classics to supplement the work so long and ably carried on by Dr. Cornish, but which has now become too large to be satisfactorily performed by any one man. This, with the lectureship in mathematics, established some years ago, will for the first time bring up the corps of instructors to its proper number, or at least will foreshadow that completeness which will be attained when the mathematical and classical instruction shall be carried on by four professors.

EDUCATION IN THE EAST.

In my visit to the old world I was much impressed not only with the activity of the educational movement in Britain and the continent of Europe, where it has certainly within the last ten years being going on more rapidly than even in America, but with the fact that in that old and stagnant East, in which we are apt to think there is little progress, education is advancing. I could refer here to 40 or 50 good schools scattered in the villages up and down the Nile, and attended by several thousands of quick and eager pu-

pils, of large schools of 400 children or more in Cairo, of multitudes of young people of both sexes studying the science, literature and languages of Europe; but I prefer to say a few words of the Syrian Protestant college at Beyrout, which is holding up the light of modern collegiate education for the young men of Syria, Cyprus and Egypt.

The Beyrout college is a well-appointed institution on the American plan, with able professors from the United States, and attended by more than 200 students, who are receiving an education comparable with that in any of our colleges. I met with young Syrians, graduates of this college, who are most able and cultivated men, in evidence of which I may mention that some of these young men are conducting for the benefit of their countrymen a scientific journal in the Arabic language, in which I had the honour of having a lecture on the geology of the Lebanon, which I delivered in Beyrout, reported at length within a few days of its delivery. I had the pleasure of addressing a large number of the students of the college, who, though of all shades of colour and of many races, were quite able to understand and appreciate an English speaker. Attached to the Beyrout college is also a well-appointed medical school, by which Syria and the neighbouring countries are being supplied for the first time with native practitioners trained in accordance with the principles of modern medical science. The Arabic press connected with the college is employed in producing not only books for the use of the Protestant missions, but improved school-books, and scientific, historical and geographical books which are very widely circulated through all the vast regions where Arabic is the language of the people. I would observe here that this great educational work is that of Protestant missions. It is Christian first, and educational afterward, and its benefits are first felt by the Christian populations. The Moslems are for the most part inert or hostile. Allow me to say that it is the same elsewhere. In the mother country, in the United States and in Canada, the great educational movements and benefactions have been the work of Christian men, and have been animated by the spirit of Christianity. It ever has been and it ever will be so, and the spirit of materialistic unbelief will be found to be either useless or inimical to the progress of science and education.

A WORD TO STUDENTS.

I would wish, in conclusion, to address a few words to the students of the university, and especially to the young men, and to say these, not in any spirit of monition or of mere authority, but as a student speaking to students. And first I would say that I am no pessimist. I have a lively and often painful sense of the evils and troubles that beset educational work, and of the manifold imperfections of the work itself. But I believe in its ultimate success, and in the final prevalence of good, and I am very sure that the times in which we live are better than those which have preceded them. Least of all am I disposed to indulge in any gloomy anticipations as to the future of this country. I know what Canada would be if it could be put back into the condition in which it was fifty years ago, when I was as young as the youngest among you; and reasoning from that I can scarcely imagine how far it may be in advance when you shall have attained to my age. I made in the summer of 1883 a little excursion along the Pacific railway as far as Calgary, and became aware that a region which we used to call the "fur countries" and the "Hudson's Bay territory," and which we used to regard as an inhospitable abode of wild Indians and wild beasts, had become a part of the civilized world, a home for future nations and one of the great food-producing regions of the earth. Next year I may take, if I feel so

disposed, a pleasure trip to the Pacific, nay more I shall be able to go around the whole world, without the necessity of passing from under the British flag, or of being where the English language is not spoken. And this will be a result of Canadian enterprise, and a mere beginning of a greater growth and progress. The young men of to-day may truly be congratulated on the circumstances in which they enter on the active work of life, and on the wider and greater world which belongs to them, as compared with that which was open to us, their predecessors. You have also vastly greater educational advantages. When I was a young man I had to go abroad for a scientific training far less perfect than that which you now enjoy at home. But the wider sphere open to you requires a broader and deeper culture. The battle of life will not be less severe because its area is greater and its progress swifter. The young men of to-day require a better training than that of the generation now passing away, while they need as earnest purpose, as strong determination and as true hearts. May God grant that all these requirements may be realized in your present training and your future work for your own good and that of your country.

At the conclusion of the address Rev. Dr. Cornish rose, and on behalf of the university made a few remarks expressive of the great value of the lecture, and concluded by moving a vote of thanks to Sir William Dawson, which was carried amid much applause. The gathering then dispersed.



MCGILL UNIVERSITY
ARCHIVES
ACC. NO. 699/7
REF.