
THIRTY-EIGHT YEARS OF MCGILL.

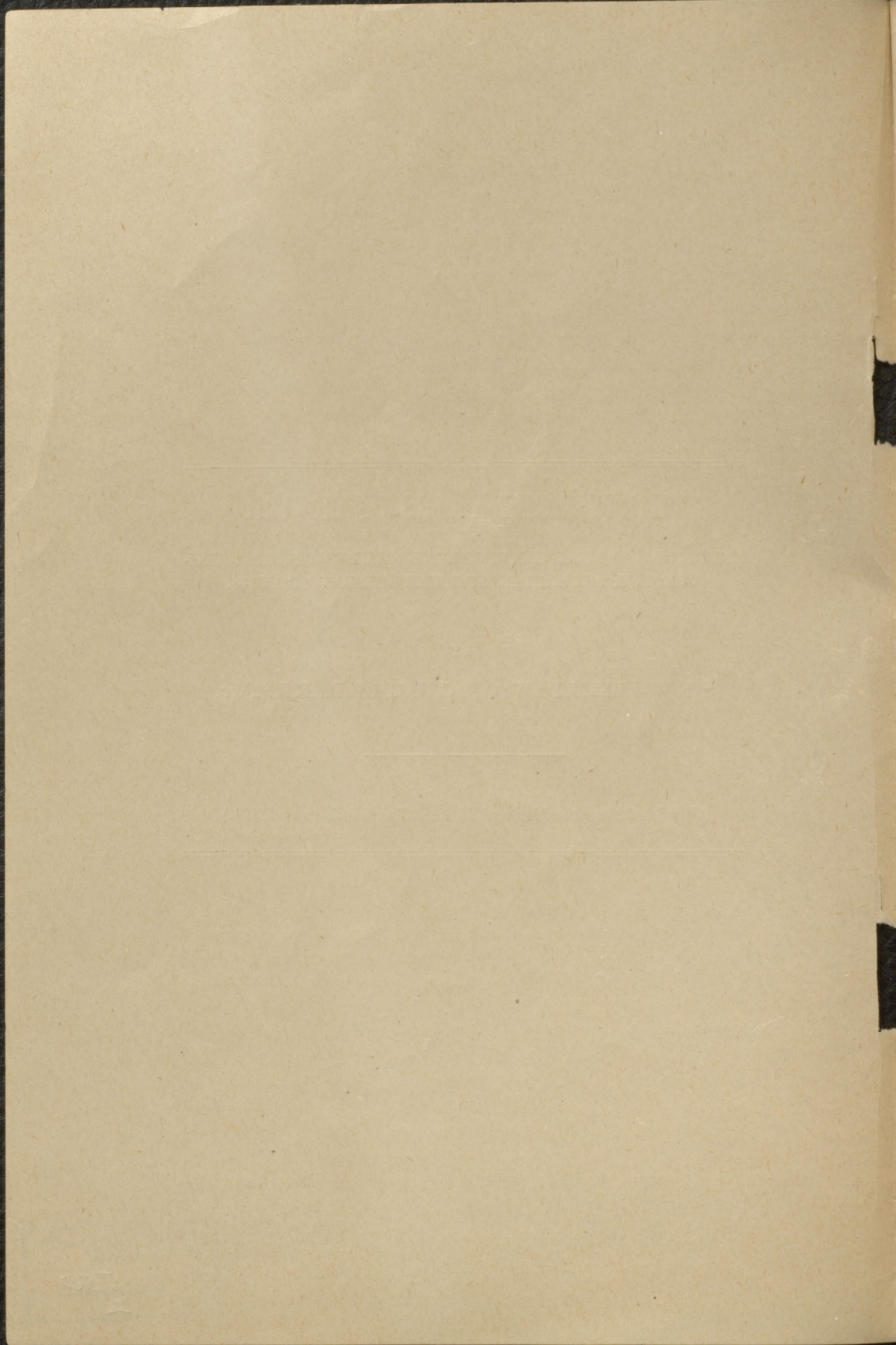
BEING THE ANNUAL UNIVERSITY LECTURE OF MCGILL UNIVERSITY, MONTREAL, FOR THE SESSION OF 1893-94.

BY

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

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Having been invited by the acting Principal and the Corporation to deliver once more the annual University lecture, this has appeared to be an occasion on which you would bear with me in tracing some of the footsteps of the past, as a suitable close to the official work of nearly a lifetime, and as a farewell address to the friends and colleagues with whom I have laboured so long and with so much happiness to myself. We may have perfect faith in the practical wisdom of the apostolic maxim, "forgetting the things that are behind, press forward to those that are before." Yet we may have equal faith in recalling the memories of the past, in "remembering the mercies that are of old," as well as the errors and shortcomings of former years, that we may draw lessons from all as to the present and the future. It may, for instance, be interesting, perhaps even useful, to young men, to know how I first became connected with McGill.

My plans for life lay in an entirely different direction. I had prepared myself, as far as was possible at the time, for field work in geology; and my ambition was to secure employment of this kind; or next to this, to have the privilege of teaching my favourite science, with sufficient spare time to

prosecute original work. In connection with this ambition, after having attained some little reputation by papers published under the auspices of the Geological Society of London, I accepted an invitation to deliver a course of lectures on geology and allied subjects in Dalhousie College, Halifax, in the winter of 1849-50. When in Halifax, I had some conversation with Messrs. Young and Howe, afterwards Sir William Young and Sir Joseph Howe, at that time governors of Dalhousie College and the leaders of the Provincial Government, as to a new school-law they were preparing for Nova Scotia, and in which important improvements were introduced. I had at the time no thought of being connected with the administration of the Act. In the following spring, however, I was surprised with the offer of the position of Superintendent of Education, established under the new law. I had many reasons for declining the task, but my friends would take no refusal, and I consoled myself with the consideration that the visitation of the school districts throughout the province, which was one of the duties of the office, would give great facilities for making myself acquainted with the geology of the country. For three years I was engaged in this work, and, besides writing educational reports, and administering the new school law, conducting an educational journal, visiting schools, and holding teachers' institutes, had collected the materials for several papers published in England, as well as for my "Acadian Geology," which, however, did not appear till 1855. In 1852, when on a geological excursion with my friend Sir Charles Lyell, I was introduced by him to Sir Edmund Head, the Governor of New Brunswick, who was much occupied at the time with the state of education in that province, and in particular that of its provincial university; and in 1854 he invited me, along with the late Dr. Ryerson, to be a member of a commission which had been appointed to suggest means for the improvement of the provincial university. This work was scarcely finished when Sir Edmund was promoted to be the Governor-General of Canada, and removed to Quebec, where, under the new charter granted to McGill College in 1852, he became Visitor of the University; and as he was known to be a man of pronounced literary and scientific tastes, and an active worker in the reforms then recently car-

ried out in the English universities, the Governors of McGill naturally counted on his aid in the arduous struggle on which they had entered. Accordingly, soon after Sir Edmund's arrival, a deputation of the Board waited on him, and one of the subjects on which they asked his advice was the filling of the office of principal, which was yet vacant. Sir Edmund mentioned my name as that of a suitable person. At first, as one of them afterwards admitted to me, they were somewhat disconcerted. They were very desirous, for the best reasons, to follow Sir Edmund's counsel, but with his knowledge of the available men in England, of some of whom they had already heard, they were somewhat surprised that he should name a comparatively unknown colonist. In the meantime, ignorant of all this, I was prosecuting a candidature for the chair of natural history in my Alma Mater, the University of Edinburgh, vacant by the death of Prof. Edward Forbes, and in which I was strongly supported by the leading geologists of the time. By a strange coincidence, just as I was about to leave Halifax for England in connection with this candidature, intelligence arrived that the Edinburgh chair had been filled at an earlier date than my friends had anticipated, and at the same time a letter reached me from Judge Day offering me the Principalship of McGill. I had determined in any case to visit England, to attend the meeting of the British Association in Glasgow, and to thank the many friends who had promoted my Edinburgh candidature; but postponed my departure for a week that I might consult my family, and decided to accept the Montreal offer, provided that a professorship of geology or natural history were coupled with the office. Thus it happened that I became connected with McGill in its infancy under its new management, and the story forms a striking illustration of the way in which Providence shapes our ends, rough hew them as we may. Its lesson is that young men should qualify themselves well for some speciality, but should also be sufficiently general in their training to adapt themselves to new and unforeseen pursuits.

As I have referred to Sir Edmund Head, I may say that he continued to be an active friend of the University during his term of office and after he returned to England. This is true also of his successors, all of whom have shown a kindly inter-

est in our work, so that our Visitor has all along been a power for good. The present Governor-General has already by his presence and words of cheer on a recent public occasion, given an earnest that in this respect he will, like his predecessors, prove a warm friend and kindly patron of the higher education in Canada.

When I accepted the principalship of McGill, I had not been in Montreal, and knew the college and men connected with it only by reputation. I first saw it in October, 1855. Materially, it was represented by two blocks of unfinished and partly ruinous buildings, standing amid a wilderness of excavators' and masons' rubbish, overgrown with weeds and bushes. The grounds were unfenced and pastured at will by herds of cattle, which not only cropped the grass, but browsed on the shrubs, leaving unhurt only one great elm, which still stands as the "founder's tree," and a few old oaks and butternuts, most of which had to give place to our new buildings. The only access from the town was by a circuitous and ungraded cart-track, almost impassable at night. The buildings had been abandoned by the new Board, and the classes of the Faculty of Arts were held in the upper story of a brick building in the town, the lower part of which was occupied by the High School. I had been promised a residence, and this I found was to be a portion of one of the detached buildings aforesaid, the present east wing. It had been very imperfectly finished, was destitute of nearly every requisite of civilized life, and in front of it was a bank of rubbish and loose stones, with a swamp below, while the interior was in an indescribable state of dust and disrepair. Still, we felt that the Governors had done the best they could in the circumstances, and we took possession as early as possible. As it was, however, we received many of the citizens who were so kind as to call on us, in the midst of all the confusion of plastering, papering, painting and cleaning. The residence was only a type of our difficulties and discouragements, and a not very favorable introduction to the work I had undertaken in Montreal.

On the other hand, I found in the Board of Governors a body of able and earnest men, aware of the difficulties they had to encounter, fully impressed with the importance of the

ends to be attained, and having sufficient culture and knowledge of the world to appreciate the best means for attaining these ends. They were greatly hampered by lack of means, but had that courage which enables risks to be run to secure important objects. I may mention here a few of these men. Judge Day was a man of acute legal mind, well educated and well read, a clear and persuasive speaker, and wholly devoted to the interest of education, and especially to the introduction into the college course of studies in science and modern literature. Christopher Dunkin was a graduate of the University of London, educated first in Glasgow, and afterwards in University College, and who had held a tutorial position in Harvard before he came to Canada. He had made college work and management a special study, and was thoroughly equipped to have been himself a college president or principal, had he not had before him the greater attractions of legal and political success. Hew Ramsay was an admirable example of an educated Scotsman of literary tastes and business capacity. David Davidson was also a product of Scottish college training and a warm and zealous friend of education, with great sagacity and sound judgment. James Ferrier should have been mentioned first. He was a member of the old Board of Royal Institution and senior member of the new, but voluntarily resigned the presidency in favor of Judge Day, in the interest, as he believed, of the University. He was longer with us than any of the others, and no man could be a more devoted worker in the cause of education. Such men as these and their colleagues ensured public confidence and a wise and enlightened management.

The teaching staff of the University then consisted of three faculties, those of law, medicine and arts. The Faculty of Law, then recently organized, had two professors and two lecturers. The Faculty of Medicine, the oldest and most prosperous of the three, had ten professors and a demonstrator. The Faculty of Arts had four professors and a lecturer, and all of these except one gave only a part of their time to college work. They were, however, able and efficient men. Dr. Leach, who represented philosophy and allied subjects, was a man of rare gifts and of warm attachment to the college; Dr. Davies, a man of great learning, was shortly afterwards ap-

pointed to Regent's Park College, London; Dr. DeSola was an expert in Oriental languages and literature, and Mr. Markgraf represented modern languages, while Dr. Howe gave what time he could spare from the High School to his favorite mathematical and physical subjects. My own lectures in natural science came in aid of this slender staff, raising the professoriate in Arts to six. It was well for me that the Dean of the Medical Faculty, Dr. Holmes, was a man of scientific tastes and an accomplished mineralogist and botanist, as this led at once to my lectures being taken advantage of by the medical students as well as those in Arts. Thus, while the whole students in Arts were only at that time 15, I began a course of lectures in 1855 with a large class, attended by some of the medical professors and by gentlemen from the city, as well as by the students. At the same time a good deal was done to perfect and render more definite the course in Arts, which, even in the session of 1855-6 was becoming so moulded as to bear some resemblance to its present arrangements, and to foreshadow, at least, the anticipations of my inaugural address of November, 1855, most of which have since been realized. The University at this time had no library and no museum, and its philosophical apparatus was limited to a few instruments presented to it some time before by the late Mr. Skakel. I had to use my own private collections and specimens borrowed from the Natural History Society to illustrate my lectures. The High School, under the rectorship of Dr. Howe, was an affiliated school, and we could look to it as likely in a few years to furnish us with a larger number of students—a hope not disappointed.

But our great difficulty was lack of the sinews of war; and the seat of government being at the time in Toronto, I was asked to spend my first Christmas vacation in that city with the view of securing some legislative aid. There was as yet no direct railway communication between Montreal and Toronto, and of course no Victoria Bridge. I crossed the river in a canoe amidst floating ice, and had to travel by way of Albany, Niagara and Hamilton. The weather was stormy and the roads blocked with snow, so that the journey to Toronto occupied five days, giving me a shorter time there than I had anticipated. I received, however, a warm wel-

come from Sir Edmund Head, saw most of the members of the Government, and obtained some information as to the Hon. Mr. Cartier's contemplated Superior Education Act, passed in the following year, and which secured for the first time the status of the preparatory schools, while giving aid to the universities. I was also encouraged by Sir Edmund and Cartier to confer with the Superintendent of Education and the Governors of McGill, on my return to Montreal, with reference to the establishment of a Normal School in connection with the University, which was successfully carried out in the following year. I may here remark, in passing, that the McGill Normal School has, in my judgment, been one of the most successful institutions of its kind. It has proved indispensable to the growth of our provincial education of every grade, has indirectly aided the University, has been deservedly popular throughout the country, and has had the good will and support of the successive superintendents of education, and of the provincial governments of both political parties.

The direct aid, however, which could be obtained from the Government was small, and the next movement of the Board of Governors was our first appeal to the citizens of Montreal, resulting in the endowment of the Molson chair of English Language and Literature, with \$20,000 (subsequently augmented to \$40,000 by Mr. J. H. R. Molson) and \$35,000 from other benefactors. This was a great help at the time and the beginning of a stream of liberality which has floated our university barque up to the present date. In connection with this should be placed the gift of the Henry Chapman gold medal, the first of our gold medals. The liberality of the citizens in 1857 encouraged the Board of Governors to strengthen and extend the teaching staff in Arts by the appointment of Professors Johnson and Cornish and shortly afterward of Professor Darey, who still, after all these years of arduous and faithful service, remain to the university, and are now the senior members of the professoriate.

To counterbalance these successes and advantages, in the early part of 1856 the building occupied by the High School and by the Faculty of Arts was destroyed by fire, along with some of the few books which had been collected and some of our apparatus, and a large part of my private collections

which I had been using for my lectures. The specimens, apparatus and books were not insured, and the insurance on the building was quite insufficient to replace it, so that this was a great pecuniary loss, but one which our Governors bore with admirable fortitude and equanimity, and took immediate steps to repair. For the remainder of the session the college classes were transferred in part to the original college buildings above Sherbrooke street, and in part to the Medical Faculty's building on Coté street. The classes were not interrupted, and plans were at once prepared for the erection of a new and better building.

The year 1857 was signalized not only by the opening of the McGill Normal School and by the addition to our staff already noted, but by the institution of a chair of Civil Engineering, the first small beginning of our Faculty of Applied Science. At the same time, in the hope that the Faculty of Arts might be able before many years to occupy permanently the college buildings, the improvement of the grounds was begun by planting, draining and making walks. At first I did this at my own cost, as a labour of love, with the aid of the late Mr. Sheppard in laying out the walks, merely asking permission of the Board. Dr. Howe, who resided at that time in the centre building, gave some aid, and the new secretary, Mr. Baynes, took a deep interest in the matter. The graduates undertook to plant trees along one of our walks, and eventually the Board gave small sums toward this object, and at a later day appointed a caretaker, for whom a lodge was erected by a subscription among our friends.

We had proposed that so soon as the students in arts should exceed fifty we would venture to occupy the old building. This happened in 1860, and we accordingly proceeded to move up and take possession of the centre block, the east wing being used for residences. The movement was a fortunate one, for it suggested to our friend, Mr. William Molson, the erection of a third block, corresponding to the eastern one, to be named the William Molson Hall, and which was to contain the convocation room and library. This was the original limit of Mr. Molson's intention; but, driving up one day, in company with Mrs. Molson, to note the progress of the work, she suggested that it would be a pity to leave it unfinished,

and that it would be well at once to connect the three blocks of buildings in one pile, according to the original plan. The hint was taken, plans were prepared, and one of the connecting buildings became our first museum, while the other provided a chemical and natural science class room and laboratory. Both buildings, as well as the library, were seeds of greater things. The library was provided with shelves for 20,000 volumes, while we possessed less than 2,000, and at first it was distressing to see its emptiness, but the time has long passed when, after crowding it with additional book-cases and extending it into an adjoining room, we began to desire larger space, now happily supplied by the magnificent Peter Redpath Library. The museum, equally empty, received in the first instance a portion of my own collections, and others obtained in exchange and by purchase from my own resources. In this way it was possible almost from the first to fill it respectably, for a museum without specimens is even more forlorn than a library without books. Dr. Carpenter's magnificent collection of shells was added in 1869. The whole furnished the nucleus for the Peter Redpath Museum, which stands at the head of Canadian educational museums. The other connecting building became the home of our chemistry and assaying, in which Dr. Harrington, with the aid for a time of the late Dr. Sterry Hunt, built up our schools of Practical Chemistry and of Mining and Assaying, which have trained so many young men for useful chemical and manufacturing employment, for mining enterprises and for the Geological Survey, and have sustained indirectly the honour course in geology in the Faculty of Arts. Thus our resuming possession of the old buildings was successful and fruitful of new enterprise, and Mr. Molson's timely aid laid the foundation of greater successes in the following years.

About this time a number of our graduates resident in Montreal formed themselves into the nucleus of a university society, which has continued to grow and expand up to the present time, and has still room for further extension, more especially by the formation of branch or local associations, of which the Ottawa Valley Graduates' Society has set the first and a brilliant example. One of the early efforts of this society, at the time under the presidency of Brown Chamberlin, M.A.,

D.C.L., was the institution of the Founder's Festival, a social gathering on Mr. McGill's birthday. It was continued with spirit for some years, but failed to attract graduates from a distance, and was ultimately dropped in favour of other movements. The time may shortly come for its revival.

In 1860 we entered on the new departure of affiliating colleges in arts, by the affiliation of St. Francis College, Richmond, and this was followed in a year or two by Morrin College, Quebec. In this matter the President of the Board of Governors, Judge Day and the Hon. Judge Dunkin were very earnest, believing that these affiliated colleges might form important local centres of the higher education, and might give strength to the university. They have not, it is true, grown in magnitude as we had hoped; but so far they have maintained a useful existence, and have unquestionably done educational good; and, more especially, have enabled some deserving and able men to obtain an academical education which would otherwise have been denied them. In the circumstances of the Protestant population of the Province of Quebec, this is an end worthy of some sacrifice for its attainment. The only additional college of this class is that of Stanstead, added at a comparatively recent date. In 1865 the Congregational College of British America, an institution for theological education only, was removed to Montreal and became affiliated to the university, and has been followed by three other theological colleges. The value of these to the university no one can doubt. They not only add to the number of our students in arts, but to their character and standing, and they enable the university to offer a high academical training to the candidates for the Christian ministry in four leading denominations, thus rendering it helpful to the cause of Protestant Christianity, and enabling us to boast that we have aided in providing for the scattered Protestant congregations of this province a larger number of well-educated pastors than they could possibly have obtained in any other way, while the ministers sent out into the country have more than repaid us by sending students to the classes in all our faculties. Our system in this respect, which has been imitated elsewhere, presents, for colonial communities at least, the best solution of the question of how to combine Christian usefulness with freedom from denominational control.

The year 1870 brings me to the beginning of a most important movement not yet completed, but which has already proved itself a marked success—that for the higher education of women, respecting which a few chronological statements may be in place here. At a meeting of citizens convened by the Board of Governors in the early part of the year 1870, for the purpose of soliciting additional endowments, a resolution was moved by the late Dr. Wilkes, and unanimously adopted, to the effect that the university should, at as early a date as possible, extend its benefits to women. It is true that no special endowments for the purpose were at this time offered, nor were there any applicants for admission; but, in spending the summer of 1870 in England, my wife and I made it our business to collect information respecting the movements in this matter then in progress in the Mother Country. The conclusion at which we arrived was that in our circumstances the methods of the Ladies Educational Association of Edinburgh were the most suitable; and seconded by Mrs. G. W. Simpson, whose experience and influence as an educator were of the highest value, we endeavoured to promote such an organization in Montreal. At a meeting of ladies, convened by our friend Mrs. Molson, of Belmont Hall, in her drawing-room, the preliminaries were agreed on, and the classes were opened in October, 1871, on which occasion I delivered the introductory lecture. This association conducted an admirable and most useful work for fourteen years, until its place was taken by the Donalda Special Course for Women.

About the same time with the organization of the Ladies' Educational Association, two other movements occurred bearing on the same question. One was the foundation by former pupils of Miss Hannan Willard Lyman of an endowment in commemoration of that gifted lady, and the income of which was to be expended to found a scholarship or prize "in a College for Women" affiliated to the University, or in classes for women approved by it. This endowment was used in the first instance for prizes in the classes of the association, and its terms furnished an indication as to the prevailing sentiment with respect to the education of women, and were in accordance with the fact that Miss Lyman had been the lady principal of one of the greatest and most successful colleges

for women in the United States. The other, and practically more important, was the establishment of the Girls' High School of Montreal. This was suggested by the Rev. Dr. Jenkins, the chairman of the Protestant commissioners of schools, in his report for 1871, and after some delays, owing to the claims of other objects, I moved, as a member of the Board, in February, 1874, the appointment of a committee with power to establish such a school. The committee acted promptly, prepared a plan, recommended teachers, and engaged a temporary building, and the school came into operation in the autumn of 1874. In moving in this matter I fully expected that the establishment of a school giving the training necessary for our matriculation examination would lead in a few years to a demand for college education on behalf of the passed pupils of the school, but trusted that means would be found to meet this when it should arise, though I deprecated any premature action on the part of the University itself in this direction. The attention of the corporation was directed to the subject by the Rev. Dr. Clark Murray in 1882, and the matter was referred to a committee to collect information; but the demand did not actually develop itself till 1884, when several pupils of the Girls' High School had distinguished themselves in the examination for associate in arts, and formal application was made by eight qualified candidates for admission to University privileges. At first the only resource seemed to be to appeal to the public for aid in this new departure; but at the moment when the difficulty pressed, Sir Donald A. Smith voluntarily came forward with an offer of \$50,000 to provide separate classes in Arts for women for the first and second years, leaving the question of how their education was to be continued afterwards in abeyance. This generous offer was thankfully accepted by the University, and thus our classes for women were commenced in 1884. Subsequently the same liberal benefactor increased his gift to \$120,000 to continue the work over the third and fourth years, and besides contributed \$4,000 annually in aid of sessional lecturers, while the corporation, without hesitation, admitted the women to all the privileges of examinations and degrees. Under these arrangements the Donalda special course for women has been going on successfully for eight years; but it still remains to

carry out the development of the liberal plans of the founder into a separate college for women affiliated to the University. In this form, and with a suitable building in proximity to the other buildings of the University, and aided by our library, museum and laboratories, it cannot fail to attract a much larger number of students and to become more than ever a leading department of the work of the University.

Reference has been made to the Examinations for Associate in Arts. These were established in 1865, and at first were limited to pupils of the High School. With the aid of the University of Bishop's College and the Protestant Committee of the Council of Public Instruction, they have now been extended to all the Protestant Academies and High Schools, and have become an important factor in the higher education.

In 1880, on occasion of the twenty-fifth year of my tenure of office as principal, I endeavoured to assemble its graduates at a banquet in the William Molson Hall. Much labour was necessary to secure accurate information as to their addresses, and this was made the means of preparing the first directory of the graduates. Eight hundred and fifty cards of invitation were issued, and answers expressing sympathy and affection for Alma Mater were received from nearly all. The result was that 360 gentlemen, nearly all graduates of the University, were able to attend and to take their seats at the tables occupying the hall. At this entertainment, after a few words of welcome to the guests and the usual toasts, addresses were delivered by representatives of the different bodies and interests connected with the University, and by representatives of sister institutions. The topics were naturally those connected with the past history and present state of the University; and the part which its governors principal and fellows, its benefactors and its graduates had taken in elevating it to the condition to which it had attained, and in advancing the interests of education. As to the future, the evening was signalized by the announcement of the intention of Peter Redpath, Esq., one of the governors, to erect a costly and capacious museum building on the college grounds, and that of the Principal to place therein, as a gift to the University, his own large geological collections, and the further announcement that the graduates proposed to commemorate the twenty-fifth year of

the Principal's tenure of office by the erection of a university building to bear his name. The entertainment being a private one, reporters were not admitted, which, perhaps, was an error, as it would have been interesting now to have preserved a record of the addresses, more especially of those delivered by men who have since passed away. It had been hoped that entertainments of this kind might have been continued, but the labour and cost of meetings of scientific associations prevented this for the time.

The university should, I think, take a large share of credit for the success of the meetings of the American Association for the Advancement of Science in Montreal in 1857 and 1882, and the still more important meeting of the British Association in 1884. University men worked earnestly in aid of these meetings, the use of the college buildings contributed materially to their accommodation, and the results tended in many ways to the promotion of science in Canada. Such meetings, by bringing among us eminent men, widely known abroad, and by directing special attention to new scientific topics, contribute greatly to our advance in national improvement, and in placing us abreast of the scientific movement in other countries. Each of these meetings has had its influence in these respects, and has marked a distinct step in our upward progress.

I have referred in these reminiscences to the financial affairs of the university. In this respect we have always been in straitened circumstances, but relief has often come just at our time of greatest need, though there have always been important fields of usefulness open to us, but which we had not means to enter on. Our last public appeal is thus referred to in a publication of the time: "At the close of the financial year 1880-81, our income had ebbed in a most threatening manner. Being derived mainly from mortgages on real estate, it had run some risks and experienced a few losses in the commercial crisis of the preceding years. But when the tide of commercial prosperity turned, a greater calamity befell us in the fall of the rate of interest, which reduced our revenue by nearly 20 per cent., and this at a time when no decrease of expenditure could be made without actual diminution of efficiency." In these circumstances the Board of Gov-

ernors found it necessary to insist on most unwelcome retrenchments, injurious to our educational work, and which some of us would have been glad to avert, even by much personal sacrifice and privation. At length, on the 13th of October, 1881, we convened a meeting, not happily of our creditors, but of our constituents, the Protestant population of Montreal, and our position and wants were laid before them most ably, and, I may say, even pathetically, by the chancellor, Judge Day, and the honorary treasurer, Mr. Ramsay. The meeting was a large and influential one, and I shall never cease to bear in grateful remembrance the response which it made. There was no hint of blame for our extravagance, no grudging of the claims of the higher education which we represented, but a hearty and unanimous resolve to sustain the university and to give it more than the amount which it asked. The result of the meeting was the contribution of \$28,500 to the endowment fund, besides \$26,335 to special funds, including the endowment of Mr. W. C. McDonald's scholarships, and of \$18,445 in annual subscriptions, most of them for five years. But this was not all, for it was followed by two of those large and generous bequests of which this city may well be proud. Major Hiram Mills, an American gentleman, resident for twenty years in Montreal, and familiar with the struggles of the university, left us by will the handsome sum of \$43,000 to endow a chair in his name, as well as a scholarship and a gold medal. On this endowment the Governors have placed the chair of Classical Literature. More recently our late esteemed friend and fellow-citizen, Mr. David Greenshields, has added to the many kind actions of a noble and generous life the gift of \$40,000 for the endowment of a chair to be called by his name (the David J. Greenshields chair of Chemistry).

It is perhaps unnecessary that I should continue this subject further. The great steps in advance of the last few years are known to nearly all who hear me. In so far as money is concerned, these gifts include the following: The Thomas Workman endowment for Mechanical Engineering of \$117,000, supplemented by \$20,000 from Mr. W. C. McDonald; the W. C. McDonald Engineering Building, valued, with its equipment, at \$350,000, and an endowment of \$45,000 for its maintenance, and also the endowment of the chair of Eleectri-

cal Engineering with the sum of \$40,000; the erection and equipment by the same gentleman of the Physics Building, valued at \$300,000, with two chairs of Physics with endowments amounting to \$90,000; the endowment of the Faculty of Law by the same benefactor with \$150,000, and the endowment of the Gale chair in the same faculty with \$25,000; the large gifts to the Medical Faculty by Sir D. A. Smith and Mr. J. H. R. Molson and other benefactors, amounting to \$269,000: the late John Frothingham principal fund of \$40,000, founded by Mrs. J. H. R. Molson and the Rev. Fred'k Frothingham; the purchase of land valued at \$42,500 by Mr. J. H. R. Molson; the further endowment by the same gentleman of the chair of English Literature with \$20,000; the Philip Carpenter Fellowship with endowment of \$7,000; the Peter Redpath Library, valued at \$150,000, with \$5,000 annually for its maintenance. In the aggregate, these gifts of citizens of Montreal within the past four years amount to more than a million and a half of dollars. Many minor gifts also testify to the goodwill and liberality of the citizens generally. These great benefactions are not only a vast addition to our resources, but an earnest for the future, since it is not to be supposed that so great and useful endowments, attracting so many students and so highly appreciated by the public, shall ever be left to fall into decay, or fail to be supplemented by additional benefactions. It is to be observed also that the greater part of them have been given by men not graduates of the university, and it is to be expected that as our graduates increase in number, influence and wealth, some return will flow in from them for the benefits they have received. They need not think that their gifts will be declined. There are still great needs to be supplied. These may be ranged under the three heads of the professional faculties, the academical faculty and the university as a whole.

In the former, the Faculties of Law, Medicine and Veterinary Science are still deficient in regard to class rooms and laboratories. The Faculty of Applied Science is still unprovided with necessary outfit in reference to the departments of mining engineering and practical chemistry. It is, however, the academical faculty or Faculty of Arts that is in most need. It requires large additions to its staff, and more especially division of the heavier chairs. In this connection it

should be observed that it is burdened with the general education of students of professional schools as well as with the training of its own students. It is also in great need of improved class-rooms and extended accommodation of every kind for its work. The university as such needs a new gymnasium, lodging houses and a dining hall, and an adequate convocation hall, with proper rooms for university boards and general college societies and for university officers. It is not too much to say that in securing these ends the great benefactions already given might profitably be doubled. That these things will all be done in process of time I have no doubt, but it should be remembered that class after class of students is going forth into the world without having enjoyed these benefits. I have a large packet of papers labelled unfinished and abortive schemes, containing the details of these and other plans. I value these papers very highly, as representing creative thought not yet materialized, but I am quite willing to part with any of them to any benefactor who will carry it into actual effect. While personally it is necessarily a matter for regret that I cannot continue in office till the great improvements to which I have referred are realized, it is at least something, after our long and arduous journey through the wilderness of penury and privation, to see even afar off the goodly land into which my successors are entering, and in the enjoyment of which, I trust, they will forgive the shortcomings of those who had to lead the way, and will not forget the dangers and difficulties of the thorny paths through which we have passed.

One feature, however, of our history for which we cannot be too deeply thankful, is the comparative peace and mutual forbearance which have prevailed in all the past years, and the united and earnest action of all the members of the University in every crisis of our long conflict. Nor have we had any reason for anxiety respecting our students. I confess that if there is anything I have feared and have constantly prayed to be exempt from, it has been the possible occurrence of those rebellions and disorders that have troubled so many colleges on this continent. For this exemption I do not take credit to myself. McGill has had an able and devoted governing Board, a body of competent, diligent and popular profes-

sors, derived from a large number of different universities on both sides of the Atlantic; and the Canadian student is on the whole a hard worker, good-natured and patriotic, and not too self-asserting. Nor is our system of college government a cast-iron constitution which has been set up by an act of legislation. It has grown up under experience and careful adaptation of methods to needs. In McGill each faculty exercises jurisdiction over its own students, the executive officer being the dean of the faculty. The principal intervenes only when desired to give advice or assistance, or when any case arises affecting students of different faculties; and the power of expelling students resides only in the corporation—a body including the governors, the principal, and all the deans of the faculties, with elective representatives of the faculties, of the affiliated colleges, and of the graduates. Under this system it is understood that each professor is supreme in his own class-room, but his power of discipline is limited to a temporary suspension from lectures, which must be at once reported to the dean. If necessary, the dean may lay the case before the faculty, which, after hearing, may reprimand, report to parents or guardians, impose fines, suspend from classes, or, in extreme cases, report to the corporation for expulsion. No case involving this last penalty has, however, yet occurred, and the effort has been to settle every case of discipline by personal influence and with as little reference to laws and penalties as possible. With this machinery a simple code of rules is sufficient. It provides for orderly and moral conduct in the buildings and in going and coming, and for the safety of the property of the University, and prohibits all action likely to obstruct the work of the college or to interfere with the progress of other students. In the case of college societies it is required merely that their objects shall be consistent with those of the University, and that their laws and officers shall be communicated to and approved by the faculty in whose rooms they meet. Above and beyond all such machinery and rules, lies the obligation on principal, deans and professors to watch the beginnings of evil and to counteract by wise and kindly advice anything that may lead to disorder. On the other hand, the effort of the student should be to exercise all that liberty which tends to make him self-reliant and fit for

the battle of life, while he endeavours to avoid the formation of any habits inimical to the interests of his fellow-students or injurious to himself. In all this I proceed on the assumption that it is the business of a university to train young men and women for noble lives, not so much to teach them to do something as to train them to be something. Perhaps the tendency most to be feared in our age and country is that towards practical and profitable work without the previous education that should develop fully the mental powers and form the character. This tendency it is the duty of the university by all means to counteract, as one that will lower our national character and thereby prevent our highest success. This principle being kept in view, the cultivation of interest and enthusiasm for college work at once secures progress and peace. In short, the control of young men or young women is to be exercised rather in the way of inducing them to like their work and duty than by any influence of the nature of coercion or restraint. In this way only can they be trained to control themselves and, when their turn comes, to control others. They who would rule must themselves learn willing obedience. Of course, there is place here for all the elevating influence of spiritual religion, and there is scope for that most important power which arises from the example of punctuality, self-denial and honest work on the part of the professors. I fervently pray that the good traditions of McGill in all these respects may ever be maintained.

The religious life of McGill University has been of a quiet and unofficial character. We have not sought to make any parade of religious services as such, but by personal influence and example to foster piety among the students and to facilitate as far as possible their taking advantage of the religious privileges afforded in the city. In this connection I attach paramount importance to the spontaneous action of the students themselves, more especially as manifested in their Christian Associations. These have, I think, been sources of unmixed good, and have largely contributed to maintain and extend religious life. I could wish that they should have from the university or its friends means to provide proper accommodation for meetings and social reunions, and that the utmost aid and countenance should be extended to them by the college authorities.

My function in this university has been that of a pioneer; and viewed in this light it has not been compatible with the dignity and the authority which are usually attached to the heads of more firmly established colleges in older countries. It is time, however, that this should be changed, and my successor should enter upon office under more favourable conditions than those of the feeble and struggling university of the past. In 1855 the university had twenty professors and lecturers and about eighty students. It now has seventy-four professors and lecturers and a thousand students. This fact alone is sufficient to indicate the increase in the work and responsibility of the officer who has to superintend and harmonize all these workers in many different departments. I would therefore more especially ask in his behalf that he should have means to support the dignity of the university in its social aspect, to entertain distinguished strangers as well as the members of the university, and to take a place in society becoming the magnitude of the interests committed to his care. Under our constitution he cannot be an autocrat, since he can only enforce regulations enacted by the Governors and corporation, but he should at least have full information as to all contemplated movements, and should be consulted respecting them, and should be recognized as the only official medium of communication between the different portions of the university. The operations of McGill are now so extensive and complicated that the dangers of disintegration and isolation have become greater than any others, and the Principal must always be the central bond of union of the university, because he alone can know it in all its parts and weigh the claims, needs, dangers, difficulties and opportunities of each of its constituent faculties and departments. Much of this must without doubt depend upon his personal qualities, and I trust those who are to succeed me in this office may be men not only of learning, ability and administrative capacity, but of unselfish disinterestedness, of large, sympathetic and wide views, of kindly, generous and forgiving disposition, and of that earnest piety which can alone make them safe advisers of young men and women entering on the warfare of life.

In conclusion, let me say a word as to myself and my retirement from office. My connection with this University for

the past thirty-eight years has been fraught with that happiness which results from the consciousness of effort in a worthy cause, from the aid and support of my dear wife, who has cheered and sustained me in every difficulty, and from association with such noble and self-sacrificing men as those who have built up McGill College. But it has been filled with anxieties and cares, and with continuous and almost unremitting labour. I have been obliged to leave undone or imperfectly accomplished many cherished schemes by which I had hoped to benefit my fellow-men, and leave footprints of good on the sands of time. Age is advancing upon me, and I feel that if I am fittingly to bring to a close the business of my life I must have a breathing space to gird up my loins and refresh myself for what remains of the battle. I have, besides, as you know, been somewhat abruptly deprived by a serious illness of my accustomed strength, and in this I recognize the warning of my Heavenly Father that my time of active service is nearly over. In retiring from my official duty I can leave all my work and all the interests of this University with the confidence that, under God's blessing, they will continue to be successful and progressive. The true test of educational work well done is that it shall have life and power to continue and extend itself after those who established it are removed. I believe that this is the character of our work here, and I shall leave it with the confident expectation that it will be quite as successful in my absence as in my presence. Such a result I shall regard as the highest compliment to myself. To this end I ask your earnest consideration of the sketch of our progress which I have endeavoured to present, and I pray that the blessing of God may rest on the university and on every part of it, and that it may be strengthened with His power and animated with His spirit.





WITH KIND REGARDS
OF THE LECTURER.

THIRTY EIGHT YEARS

OF

McGILL.

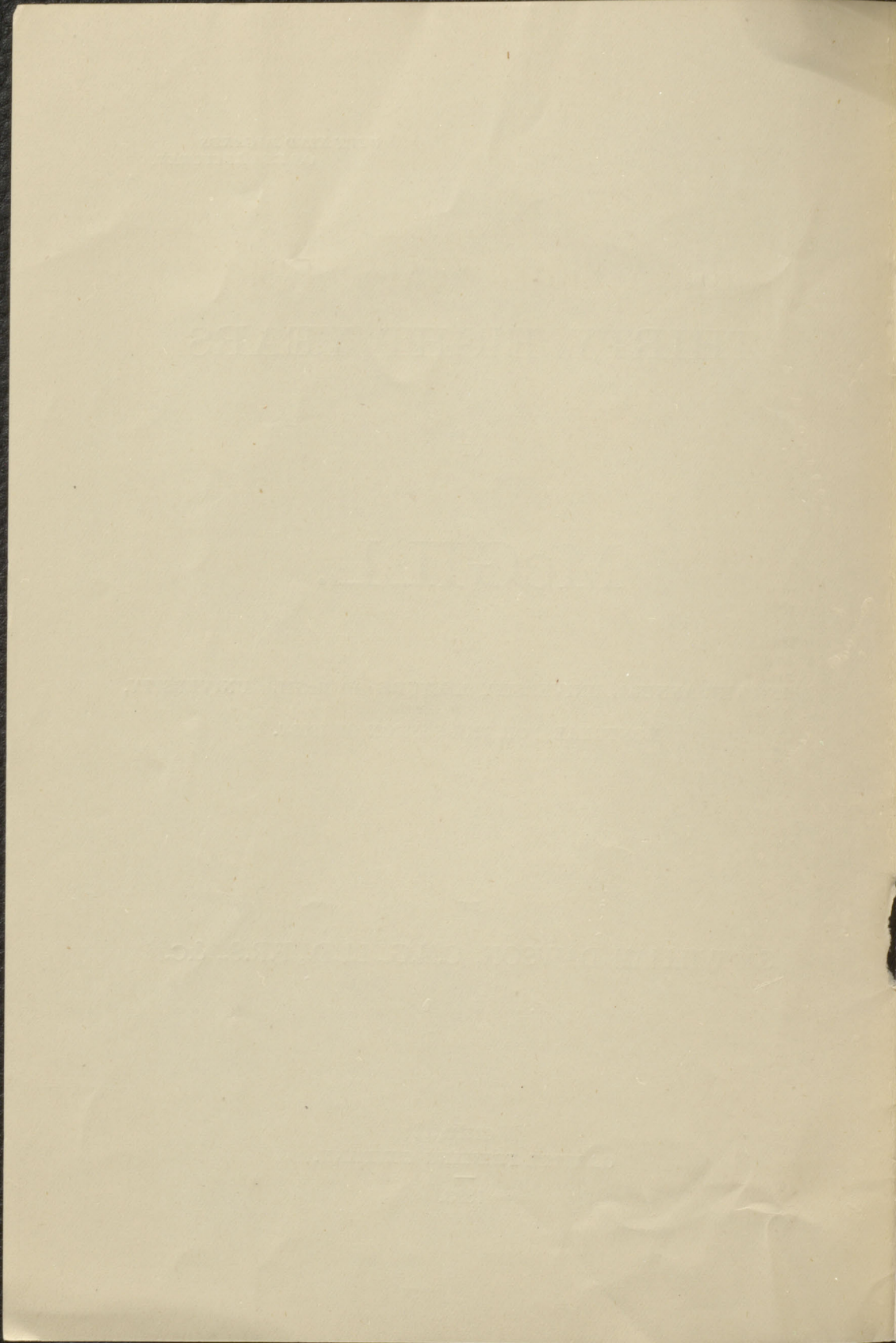
BEING THE ANNUAL UNIVERSITY LECTURE OF MCGILL UNIVERSITY,
MONTREAL, FOR THE SESSION OF 1893-4.

BY

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

Montreal:
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1893.



THIRTY EIGHT YEARS OF MCGILL.

BY

SIR WILLIAM DAWSON, C.M.G., LL.D., &C.

(FROM THE GAZETTE, Montreal, 1st Dec., 1893.)

Having been invited by the acting Principal and the Corporation to deliver once more the annual University lecture, this has appeared to be an occasion on which you would bear with me in retracing some of the footsteps of the past, as a suitable close to the official work of nearly a lifetime, and as a farewell address to the friends and colleagues with whom I have labored so long and with so much happiness to myself. We may have perfect faith in the practical wisdom of the apostolic maxim "forgetting the things that are behind, press forward to those that are before." Yet we may have equal faith in recalling the memories of the past, in "remembering the mercies that are of old," as well as the errors and shortcomings of former years, that we may draw lessons from all as to the present and the future. It may, for instance, be interesting, perhaps even useful, to young men, to know how I first became connected with McGill.

My plans for life lay in an entirely different direction. I had prepared myself, as far as was possible at the time, for field work in geology; and my ambition was to secure employment of this kind; or next to this, to have the privilege of teaching my favorite science, with sufficient spare time to prosecute original work. In connection with this ambition, after having attained to some little reputation by papers published under the auspices of the Geological Society of London, I accepted an invitation to deliver a course of lectures on geology and allied

subjects in Dalhousie college, Halifax, in the winter of 1849-50. When in Halifax, I had some conversation with Messrs. Young and Howe, afterwards Sir Wm. Young and Sir Joseph Howe, at that time governors of Dalhousie college and the leaders of the provincial Government, as to a new school-law they were preparing for Nova Scotia, and in which important improvements were introduced. I had at the time no thought of being connected with the administration of the act. In the following spring, however, I was surprised with the offer of the position of superintendent of education, established under the new law. I had many reasons for declining the task, but my friends would take no refusal, and I consoled myself with the consideration that the visitation of the school districts throughout the province, which was one of the duties of the office, would give great facilities for making myself acquainted with the geology of the country. For three years I was engaged in this work, and, besides writing educational reports, and administering the new school law, conducting an educational journal, visiting schools, and holding teachers' institutes, had collected the materials for several papers published in England, as well as for my "Acadian Geology," which, however, did not appear till 1855. In 1852, when on a geological excursion with my friend Sir Charles Lyell, I was introduced by him to Sir Edmund Head, the governor of New Brunswick, who was much occu-

pied at the time with the state of education in that province, and in particular that of its provincial university; and in 1854 he invited me, along with the late Dr. Ryerson, to be a member of a commission which had been appointed to suggest means for the improvement of the provincial university. This work was scarcely finished when Sir Edmund was promoted to be the Governor-general of Canada, and removed to Quebec, where, under the new charter granted to McGill college in 1852, he became Visitor of the university; and as he was known to be a man of pronounced literary and scientific tastes and an active worker in the reforms then recently carried out in the English universities, the governors of McGill naturally counted on his aid in the arduous struggle on which they had entered. Accordingly, soon after Sir Edmund's arrival, a deputation of the Board waited on him, and one of the subjects on which they asked his advice, was the filling of the office of principal, which was yet vacant. Sir Edmund mentioned my name as that of a suitable person. At first, as one of them afterwards admitted to me, they were somewhat disconcerted. They were very desirous for the best reasons to follow Sir Edmund's counsel, but with his knowledge of the available men in England, of some of whom they had already heard, they were somewhat surprised that he should name a comparatively unknown colonist. In the meantime, ignorant of all this, I was prosecuting a candidature for the chair of natural history in my alma mater, the University of Edinburgh, vacant by the death of Prof. Edward Forbes, and in which I was strongly supported by the leading geologists of the time. By a strange coincidence, just as I was about to leave Halifax for England in connection with this candidature, intelligence arrived that the Edinburgh chair had been filled at an earlier date than my friends had anticipated, and at the same time a letter reached me from Judge Day offering me the Principalship of McGill. I had determined in any case to visit England, to attend the meeting of the British Association in Glasgow and to thank the many friends who had promoted my Edinburgh candidature; but postponed my departure for a week that I might consult my family, and decided to accept the Montreal offer, provided

that a professorship of geology or natural history were coupled with the office. Thus it happened that I became connected with McGill in its infancy under its new management, and the story forms a striking illustration of the way in which Providence shapes our ends, rough hew them as we may. Its lesson is that young men should qualify themselves well for some specialty, but should also be sufficiently general in their training to adapt themselves to new and unforeseen pursuits.

OUR VISITOR.

As I have referred to Sir Edmund Head, I may say that he continued to be an active friend of the university during his term of office and after he returned to England. This is true also of his successors, all of whom have shown a kindly interest in our work, so that our visitor has all along been a power for good. The present Governor-General has already by his presence and words of cheer on a recent public occasion, given an earnest that in this respect he will, like his predecessors, prove a warm friend and kindly patron of the higher education in Canada.

FIRST IMPRESSIONS.

When I accepted the principalship of McGill, I had not been in Montreal, and knew the college and men connected with it only by reputation. I first saw it in October, 1855. Materially, it was represented by two blocks of unfinished and partly ruinous buildings, standing amid a wilderness of excavators' and masons' rubbish, overgrown with weeds and bushes. The grounds were unfenced and pastured at will by herds of cattle, which not only cropped the grass, but browsed on the shrubs, leaving unhurt only one great elm, which still stands as the "founder's tree," and a few old oaks and butternuts, most of which have had to give place to our new buildings. The only access from the town was by a circuitous and ungraded cart-track, almost impassable at night. The buildings had been abandoned by the new Board, and the classes of the Faculty of Arts were held in the upper storey of a brick building in the town, the lower part of which was occupied by the High school. I had been promised a residence, and this I found was to be a portion of one of the detached buildings aforesaid,

the present east wing. It had been very imperfectly finished, was destitute of nearly every requisite of civilized life, and in front of it was a bank of rubbish and loose stones, with a swamp below, while the interior was in an indescribable state of dust and disrepair. Still we felt that the Governors had done the best they could in the circumstances, and we took possession as early as possible. As it was, however, we received many of the citizens who were so kind as to call on us, in the midst of all the confusion of plastering, papering, painting and cleaning. The residence was only a type of our difficulties and discouragements, and a not very favorable introduction to the work I had undertaken in Montreal.

On the other hand, I found in the Board of Governors a body of able and earnest men, aware of the difficulties they had to encounter, fully impressed with the importance of the ends to be attained, and having sufficient culture and knowledge of the world to appreciate the best means for attaining these ends. They were greatly hampered by lack of means, but had that courage which enables risks to be run to secure important objects. I may mention here a few of these men. Judge Day was a man of acute legal mind, well educated and well read, a clear and persuasive speaker and wholly devoted to the interest of education, and especially to the introduction into the college course of studies in science and modern literature. Christopher Dunkin was a graduate of the University of London, educated first in Glasgow and afterwards in University college, and who had held a tutorial position in Harvard before he came to Canada. He had made college work and management a special study, and was thoroughly equipped to have been himself a college president or principal, had he not had before him the greater attractions of legal and political success. Hew Ramsay was an admirable example of an educated Scotsman of literary tastes and business capacity. David Davidson was also a product of Scottish college training and a warm and zealous friend of education, with great sagacity and sound judgment. James Ferrier should have been mentioned first. He was a member of the old Board of Royal Institution and senior mem-

ber of the new, but voluntarily resigned the presidency in favor of Judge Day, in the interest, as he believed, of the university. He was longer with us than any of the others, and no man could be a more devoted worker in the cause of education. Such men as these and their colleagues ensured public confidence and a wise and enlightened management.

The teaching staff of the university then consisted of three faculties, those of law, medicine and arts. The Faculty of Law, then recently organized, had two professors and two lecturers. The Faculty of Medicine, the oldest and most prosperous of the three, had ten professors and a demonstrator. The Faculty of Arts had four professors and a lecturer, and all of these, except one gave only a part of their time to college work. They were, however, able and efficient men. Dr. Leach, who represented philosophy and allied subjects, was a man of rare gifts and of warm attachment to the college; Dr. Davies, a man of great learning, was shortly afterwards appointed to Regent's Park college, London; Dr. DeSola was an expert in Oriental languages and literature, and Mr. Markgraf represented modern languages, while Dr. Howe gave what time he could spare from the High school to his favorite mathematical and physical subjects. My own lectures in natural science came in aid of this slender staff, raising the professoriate in Arts to six. It was well for me that the Dean of the medical faculty, Dr. Holmes, was a man of scientific tastes and an accomplished mineralogist and botanist, as this led at once to my lectures being taken advantage of by the medical students as well as those in Arts. Thus while the whole students in Arts were only at that time 15, I began a course of lectures in 1855 with a large class, attended by some of the medical professors and by gentlemen from the city, as well as by the students. At the same time a good deal was done to perfect and render more definite the course in Arts, which even in the session of 1855-6 was becoming so moulded as to bear some resemblance to its present arrangements. The university at this time had no library and no museum, and its philosophical apparatus was limited to a few instruments presented to it some time

before by the late Mr. Skakel. I had to use my own private collections and specimens borrowed from the Natural History society to illustrate my lectures. The High school, under the rectorship of Dr. Howe, was an affiliated school, and we could look to it as likely in a few years to furnish us with a larger number of students—a hope not disappointed.

VISIT TO TORONTO.

But our great difficulty was lack of the sinews of war; and the seat of government being at the time in Toronto, I was asked to spend my first Christmas vacation in that city with the view of securing some legislative aid. There was as yet no direct railway communication between Montreal and Toronto, and of course no Victoria bridge. I crossed the river in a canoe amidst floating ice, and had to travel by way of Albany, Niagara and Hamilton. The weather was stormy and the roads blocked with snow, so that the journey to Toronto occupied five days, giving me a shorter time there than I had anticipated. I received, however, a warm welcome from Sir Edmund Head, saw most of the members of the Government, and obtained some information as to the Hon. Mr. Cartier's contemplated Superior Education act, passed in the following year, and which secured for the first time the status of the preparatory schools, while giving aid to the universities. I was also encouraged by Sir Edmund and Cartier to confer with the Superintendent of Education and the governors of McGill on my return to Montreal with reference to the establishment of a Normal School in connection with the university, which was successfully carried out in the following year. I may here remark, in passing, that the McGill Normal school has, in my judgment, been one of the most successful institutions of its kind. It has proved indispensable to the growth of our provincial education of every grade, has indirectly aided the university, has been deservedly popular throughout the country, and has had the good will and support of the successive superintendents of education, and of the provincial governments of both political parties.

AN APPEAL TO MONTREAL.

The direct aid, however, which could be obtained from the Government was

small, and the next movement of the board of governors was our first appeal to the citizens of Montreal, resulting in the endowment of the Molson chair of English language and literature with \$20,000 (subsequently augmented to \$40,000 by Mr. J. H. R. Molson), and \$35,000 from other benefactors. This was a great help at the time and the beginning of a stream of liberality which has floated our university barque up to the present date. In connection with this should be placed the gift of the Henry Chapman gold medal, the first of our gold medals. The liberality of the citizens in 1857 encouraged the board of governors to strengthen and extend the teaching staff in arts by the appointment of Professors Johnson and Cornish, and shortly afterward of Professor Darey, who still, after all these years of arduous and faithful service, remain to the university, and are now the senior members of its professoriate.

A LOSS BY FIRE.

To counterbalance these successes and advantages, in the early part of 1856 the building occupied by the High school and by the Faculty of Arts was destroyed by fire, along with some of the few books which had been collected and some of our apparatus, and a large part of my private collections which I had been using for my lectures. The specimens, apparatus and books were not insured, and the insurance on the building was quite insufficient to replace it, so that this was a great pecuniary loss, but one which our governors bore with admirable fortitude and equanimity and took immediate steps to repair. For the remainder of the session the college classes were transferred in part to the original college buildings above Sherbrooke street, and in part to the medical faculty's building on Cote street. The classes were not interrupted, and plans were at once prepared for the erection of a new and better building.

ADDITIONS AND IMPROVEMENTS.

The year 1857 was signalized not only by the opening of the McGill Normal school and by the additions to our staff already noted, but by the institution of a chair of civil engineering, the first small beginning of our Faculty of Applied Science. At the same time, in the hope that the Faculty of Arts might be able before

many years to occupy permanently the college buildings, the improvement of the grounds was begun, by planting, draining and making walks. At first I did this at my own cost, as a labor of love, with the aid of the late Mr. Sheppard in laying out the walks, merely asking permission of the Board. Dr. Howe, who resided at that time in the centre building, gave some aid, and the new secretary, Mr. Baynes, took a deep interest in the matter. The graduates undertook to plant trees along one of our walks, and eventually the Board gave small sums toward this object, and at a later date appointed a caretaker, for whom a lodge was erected by a subscription among our friends.

THE OLD BUILDING OCCUPIED, AND COMPLETED BY MR. W. MOLSON.

We had proposed that so soon as the students in arts should exceed fifty we would venture to occupy the old building. This happened in 1860, and we accordingly proceeded to move up and take possession of the centre block, the east wing being used for residences. The movement was a fortunate one, for it suggested to our friend, Mr. William Molson, the erection of a third block, corresponding to the eastern one, to be named the William Molson Hall, and which was to contain the convocation room and library. This was the original limit of Mr. Molson's intention; but, driving up one day in company with Mrs. Molson to note the progress of the work, she suggested that it would be a pity to leave it unfinished, and that it would be well at once to connect the three blocks of buildings in one pile, according to the original plan. The hint was taken, plans were prepared, and one of the connecting buildings became our first museum, while the other provided a chemical and natural science class room and laboratory. Both buildings, as well as the library, were seeds of greater things. The Library was provided with shelves for 20,000 volumes, while we possessed less than 2,000, and at first it was distressing to see its emptiness, but the time has long passed when, after crowding it with additional book-cases and extending it into an adjoining room, we began to desire larger space, now happily supplied by the magnificent Peter Redpath Library. The Museum, equally empty, received in the first instance a portion of my own collections,

and others obtained in exchange and by purchase from my own resources. In this way it was possible almost from the first to fill it respectably, for a museum without specimens is even more forlorn than a library without books. Dr. Carpenter's magnificent collection of shells was added in 1869. The whole furnished the nucleus for the Peter Redpath Museum, which stands at the head of Canadian educational museums. The other connecting building became the home of our chemistry and assaying, in which Dr. Harrington, with the aid for a time of the late Dr. Sterry Hunt, built up our schools of Practical Chemistry and of Mining and Assaying, which have trained so many young men for useful chemical and manufacturing employment, for mining enterprises and for the Geological Survey, and have sustained indirectly the honour course in geology in the Faculty of Arts. Thus our resuming possession of the old buildings was successful and fruitful of new enterprise, and Mr. Molson's timely aid laid the foundation of greater successes in the following years.

GRADUATES' SOCIETY.

About this time a number of our graduates resident in Montreal formed themselves into the nucleus of a university society, which has continued to grow and expand up to the present time, and has still room for further extension, more especially by the formation of branch or local associations, of which the Ottawa Valley Graduates' society has set the first and a brilliant example. One of the early efforts of this society, at the time under the presidency of Brown Chamberlin, M.A., D.C.L., was the institution of the Founders' Festival, a social gathering on Mr. McGill's birthday. It was continued with spirit for some years, but failed to attract graduates from a distance and was ultimately dropped in favor of other movements. The time may shortly come for its revival.

THE AFFILIATED COLLEGES.

In 1860 we entered on the new departure of affiliating colleges in arts, by the affiliation of St. Francis college, Richmond, and this was followed in a year or two by Morrin college, Quebec. In this matter the president of the Board of Governors, Judge Day, and the Hon. Judge Dunkin were very earnest, believing that

these affiliated colleges might form important local centres of the higher education, and might give strength to the university. They have not, it is true, grown in magnitude as we had hoped; but so far they have maintained a useful existence, and have unquestionably done educational good; and, more especially, have enabled some deserving and able men to obtain an academical education which would otherwise have been denied them. In the circumstances of the Protestant population of the province of Quebec, this is an end worthy of some sacrifice for its attainment. The only additional college of this class is that of Stanstead, added at a comparatively recent date. In 1865 the Congregational College of British America, an institution for theological education only, was removed to Montreal and became affiliated to the university, and has been followed by three other Theological Colleges. The value of these to the university no one can doubt. They not only add to the number of our students in arts, but to their character and standing, and they enable the university to offer a high academical training to the candidates for the Christian ministry in four leading denominations, thus rendering it helpful to the cause of Protestant Christianity, and enabling us to boast that we have aided in providing for the scattered Protestant congregations of this province a larger number of well-educated pastors than they could possibly have obtained in any other way, while the ministers sent out into the country have more than repaid us by sending students to the classes in all our faculties. Our system in this respect, which has been imitated elsewhere, presents, for colonial communities at least, the best solution of the question how to combine Christian usefulness with freedom from denominational control.

THE EDUCATION OF WOMEN.

The year 1870 brings me to the beginning of a most important movement not yet completed, but which has already proved itself a marked success—that for the higher education of women, respecting which a few chronological statements may be in place here. At a meeting of citizens convened by the Board of Governors in the early part of the year 1870 for the purpose of soliciting additional

endowments, a resolution was moved by the late Rev. Dr. Wilkes, and unanimously adopted, to the effect that the university should at as early a date as possible extend its benefits to women. It is true that no special endowments for the purpose were at this time offered, nor were there any applicants for admission, but in spending the summer of 1870 in England, my wife and I made it our business to collect information respecting the movements in this matter then in progress in the mother country. The conclusion at which we arrived was that in our circumstances the methods of the Ladies' Educational Association of Edinburgh were the most suitable; and seconded by Mrs. G. W. Simpson, whose experience and influence as an educator were of the highest value, we endeavored to promote such an organization in Montreal. At a meeting of ladies, convened by our friend Mrs. Molson, of Belmont hall, in her drawing-room, the preliminaries were agreed on; and the classes were opened in October, 1871, on which occasion I delivered the introductory lecture. This association conducted an admirable and most useful work for fourteen years, until its place was taken by the Donalda Special Course for Women.

About the same time, with the organization of the Ladies' Educational Association, two other movements occurred bearing on the same question. One was the foundation by former pupils of Miss Hannah Willard Lyman of an endowment in commemoration of that gifted lady, and the income of which was to be expended to found a scholarship or prize "in a College for Women" affiliated to the university, or in classes for women approved by it. This endowment was used in the first instance for prizes in the classes of the association, and its terms furnished an indication as to the prevailing sentiment with respect to the education of women, and were in accordance with the fact that Miss Lyman had been the lady principal of one of the greatest and most successful colleges for women in the United States. The other, and practically more important, was the establishment of the Girls' High School of Montreal. This was suggested by the Rev. Dr. Jenkins, the chairman of the Protestant commissioners of schools, in his report

for 1871, and after some delays, owing to the claims of other objects, I moved, as a member of the Board, in February, 1874, the appointment of a committee with power to establish such a school. The committee acted promptly, prepared a plan, recommended teachers, and engaged a temporary building, and the school came into operation in the autumn of 1874. In moving in this matter I fully expected that the establishment of a school giving the training necessary for our matriculation examination would lead in a few years to a demand for college education on behalf of the passed pupils of the school, but trusted that means would be found to meet this when it should arise, though I deprecated any premature action on the part of the university itself in this direction. The attention of the corporation was directed to the subject by the Rev. Dr. Clark Murray in 1882, and the matter was referred to a committee to collect information; but the demand did not actually develop itself till 1884, when several pupils of the Girls' High school had distinguished themselves in the examinations for associate in arts, and formal application was made by eight qualified candidates for admission to university privileges. At first the only resource seemed to be to appeal to the public for aid in this new departure; but at the moment when the difficulty pressed, Sir Donald A. Smith voluntarily came forward with an offer of \$50,000 to provide separate classes in Arts for women for the first and second years, leaving the question of how their education was to be continued afterwards in abeyance. This generous offer was thankfully accepted by the university, and thus our classes for women were commenced in 1884. Subsequently the same liberal benefactor increased his gift to \$120,000 to continue the work over the third and fourth years, and besides contributed \$4,000 annually in aid of sessional lecturers, while the Corporation, without hesitation, admitted the women to all the privileges of examinations and degrees. Under these arrangements the Donald special course for women has been going on successfully for eight years; but it still remains to carry out the development of the liberal plans of the founder into a separate college for women affiliated to the Uni-

versity. In this form, and with a suitable building in proximity to the other buildings of the university, and aided by our library, museum and laboratories, it cannot fail to attract a much larger number of students and to become more than ever a leading department of the work of the university.

Reference has been made to the Examinations for Associate in Arts. These were established in 1865, and at first were limited to pupils of the High School. With the aid of the University of Bishops College and the Protestant Committee of the Council of Public Instruction, they have now been extended to all the Protestant Academies and High Schools, and have become an important factor in the higher education.

A SEMI-JUBILEE.

In 1880, on occasion of the twenty-fifth year of my tenure of office as principal, I endeavored to assemble its graduates at a banquet in the William Molson hall. Much labor was necessary to secure accurate information as to their addresses, and this was made the means of preparing the first directory of the graduates. Eight hundred and fifty cards of invitation were issued, and answers expressing sympathy and affection for Alma Mater were received from nearly all. The result was that 360 gentlemen, nearly all graduates of the university, were able to attend and to take their seat at the tables occupying the hall. At this entertainment, after a few words of welcome to the guests and the usual toasts, addresses were delivered by representatives of the different bodies and interests connected with the University, and by representatives of sister institutions. The topics were naturally those connected with the past history and present state of the University; and the part which its governors, principal and fellows, its benefactors and its graduates had taken in elevating it to the condition to which it had attained, and in advancing the interests of education. As to the future, the evening was signaled by the announcement of the intention of Peter Redpath, Esq., one of the governors, to erect a costly and capacious museum building on the college grounds, and that of the Principal to place therein, as a gift to the university, his own large geological collections, and the further announcement that the

graduates proposed to commemorate the twenty-fifth year of the Principal's tenure of office by the erection of a university building to bear his name. The entertainment being a private one, reporters were not admitted, which, perhaps, was an error, as it would have been interesting now to have preserved a record of the addresses, more especially of those delivered by men who have since passed away. It had been hoped that entertainments of this kind might have been continued, but the labour and cost of meetings of scientific associations prevented this for the time.

THE AMERICAN AND BRITISH ASSOCIATIONS.

The university should, I think, take a large share of credit for the success of the meetings of the American Association for the Advancement of Science in Montreal in 1857 and 1882, and the still more important meeting of the British association in 1884. University men worked earnestly in aid of these meetings, the use of the college buildings contributed materially to their accommodation, and the results tended in many ways to the promotion of science in Canada. Such meetings, by bringing among us eminent men, widely known abroad, and by directing special attention to new scientific topics, contribute greatly to our advance in national improvement and in placing us abreast of the scientific movement in other countries. Each of these meetings has had its influence in these respects and has marked a distinct step in our upward progress.

THE UNIVERSITY'S FINANCES.

I have referred in these reminiscences to the financial affairs of the University. In this respect we have always been in straitened circumstances, but relief has often come just at our time of greatest need, though there have always been important fields of usefulness open to us, but which we had not room to enter on. Our last public appeal is thus referred to in a publication of the time: "At the close of the financial year 1880-'81, our income had ebbed in a most threatening manner. Being derived mainly from mortgages on real estate, it had run some risks and experienced a few losses in the commercial crisis of the preceding years. But when the tide

of commercial prosperity turned, a greater calamity befell us in the fall of the rate of interest, which reduced our revenue by nearly 20 per cent., and this at a time when no decrease of expenditure could be made without actual diminution of efficiency. In these circumstances the Board of Governors found it necessary to insist on most unwelcome retrenchments, injurious to our educational work, and which some of us would have been glad to avert even by much personal sacrifice and privation. At length, on the 13th of October, 1881, we convened a meeting, not happily of our creditors, but of our constituents, the Protestant citizens of Montreal, and our position and wants were laid before them most ably, and, I may say, even pathetically, by the chancellor, Judge Day and the non-ordinary treasurer, Mr. Ramsay. The meeting was a large and influential one, and I shall never cease to bear in grateful remembrance the response which it made. There was no hint of blame for our extravagance, no grudging of the claims of the higher education which we represented, but a hearty and unanimous resolve to sustain the university and to give it more than the amount which it asked. The result of the meeting was the contribution of \$28,500 to the endowment fund, besides \$26,335 to special funds, including the endowment of Mr. W. C. McDonald's scholarships, and of \$18,445 in annual subscriptions, most of them for five years. But this was not all, for it was followed by two of those large and generous bequests of which this city may well be proud. Major Hiram Mills, an American gentleman, resident for twenty years in Montreal, and familiar with the struggles of the university, left us by will the handsome sum of \$43,000 to endow a chair in his name, as well as a scholarship and a gold medal. On this endowment the Governors have placed the chair of classical literature. More recently our late esteemed friend and fellow-citizen, Mr. David Greenshields, has added to the many kind actions of a noble and generous life the gift of \$40,000 for the endowment of a chair to be called by his name (the David J. Greenshields chair of chemistry).

THE LATEST GIFTS.

It is perhaps unnecessary that I should continue this subject further. The great

steps in advance of the last few years are known to nearly all who near me. In so far as money is concerned these gifts include the following: The Thomas Workman endowment for mechanical engineering of \$117,000, supplemented by \$20,000 from Mr. W. C. McDonald; the W. C. McDonald Engineering Building, valued with its equipment at \$350,000, and an endowment of \$45,000 for its maintenance, and also the endowment of the chair of electrical engineering with the sum of \$40,000; the erection and equipment by the same gentleman of the Physics building, valued at \$300,000, and two chairs of physics with endowments amounting to \$90,000; the endowment of the Faculty of Law by the same benefactor with \$150,000, and the endowment of the Gale chair in the same faculty with \$25,000; the large gifts to the Medical Faculty by Sir D. A. Smith and Mr. J. H. R. Molson and other benefactors, amounting to \$269,000; the John Frothingham principal fund of \$40,000, founded by Mrs. J. H. R. Molson and the Rev. Fred'k Frothingham; the purchase of land valued at \$42,500 by Mr. J. H. R. Molson; the further endowment by the same gentleman of the chair of English Literature with \$20,000; the Philip Carpenter Fellowship with endowment of \$7,000; the Peter Redpath Library, valued at \$150,000, with \$5,000 annually for its maintenance. In the aggregate these gifts of citizens of Montreal within the past four years amounts to more than a million and a half of dollars. Many minor gifts also testify to the goodwill and liberality of the citizens generally. These great benefactions are not only a vast addition to our resources, but an earnest for the future, since it is not to be supposed that so great and useful endowments, attracting so many students and so highly appreciated by the public, shall ever be left to fall into decay, or fail to be supplemented by additional benefactions. It is to be observed also that the greater part of them have been given by men not graduates of the university, and it is to be expected that as our graduates increase in number, influence and wealth, some return will flow in from them for the benefits they have received. They need not think that their gifts will be declined. There are still great needs to be supplied. These may be ranged under the three

heads of the professional faculties, the academical faculty and the university as a whole.

ADDITIONAL AID REQUIRED.

In the former the Faculties of Law, Medicine and Veterinary Science are still deficient in regard to class rooms and laboratories. The Faculty of Applied Science is still unprovided with necessary outfit in reference to the departments of mining engineering and practical chemistry. It is, however, the Academical Faculty or Faculty of Arts that is in most need. It requires large additions to its staff, and more especially division of the heavier chairs. In this connection it should be observed that it is burdened with the general education of students of professional schools as well as with the training of its own students. It is also in great need of improved class rooms and extended accommodation of every kind for its work. The University as such needs a new Gymnasium, Lodging Houses and a Dining Hall, and an adequate Convocation Hall, with proper rooms for university Boards and general college societies and for university officers. It is not too much to say that in securing these ends the great benefactions already given might profitably be doubled. That these things will all be done in process of time I have no doubt, but it should be remembered that class after class of students is going forth into the world without having enjoyed these benefits. I have a large packet of papers labelled "Unfinished and Abortive Schemes" containing the details of these and other plans. I value these papers very highly, as representing creative thought not yet materialised, but I am quite willing to part with any of them to any benefactor who will carry it into actual effect. While personally it is necessarily a matter for regret that I cannot continue in office till the great improvements to which I have referred are realized, it is at least something, after our long and arduous journey through the wilderness of penury and privation, to see even afar off the goodly land into which my successors are entering, and in the enjoyment of which, I trust, they will forgive the shortcomings of those who had to lead the way, and will not forget the dangers and difficulties of the thorny paths through which we have passed.

ORDER AND UNITY.

One feature, however, of our history for which we cannot be too deeply thankful, is the comparative peace and mutual forbearance which have prevailed in all the past years, and the united and earnest action of all the members of the university in every crisis of our long conflict. Nor have we had any reason for anxiety respecting our students. I confess that if there is anything I have feared and have constantly prayed to be exempt from, it has been the possible occurrence of those rebellions and disorders that have troubled so many colleges on this continent. For this exemption I do not take credit to myself. McGill has had an able and devoted governing Board, a body of competent, diligent and popular professors, derived from a large number of different universities on both sides of the Atlantic, and the Canadian student is on the whole a hard worker, good-natured and patriotic, and not too self-asserting. Nor is our system of college government a cast iron constitution which has been set up by an act of legislation. It has grown up under experience and careful adaptation of methods to needs. In McGill each faculty exercises jurisdiction over its own students, the executive officer being the dean of the faculty. The principal intervenes only when desired to give advice or assistance, or when any case arises affecting students of different faculties; and the power of expelling students resides only in the corporation—a body including the governors, the principal and all the deans of the faculties, with elective representatives of the faculties, of the affiliated colleges and of the graduates. Under this system it is understood that each professor is supreme in his own classroom, but his power of discipline is limited to a temporary suspension from lectures, which must be at once reported to the dean. If necessary, the dean may lay the case before the faculty, which, after hearing, may reprimand, report to parents or guardians, impose fines, suspend from classes, or in extreme cases, report to the corporation for expulsion. No case involving this last penalty has, however, yet occurred, and the effort has been to settle every case of discipline by personal influence and with as

little reference to laws and penalties as possible. With this machinery a simple code of rules is sufficient. It provides for orderly and moral conduct in the buildings and in going and coming, and for the safety of the property of the university, and prohibits all action likely to obstruct the work of the college or to interfere with the progress of other students. In the case of college societies it is required merely that their objects shall be consistent with those of the university, and that their laws and officers shall be communicated to and approved by the faculty in whose rooms they meet. Above and beyond all such machinery and rules lies the obligation on principal, deans and professors to watch the beginnings of evil and to counteract by wise and kindly advice anything that may lead to disorder. On the other hand, the effort of the student should be to exercise all that liberty which tends to make him self-reliant and fit for the battle of life, while he endeavors to avoid the formation of any habits inimical to the interests of his fellow students or injurious to himself. In all this I proceed on the assumption that it is the business of a university to train young men and women for noble lives, not so much to teach them to do something as to train them to be something. Perhaps the tendency most to be feared in our age and country is that towards practical and profitable work without the previous education that should develop fully the mental powers and form the character. This tendency it is the duty of the university by all means to counteract, as one that will lower our national character and thereby prevent our highest success. This principle being kept in view, the cultivation of interest and enthusiasm for college work at once secures progress and peace. In short, the control of young men or young women is to be exercised rather in the way of inducing them to like their work and duty than by any influence of the nature of coercion or restraint. In this way only can they be trained to control themselves and, when their turn comes, to control others. They who would rule must themselves learn willing obedience. Of course, there is place here for all the elevating influence of spiritual religion, and there is scope for that most important power which arises from the exam-

ple of punctuality, self-denial and honest work on the part of professors. I fervently pray that the good traditions of McGill in all these respects may ever be maintained.

THE RELIGIOUS LIFE

of McGill university has been of a quiet and unofficial character. We have not sought to make any parade of religious services as such, but by personal influence and example to foster piety among the students and to facilitate as far as possible their taking advantage of the religious privileges afforded in the city. In this connection I attach paramount importance to the spontaneous action of the students themselves, more especially as manifested in their Christian Associations. These have, I think, been sources of unmingled good and have largely contributed to maintain and extend religious life. I could wish that they should have from the university or its friends means to provide proper accommodation for meetings and social reunions, and that the utmost aid and countenance should be extended to them by the college authorities.

THE PRINCIPALSHIP OF THE FUTURE.

My function in this university has been that of a pioneer; and viewed in this light it has not been compatible with the dignity and the authority which are usually attached to the heads of more firmly established colleges in older countries. It is time, however, that this should be changed, and my successor should enter upon office under more favorable conditions than those of the feeble and struggling university of the past. In 1855 the University had twenty Professors and Lecturers and about eighty students. It now has seventy-four Professors and Lecturers and a thousand students. This fact alone is sufficient to indicate the increase in the work and responsibility of the officer who has to superintend and harmonize all these workers in many distinct departments. I would therefore more especially ask in his behalf that he should have means to support the dignity of the university in its social aspect, to entertain distinguished stran-

gers as well as the members of the university, and to take a place in society becoming the magnitude of the interests committed to his care. Under our constitution he cannot be an autocrat, since he can only enforce regulations enacted by the governors and corporation, but he should at least have full information as to all contemplated movements, and should be consulted respecting them, and should be recognized as the only official medium of communication between the different portions of the university. The operations of McGill are now so extensive and complicated that the dangers of disintegration and isolation have become greater than any others, and the Principal must always be the central bond of union of the university, because he alone can know it in all its parts and weigh the claims, needs, dangers, difficulties and opportunities of each of its constituent faculties and departments. Much of this must without doubt depend upon his personal qualities, and I trust those who are to succeed me in this office may be men not only of learning, ability and administrative capacity, but of unselfish disinterestedness, of large sympathies and wide views, of kindly, generous and forgiving disposition, and of that earnest piety which can alone make them safe advisers of young men and women entering on the warfare of life.

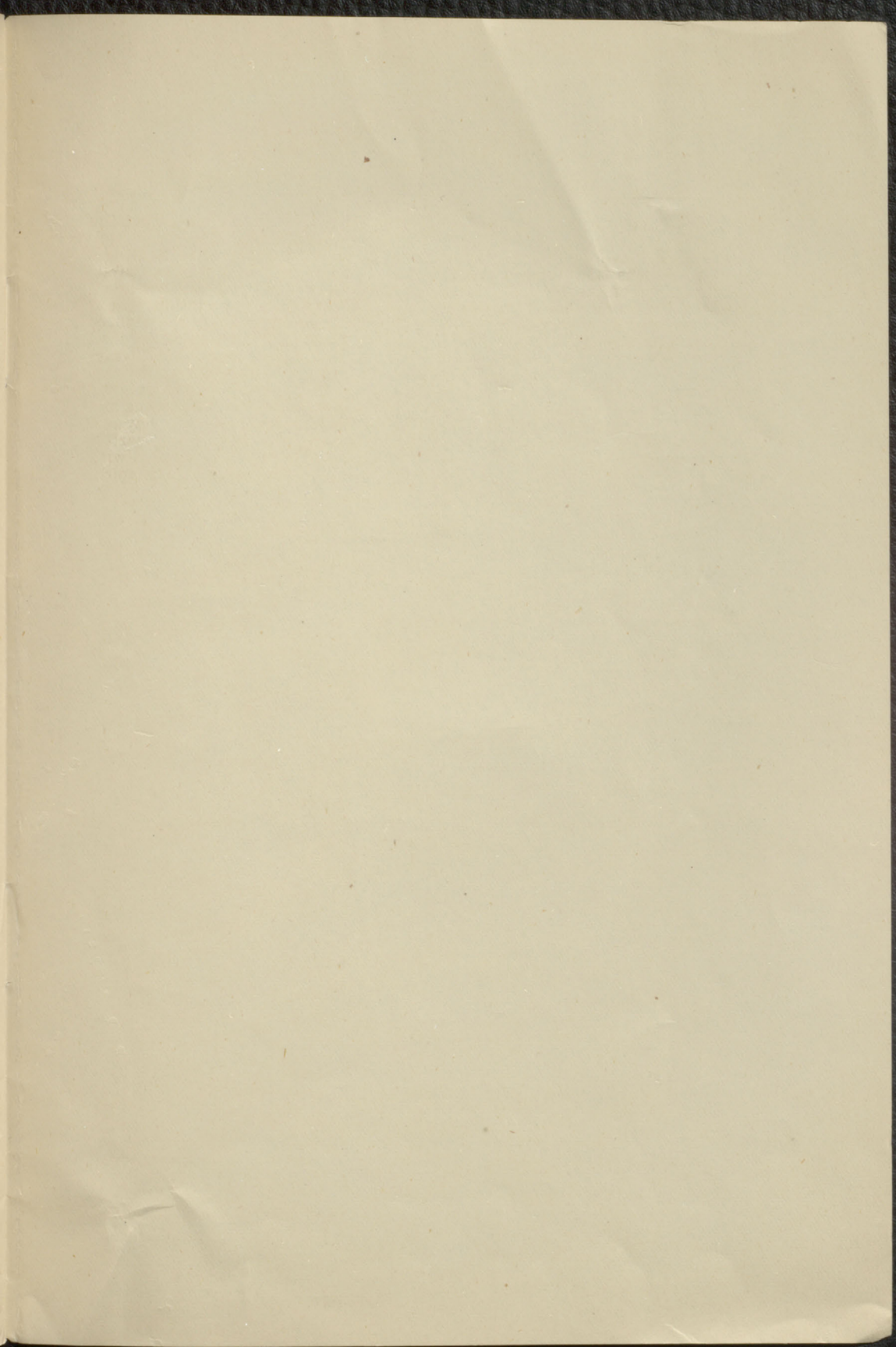
SOME PERSONAL REMARKS.

In conclusion, let me say a word as to myself and my retirement from office. My connection with this university for the past thirty-eight years has been fraught with that happiness which results from the consciousness of effort in a worthy cause, from the aid and support of my dear wife, who has cheered and sustained me in every difficulty, and from association with such noble and self-sacrificing men as those who have built up McGill College. But it has been filled with anxieties and cares and with continuous and almost unremitting labor. I have been obliged to leave undone or imperfectly accomplished many cherished schemes by which I had hoped to benefit my fellow-men, and leave footprints of good on the sands of time. Age is advan-

cing upon me, and I feel that if I am fittingly to bring to a close the business of my life I must have a breathing space to gird up my loins and refresh myself for what remains of the battle. I have, besides, as you know, been somewhat abruptly deprived by a serious illness of my accustomed strength, and in this I recognize the warning of my Heavenly Father that my time of active service is nearly over. In retiring from my official duty I can leave all my work and all the interests of this university with the confidence that, under God's blessing, they will continue to be successful and progressive. The true test of educational

work well done is that it shall have life and power to continue and extend itself after those who established it are removed. I believe that this is the character of our work here, and I shall leave it with the confident expectation that it will be quite as successful in my absence as in my presence. Such a result I shall regard as the highest compliment to myself. To this end I ask your earnest consideration of the sketch of our progress which I have endeavored to present, and I pray that the blessing of God may rest on the university and on every part of it, and that it may be strengthened with His power and animated with His spirit.





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WITH KIND REGARDS
OF THE LECTURER.

THIRTY EIGHT YEARS

OF

McGILL.

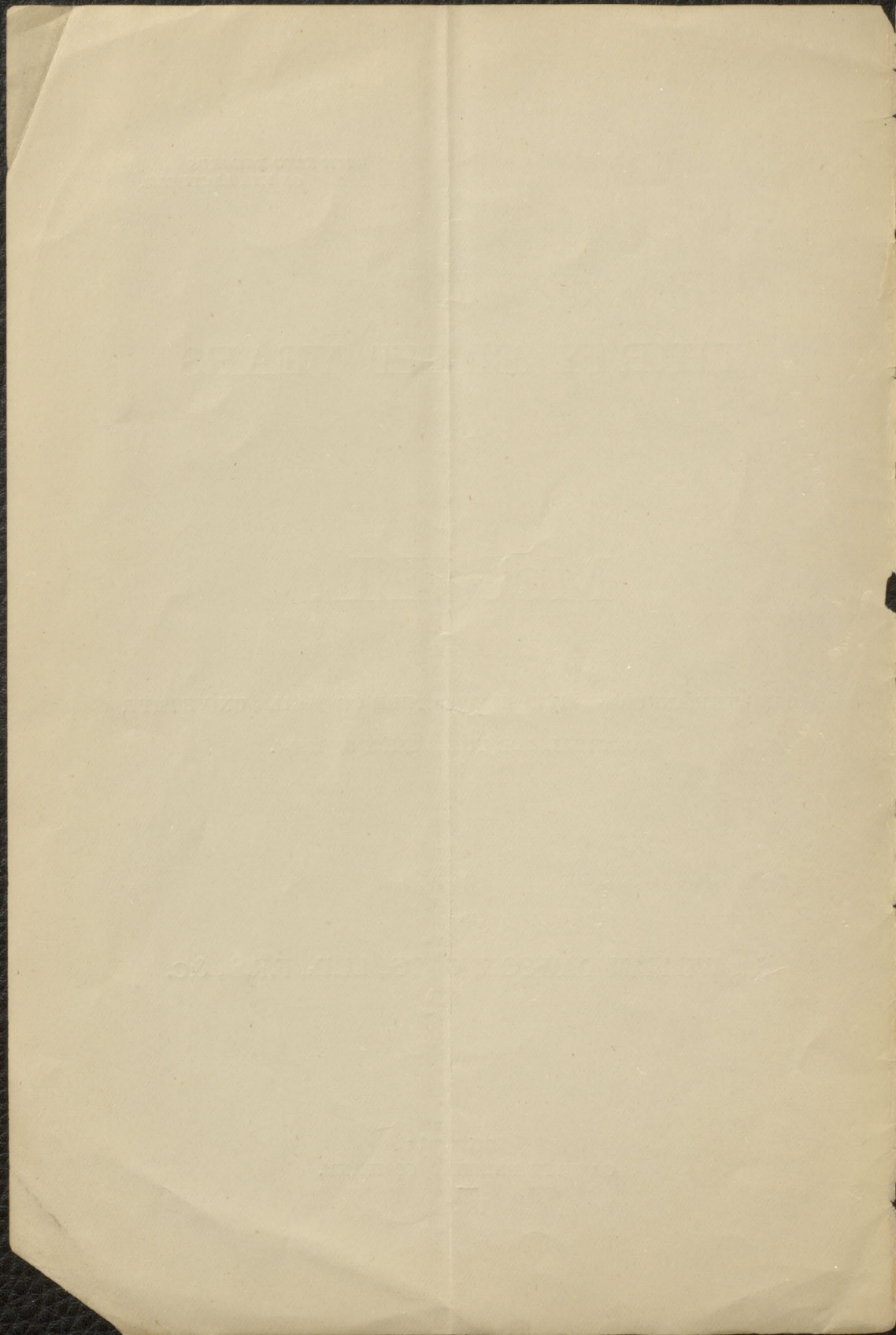
BEING THE ANNUAL UNIVERSITY LECTURE OF MCGILL UNIVERSITY,
MONTREAL, FOR THE SESSION OF 1893-4.

BY

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

Montreal:
GAZETTE PRINTING COMPANY.

1893.



THIRTY EIGHT YEARS OF MCGILL.

BY

SIR WILLIAM DAWSON, C.M.G., LL.D., &C.

(FROM THE GAZETTE, Montreal, 1st Dec., 1893.)

Having been invited by the acting Principal and the Corporation to deliver once more the annual University lecture, this has appeared to be an occasion on which you would bear with me in retracing some of the footsteps of the past, as a suitable close to the official work of nearly a lifetime, and as a farewell address to the friends and colleagues with whom I have labored so long and with so much happiness to myself. We may have perfect faith in the practical wisdom of the apostolic maxim "forgetting the things that are behind, press forward to those that are before." Yet we may have equal faith in recalling the memories of the past, in "remembering the mercies that are of old," as well as the errors and shortcomings of former years, that we may draw lessons from all as to the present and the future. It may, for instance, be interesting, perhaps even useful, to young men, to know how I first became connected with McGill.

My plans for life lay in an entirely different direction. I had prepared myself, as far as was possible at the time, for field work in geology; and my ambition was to secure employment of this kind; or next to this, to have the privilege of teaching my favorite science, with sufficient spare time to prosecute original work. In connection with this ambition, after having attained to some little reputation by papers published under the auspices of the Geological Society of London, I accepted an invitation to deliver a course of lectures on geology and allied

subjects in Dalhousie college, Halifax, in the winter of 1849-50. When in Halifax, I had some conversation with Messrs. Young and Howe, afterwards Sir Wm. Young and Sir Joseph Howe, at that time governors of Dalhousie college and the leaders of the provincial Government, as to a new school-law they were preparing for Nova Scotia, and in which important improvements were introduced. I had at the time no thought of being connected with the administration of the act. In the following spring, however, I was surprised with the offer of the position of superintendent of education, established under the new law. I had many reasons for declining the task, but my friends would take no refusal, and I consoled myself with the consideration that the visitation of the school districts throughout the province, which was one of the duties of the office, would give great facilities for making myself acquainted with the geology of the country. For three years I was engaged in this work, and, besides writing educational reports, and administering the new school law, conducting an educational journal, visiting schools, and holding teachers' institutes, had collected the materials for several papers published in England, as well as for my "Acadian Geology," which, however, did not appear till 1855. In 1852, when on a geological excursion with my friend Sir Charles Lyell, I was introduced by him to Sir Edmund Head, the governor of New Brunswick, who was much occu-

pied at the time with the state of education in that province, and in particular that of its provincial university; and in 1854 he invited me, along with the late Dr. Ryerson, to be a member of a commission which had been appointed to suggest means for the improvement of the provincial university. This work was scarcely finished when Sir Edmund was promoted to be the Governor-general of Canada, and removed to Quebec, where, under the new charter granted to McGill college in 1852, he became Visitor of the university; and as he was known to be a man of pronounced literary and scientific tastes and an active worker in the reforms then recently carried out in the English universities, the governors of McGill naturally counted on his aid in the arduous struggle on which they had entered. Accordingly, soon after Sir Edmund's arrival, a deputation of the Board waited on him, and one of the subjects on which they asked his advice, was the filling of the office of principal, which was yet vacant. Sir Edmund mentioned my name as that of a suitable person. At first, as one of them afterwards admitted to me, they were somewhat disconcerted. They were very desirous for the best reasons to follow Sir Edmund's counsel, but with his knowledge of the available men in England, of some of whom they had already heard, they were somewhat surprised that he should name a comparatively unknown colonist. In the meantime, ignorant of all this, I was prosecuting a candidature for the chair of natural history in my alma mater, the University of Edinburgh, vacant by the death of Prof. Edward Forbes, and in which I was strongly supported by the leading geologists of the time. By a strange coincidence, just as I was about to leave Halifax for England in connection with this candidature, intelligence arrived that the Edinburgh chair had been filled at an earlier date than my friends had anticipated, and at the same time a letter reached me from Judge Day offering me the Principalship of McGill. I had determined in any case to visit England, to attend the meeting of the British Association in Glasgow and to thank the many friends who had promoted my Edinburgh candidature; but postponed my departure for a week that I might consult my family, and decided to accept the Montreal offer, provided

that a professorship of geology or natural history were coupled with the office. Thus it happened that I became connected with McGill in its infancy under its new management, and the story forms a striking illustration of the way in which Providence shapes our ends, rough hew them as we may. Its lesson is that young men should qualify themselves well for some speciality, but should also be sufficiently general in their training to adapt themselves to new and unforeseen pursuits.

OUR VISITOR.

As I have referred to Sir Edmund Head, I may say that he continued to be an active friend of the university during his term of office and after he returned to England. This is true also of his successors, all of whom have shown a kindly interest in our work, so that our visitor has all along been a power for good. The present Governor-General has already by his presence and words of cheer on a recent public occasion, given an earnest that in this respect he will, like his predecessors, prove a warm friend and kindly patron of the higher education in Canada.

FIRST IMPRESSIONS.

When I accepted the principalship of McGill, I had not been in Montreal, and knew the college and men connected with it only by reputation. I first saw it in October, 1855. Materially, it was represented by two blocks of unfinished and partly ruinous buildings, standing amid a wilderness of excavators' and masons' rubbish, overgrown with weeds and bushes. The grounds were unfenced and pastured at will by herds of cattle, which not only cropped the grass, but browsed on the shrubs, leaving unhurt only one great elm, which still stands as the "founder's tree," and a few old oaks and butternuts, most of which have had to give place to our new buildings. The only access from the town was by a circuitous and ungraded cart-track, almost impassable at night. The buildings had been abandoned by the new Board, and the classes of the Faculty of Arts were held in the upper storey of a brick building in the town, the lower part of which was occupied by the High school. I had been promised a residence, and this I found was to be a portion of one of the detached buildings aforesaid,

the present east wing. It had been very imperfectly finished, was destitute of nearly every requisite of civilized life, and in front of it was a bank of rubbish and loose stones, with a swamp below, while the interior was in an indescribable state of dust and disrepair. Still we felt that the Governors had done the best they could in the circumstances, and we took possession as early as possible. As it was, however, we received many of the citizens who were so kind as to call on us, in the midst of all the confusion of plastering, papering, painting and cleaning. The residence was only a type of our difficulties and discouragements, and a not very favorable introduction to the work I had undertaken in Montreal.

On the other hand, I found in the Board of Governors a body of able and earnest men, aware of the difficulties they had to encounter, fully impressed with the importance of the ends to be attained, and having sufficient culture and knowledge of the world to appreciate the best means for attaining these ends. They were greatly hampered by lack of means, but had that courage which enables risks to be run to secure important objects. I may mention here a few of these men. Judge Day was a man of acute legal mind, well educated and well read, a clear and persuasive speaker and wholly devoted to the interest of education, and especially to the introduction into the college course of studies in science and modern literature. Christopher Dunkin was a graduate of the University of London, educated first in Glasgow and afterwards in University college, and who had held a tutorial position in Harvard before he came to Canada. He had made college work and management a special study, and was thoroughly equipped to have been himself a college president or principal, had he not had before him the greater attractions of legal and political success. Hew Ramsay was an admirable example of an educated Scotsman of literary tastes and business capacity. David Davidson was also a product of Scottish college training and a warm and zealous friend of education, with great sagacity and sound judgment. James Ferrier should have been mentioned first. He was a member of the old Board of Royal Institution and senior mem-

ber of the new, but voluntarily resigned the presidency in favor of Judge Day, in the interest, as he believed, of the university. He was longer with us than any of the others, and no man could be a more devoted worker in the cause of education. Such men as these and their colleagues ensured public confidence and a wise and enlightened management.

The teaching staff of the university then consisted of three faculties, those of law, medicine and arts. The Faculty of Law, then recently organized, had two professors and two lecturers. The Faculty of Medicine, the oldest and most prosperous of the three, had ten professors and a demonstrator. The Faculty of Arts had four professors and a lecturer, and all of these except one gave only a part of their time to college work. They were, however, able and efficient men. Dr. Leach, who represented philosophy and allied subjects, was a man of rare gifts and of warm attachment to the college; Dr. Davies, a man of great learning, was shortly afterwards appointed to Regent's Park college, London; Dr. DeSola was an expert in Oriental languages and literature, and Mr. Markgraf represented modern languages, while Dr. Howe gave what time he could spare from the High school to his favorite mathematical and physical subjects. My own lectures in natural science came in aid of this slender staff, raising the professoriate in Arts to six. It was well for me that the Dean of the medical faculty, Dr. Holmes, was a man of scientific tastes and an accomplished mineralogist and botanist, as this led at once to my lectures being taken advantage of by the medical students as well as those in Arts. Thus while the whole students in Arts were only at that time 15, I began a course of lectures in 1855 with a large class, attended by some of the medical professors and by gentlemen from the city, as well as by the students. At the same time a good deal was done to perfect and render more definite the course in Arts, which even in the session of 1855-6 was becoming so moulded as to bear some resemblance to its present arrangements. The university at this time had no library and no museum, and its philosophical apparatus was limited to a few instruments presented to it some time

before by the late Mr. Skakel. I had to use my own private collections and specimens borrowed from the Natural History society to illustrate my lectures. The High school, under the rectorship of Dr. Howe, was an affiliated school, and we could look to it as likely in a few years to furnish us with a larger number of students—a hope not disappointed.

VISIT TO TORONTO.

But our great difficulty was lack of the sinews of war; and the seat of government being at the time in Toronto, I was asked to spend my first Christmas vacation in that city with the view of securing some legislative aid. There was as yet no direct railway communication between Montreal and Toronto, and of course no Victoria bridge. I crossed the river in a canoe amidst floating ice, and had to travel by way of Albany, Niagara and Hamilton. The weather was stormy and the roads blocked with snow, so that the journey to Toronto occupied five days, giving me a shorter time there than I had anticipated. I received, however, a warm welcome from Sir Edmund Head, saw most of the members of the Government, and obtained some information as to the Hon. Mr. Cartier's contemplated Superior Education act, passed in the following year, and which secured for the first time the status of the preparatory schools, while giving aid to the universities. I was also encouraged by Sir Edmund and Cartier to confer with the Superintendent of Education and the governors of McGill on my return to Montreal with reference to the establishment of a Normal School in connection with the university, which was successfully carried out in the following year. I may here remark, in passing, that the McGill Normal school has, in my judgment, been one of the most successful institutions of its kind. It has proved indispensable to the growth of our provincial education of every grade, has indirectly aided the university, has been deservedly popular throughout the country, and has had the good will and support of the successive superintendents of education, and of the provincial governments of both political parties.

AN APPEAL TO MONTREAL.

The direct aid, however, which could be obtained from the Government was

small, and the next movement of the board of governors was our first appeal to the citizens of Montreal, resulting in the endowment of the Molson chair of English language and literature with \$20,000 (subsequently augmented to \$40,000 by Mr. J. H. R. Molson), and \$35,000 from other benefactors. This was a great help at the time and the beginning of a stream of liberality which has floated our university barque up to the present date. In connection with this should be placed the gift of the Henry Chapman gold medal, the first of our gold medals. The liberality of the citizens in 1857 encouraged the board of governors to strengthen and extend the teaching staff in arts by the appointment of Professors Johnson and Cornish, and shortly afterward of Professor Darey, who still, after all these years of arduous and faithful service, remain to the university, and are now the senior members of its professoriate.

A LOSS BY FIRE.

To counterbalance these successes and advantages, in the early part of 1856 the building occupied by the High school and by the Faculty of Arts was destroyed by fire, along with some of the few books which had been collected and some of our apparatus, and a large part of my private collections which I had been using for my lectures. The specimens, apparatus and books were not insured, and the insurance on the building was quite insufficient to replace it, so that this was a great pecuniary loss, but one which our governors bore with admirable fortitude and equanimity and took immediate steps to repair. For the remainder of the session the college classes were transferred in part to the original college buildings above Sherbrooke street, and in part to the medical faculty's building on Cote street. The classes were not interrupted, and plans were at once prepared for the erection of a new and better building.

ADDITIONS AND IMPROVEMENTS.

The year 1857 was signalized not only by the opening of the McGill Normal school and by the additions to our staff already noted, but by the institution of a chair of civil engineering, the first small beginning of our Faculty of Applied Science. At the same time, in the hope that the Faculty of Arts might be able before

many years to occupy permanently the college buildings, the improvement of the grounds was begun, by planting, draining and making walks. At first I did this at my own cost, as a labor of love, with the aid of the late Mr. Sheppard in laying out the walks, merely asking permission of the Board. Dr. Howe, who resided at that time in the centre building, gave some aid, and the new secretary, Mr. Baynes, took a deep interest in the matter. The graduates undertook to plant trees along one of our walks, and eventually the Board gave small sums toward this object, and at a later date appointed a caretaker, for whom a lodge was erected by a subscription among our friends.

THE OLD BUILDING OCCUPIED, AND COMPLETED BY MR. W. MOLSON.

We had proposed that so soon as the students in arts should exceed fifty we would venture to occupy the old building. This happened in 1860, and we accordingly proceeded to move up and take possession of the centre block, the east wing being used for residences. The movement was a fortunate one, for it suggested to our friend, Mr. William Molson, the erection of a third block, corresponding to the eastern one, to be named the William Molson Hall, and which was to contain the convocation room and library. This was the original limit of Mr. Molson's intention; but, driving up one day in company with Mrs. Molson to note the progress of the work, she suggested that it would be a pity to leave it unfinished, and that it would be well at once to connect the three blocks of buildings in one pile, according to the original plan. The hint was taken, plans were prepared, and one of the connecting buildings became our first museum, while the other provided a chemical and natural science class room and laboratory. Both buildings, as well as the library, were seeds of greater things. The Library was provided with shelves for 20,000 volumes, while we possessed less than 2,000, and at first it was distressing to see its emptiness, but the time has long passed when, after crowding it with additional book-cases and extending it into an adjoining room, we began to desire larger space, now happily supplied by the magnificent Peter Redpath Library. The Museum, equally empty, received in the first instance a portion of my own collections,

and others obtained in exchange and by purchase from my own resources. In this way it was possible almost from the first to fill it respectably, for a museum without specimens is even more forlorn than a library without books. Dr. Carpenter's magnificent collection of shells was added in 1869. The whole furnished the nucleus for the Peter Redpath Museum, which stands at the head of Canadian educational museums. The other connecting building became the home of our chemistry and assaying, in which Dr. Harrington, with the aid for a time of the late Dr. Sterry Hunt, built up our schools of Practical Chemistry and of Mining and Assaying, which have trained so many young men for useful chemical and manufacturing employment, for mining enterprises and for the Geological Survey, and have sustained indirectly the honour course in geology in the Faculty of Arts. Thus our resuming possession of the old buildings was successful and fruitful of new enterprise, and Mr. Molson's timely aid laid the foundation of greater successes in the following years.

GRADUATES' SOCIETY.

About this time a number of our graduates resident in Montreal formed themselves into the nucleus of a university society, which has continued to grow and expand up to the present time, and has still room for further extension, more especially by the formation of branch or local associations, of which the Ottawa Valley Graduates' society has set the first and a brilliant example. One of the early efforts of this society, at the time under the presidency of Brown Chamberlin, M.A., D.C.L., was the institution of the Founders' Festival, a social gathering on Mr. McGill's birthday. It was continued with spirit for some years, but failed to attract graduates from a distance and was ultimately dropped in favor of other movements. The time may shortly come for its revival.

THE AFFILIATED COLLEGES.

In 1860 we entered on the new departure of affiliating colleges in arts, by the affiliation of St. Francis college, Richmond, and this was followed in a year or two by Morrin college, Quebec. In this matter the president of the Board of Governors, Judge Day, and the Hon. Judge Dunkin were very earnest, believing that

these affiliated colleges might form important local centres of the higher education, and might give strength to the university. They have not, it is true, grown in magnitude as we had hoped; but so far they have maintained a useful existence, and have unquestionably done educational good; and, more especially, have enabled some deserving and able men to obtain an academical education which would otherwise have been denied them. In the circumstances of the Protestant population of the province of Quebec, this is an end worthy of some sacrifice for its attainment. The only additional college of this class is that of Stanstead, added at a comparatively recent date. In 1865 the Congregational College of British America, an institution for theological education only, was removed to Montreal and became affiliated to the university, and has been followed by three other Theological Colleges. The value of these to the university no one can doubt. They not only add to the number of our students in arts, but to their character and standing, and they enable the university to offer a high academical training to the candidates for the Christian ministry in four leading denominations, thus rendering it helpful to the cause of Protestant Christianity, and enabling us to boast that we have aided in providing for the scattered Protestant congregations of this province a larger number of well-educated pastors than they could possibly have obtained in any other way, while the ministers sent out into the country have more than repaid us by sending students to the classes in all our faculties. Our system in this respect, which has been imitated elsewhere, presents, for colonial communities at least, the best solution of the question how to combine Christian usefulness with freedom from denominational control.

THE EDUCATION OF WOMEN.

The year 1870 brings me to the beginning of a most important movement not yet completed, but which has already proved itself a marked success—that for the higher education of women, respecting which a few chronological statements may be in place here. At a meeting of citizens convened by the Board of Governors in the early part of the year 1870 for the purpose of soliciting additional

endowments, a resolution was moved by the late Rev. Dr. Wilkes, and unanimously adopted, to the effect that the university should at as early a date as possible extend its benefits to women. It is true that no special endowments for the purpose were at this time offered, nor were there any applicants for admission, but in spending the summer of 1870 in England, my wife and I made it our business to collect information respecting the movements in this matter then in progress in the mother country. The conclusion at which we arrived was that in our circumstances the methods of the Ladies' Educational Association of Edinburgh were the most suitable; and seconded by Mrs. G. W. Simpson, whose experience and influence as an educator were of the highest value, we endeavored to promote such an organization in Montreal. At a meeting of ladies, convened by our friend Mrs. Molson, of Belmont hall, in her drawing-room, the preliminaries were agreed on, and the classes were opened in October, 1871, on which occasion I delivered the introductory lecture. This association conducted an admirable and most useful work for fourteen years, until its place was taken by the Donalda Special Course for Women.

About the same time, with the organization of the Ladies' Educational Association, two other movements occurred bearing on the same question. One was the foundation by former pupils of Miss Hannah Willard Lyman of an endowment in commemoration of that gifted lady, and the income of which was to be expended to found a scholarship or prize "in a College for Women" affiliated to the university, or in classes for women approved by it. This endowment was used in the first instance for prizes in the classes of the association, and its terms furnished an indication as to the prevailing sentiment with respect to the education of women, and were in accordance with the fact that Miss Lyman had been the lady principal of one of the greatest and most successful colleges for women in the United States. The other, and practically more important, was the establishment of the Girls' High School of Montreal. This was suggested by the Rev. Dr. Jenkins, the chairman of the Protestant commissioners of schools, in his report

for 1871, and after some delays, owing to the claims of other objects, I moved, as a member of the Board, in February, 1874, the appointment of a committee with power to establish such a school. The committee acted promptly, prepared a plan, recommended teachers, and engaged a temporary building, and the school came into operation in the autumn of 1874. In moving in this matter I fully expected that the establishment of a school giving the training necessary for our matriculation examination would lead in a few years to a demand for college education on behalf of the passed pupils of the school, but trusted that means would be found to meet this when it should arise, though I deprecated any premature action on the part of the university itself in this direction. The attention of the corporation was directed to the subject by the Rev. Dr. Clark Murray in 1882, and the matter was referred to a committee to collect information; but the demand did not actually develop itself till 1884, when several pupils of the Girls' High school had distinguished themselves in the examinations for associate in arts, and formal application was made by eight qualified candidates for admission to university privileges. At first the only resource seemed to be to appeal to the public for aid in this new departure; but at the moment when the difficulty pressed, Sir Donald A. Smith voluntarily came forward with an offer of \$50,000 to provide separate classes in Arts for women for the first and second years, leaving the question of how their education was to be continued afterwards in abeyance. This generous offer was thankfully accepted by the university, and thus our classes for women were commenced in 1884. Subsequently the same liberal benefactor increased his gift to \$120,000 to continue the work over the third and fourth years, and besides contributed \$4,000 annually in aid of sessional lecturers, while the Corporation, without hesitation, admitted the women to all the privileges of examinations and degrees. Under these arrangements the Donald special course for women has been going on successfully for eight years; but it still remains to carry out the development of the liberal plans of the founder into a separate college for women affiliated to the Uni-

versity. In this form, and with a suitable building in proximity to the other buildings of the university, and aided by our library, museum and laboratories, it cannot fail to attract a much larger number of students and to become more than ever a leading department of the work of the university.

Reference has been made to the Examinations for Associate in Arts. These were established in 1865, and at first were limited to pupils of the High School. With the aid of the University of Bishops College and the Protestant Committee of the Council of Public Instruction, they have now been extended to all the Protestant Academies and High Schools, and have become an important factor in the higher education.

A SEMI-JUBILEE.

In 1880, on occasion of the twenty-fifth year of my tenure of office as principal, I endeavored to assemble its graduates at a banquet in the William Molson hall. Much labor was necessary to secure accurate information as to their addresses, and this was made the means of preparing the first directory of the graduates. Eight hundred and fifty cards of invitation were issued, and answers expressing sympathy and affection for Alma Mater were received from nearly all. The result was that 360 gentlemen, nearly all graduates of the university, were able to attend and to take their seats at the tables occupying the hall. At this entertainment, after a few words of welcome to the guests and the usual toasts, addresses were delivered by representatives of the different bodies and interests connected with the University, and by representatives of sister institutions. The topics were naturally those connected with the past history and present state of the University; and the part which its governors, principal and fellows, its benefactors and its graduates had taken in elevating it to the condition to which it had attained, and in advancing the interests of education. As to the future, the evening was signalized by the announcement of the intention of Peter Redpath, Esq., one of the governors, to erect a costly and capacious museum building on the college grounds, and that of the Principal to place therein, as a gift to the university, his own large geological collections, and the further announcement that the

graduates proposed to commemorate the the twenty-fifth year of the Principal's tenure of office by the erection of a university building to bear his name. The entertainment being a private one, reporters were not admitted, which, perhaps, was an error, as it would have been interesting now to have preserved a record of the addresses, more especially of those delivered by men who have since passed away. It had been hoped that entertainments of this kind might have been continued, but the labour and cost of meetings of scientific associations prevented this for the time.

THE AMERICAN AND BRITISH ASSOCIATIONS.

The university should, I think, take a large share of credit for the success of the meetings of the American Association for the Advancement of Science in Montreal in 1857 and 1882, and the still more important meeting of the British association in 1884. University men worked earnestly in aid of these meetings, the use of the college buildings contributed materially to their accommodation, and the results tended in many ways to the promotion of science in Canada. Such meetings, by bringing among us eminent men, widely known abroad, and by directing special attention to new scientific topics, contribute greatly to our advance in national improvement and in placing us abreast of the scientific movement in other countries. Each of these meetings has had its influence in these respects and has marked a distinct step in our upward progress.

THE UNIVERSITY'S FINANCES.

I have referred in these reminiscences to the financial affairs of the University. In this respect we have always been in straitened circumstances, but relief has often come just at our time of greatest need, though there have always been important fields of usefulness open to us, but which we had not room to enter on. Our last public appeal is thus referred to in a publication of the time: "At the close of the financial year 1880-'81, our income had ebbed in a most threatening manner. Being derived mainly from mortgages on real estate, it had run some risks and experienced a few losses in the commercial crisis of the preceding years. But when the tide

of commercial prosperity turned, a greater calamity befell us in the fall of the rate of interest, which reduced our revenue by nearly 20 per cent., and this at a time when no decrease of expenditure could be made without actual diminution of efficiency. In these circumstances the Board of Governors found it necessary to insist on most unwelcome retrenchments, injurious to our educational work, and which some of us would have been glad to avert even by much personal sacrifice and privation. At length, on the 13th of October, 1881, we convened a meeting, not happily of our creditors, but of our constituents, the Protestant citizens of Montreal, and our position and wants were laid before them most ably, and, I may say, even pathetically, by the chancellor, Judge Day and the non-ordinary treasurer, Mr. Ramsay. The meeting was a large and influential one, and I shall never cease to bear in grateful remembrance the response which it made. There was no hint of blame for our extravagance, no grudging of the claims of the higher education which we represented, but a hearty and unanimous resolve to sustain the university and to give it more than the amount which it asked. The result of the meeting was the contribution of \$28,500 to the endowment fund, besides \$26,335 to special funds, including the endowment of Mr. W. C. McDonald's scholarships, and of \$18,445 in annual subscriptions, most of them for five years. But this was not all, for it was followed by two of those large and generous bequests of which this city may well be proud. Major Hiram Mills, an American gentleman, resident for twenty years in Montreal, and familiar with the struggles of the university, left us by will the handsome sum of \$43,000 to endow a chair in his name, as well as a scholarship and a gold medal. On this endowment the Governors have placed the chair of classical literature. More recently our late esteemed friend and fellow-citizen, Mr. David Greenshields, has added to the many kind actions of a noble and generous life the gift of \$40,000 for the endowment of a chair to be called by his name (the David J. Greenshields chair of chemistry).

THE LATEST GIFTS.

It is perhaps unnecessary that I should continue this subject further. The great

steps in advance of the last few years are known to nearly all who near me. In so far as money is concerned these gifts include the following: The Thomas Workman endowment for mechanical engineering of \$117,000, supplemented by \$20,000 from Mr. W. C. McDonald; the W. C. McDonald Engineering Building, valued with its equipment at \$350,000, and an endowment of \$45,000 for its maintenance, and also the endowment of the chair of electrical engineering with the sum of \$40,000; the erection and equipment by the same gentleman of the Physics building, valued at \$300,000, and two chairs of physics with endowments amounting to \$90,000; the endowment of the Faculty of Law by the same benefactor with \$150,000, and the endowment of the Gale chair in the same faculty with \$25,000; the large gifts to the Medical Faculty by Sir D. A. Smith and Mr. J. H. R. Molson and other benefactors, amounting to \$269,000; the John Frothingham principal fund of \$40,000, founded by Mrs. J. H. R. Molson and the Rev. Fred'k Frothingham; the purchase of land valued at \$42,500 by Mr. J. H. R. Molson; the further endowment by the same gentleman of the chair of English Literature with \$20,000; the Philip Carpenter Fellowship with endowment of \$7,000; the Peter Redpath Library, valued at \$150,000, with \$5,000 annually for its maintenance. In the aggregate these gifts of citizens of Montreal within the past four years amounts to more than a million and a half of dollars. Many minor gifts also testify to the goodwill and liberality of the citizens generally. These great benefactions are not only a vast addition to our resources, but an earnest for the future, since it is not to be supposed that so great and useful endowments, attracting so many students and so highly appreciated by the public, shall ever be left to fall into decay, or fail to be supplemented by additional benefactions. It is to be observed also that the greater part of them have been given by men not graduates of the university, and it is to be expected that as our graduates increase in number, influence and wealth, some return will flow in from them for the benefits they have received. They need not think that their gifts will be declined. There are still great needs to be supplied. These may be ranged under the three

heads of the professional faculties, the academical faculty and the university as a whole.

ADDITIONAL AID REQUIRED.

In the former the Faculties of Law, Medicine and Veterinary Science are still deficient in regard to class rooms and laboratories. The Faculty of Applied Science is still unprovided with necessary outfit in reference to the departments of mining engineering and practical chemistry. It is, however, the Academical Faculty or Faculty of Arts that is in most need. It requires large additions to its staff, and more especially division of the heavier chairs. In this connection it should be observed that it is burdened with the general education of students of professional schools as well as with the training of its own students. It is also in great need of improved class rooms and extended accommodation of every kind for its work. The University as such needs a new Gymnasium, Lodging Houses and a Dining Hall, and an adequate Convocation Hall, with proper rooms for university Boards and general college societies and for university officers. It is not too much to say that in securing these ends the great benefactions already given might profitably be doubled. That these things will all be done in process of time I have no doubt, but it should be remembered that class after class of students is going forth into the world without having enjoyed these benefits. I have a large packet of papers labelled "Unfinished and Abortive Schemes" containing the details of these and other plans. I value these papers very highly, as representing creative thought not yet materialised, but I am quite willing to part with any of them to any benefactor who will carry it into actual effect. While personally it is necessarily a matter for regret that I cannot continue in office till the great improvements to which I have referred are realized, it is at least something, after our long and arduous journey through the wilderness of penury and privation, to see even afar off the goodly land into which my successors are entering, and in the enjoyment of which, I trust, they will forgive the shortcomings of those who had to lead the way, and will not forget the dangers and difficulties of the thorny paths through which we have passed.

ORDER AND UNITY.

One feature, however, of our history for which we cannot be too deeply thankful, is the comparative peace and mutual forbearance which have prevailed in all the past years, and the united and earnest action of all the members of the university in every crisis of our long conflict. Nor have we had any reason for anxiety respecting our students. I confess that if there is anything I have feared and have constantly prayed to be exempt from, it has been the possible occurrence of those rebellions and disorders that have troubled so many colleges on this continent. For this exemption I do not take credit to myself. McGill has had an able and devoted governing Board, a body of competent, diligent and popular professors, derived from a large number of different universities on both sides of the Atlantic, and the Canadian student is on the whole a hard worker, good-natured and patriotic, and not too self-asserting. Nor is our system of college government a cast iron constitution which has been set up by an act of legislation. It has grown up under experience and careful adaptation of methods to needs. In McGill each faculty exercises jurisdiction over its own students, the executive officer being the dean of the faculty. The principal intervenes only when desired to give advice or assistance, or when any case arises affecting students of different faculties; and the power of expelling students resides only in the corporation—a body including the governors, the principal and all the deans of the faculties, with elective representatives of the faculties, of the affiliated colleges and of the graduates. Under this system it is understood that each professor is supreme in his own classroom, but his power of discipline is limited to a temporary suspension from lectures, which must be at once reported to the dean. If necessary, the dean may lay the case before the faculty, which, after hearing, may reprimand, report to parents or guardians, impose fines, suspend from classes, or in extreme cases, report to the corporation for expulsion. No case involving this last penalty has, however, yet occurred, and the effort has been to settle every case of discipline by personal influence and with as

little reference to laws and penalties as possible. With this machinery a simple code of rules is sufficient. It provides for orderly and moral conduct in the buildings and in going and coming, and for the safety of the property of the university, and prohibits all action likely to obstruct the work of the college or to interfere with the progress of other students. In the case of college societies it is required merely that their objects shall be consistent with those of the university, and that their laws and officers shall be communicated to and approved by the faculty in whose rooms they meet. Above and beyond all such machinery and rules lies the obligation on principal, deans and professors to watch the beginnings of evil and to counteract by wise and kindly advice anything that may lead to disorder. On the other hand, the effort of the student should be to exercise all that liberty which tends to make him self-reliant and fit for the battle of life, while he endeavors to avoid the formation of any habits inimical to the interests of his fellow students or injurious to himself. In all this I proceed on the assumption that it is the business of a university to train young men and women for noble lives, not so much to teach them to do something as to train them to be something. Perhaps the tendency most to be feared in our age and country is that towards practical and profitable work without the previous education that should develop fully the mental powers and form the character. This tendency it is the duty of the university by all means to counteract, as one that will lower our national character and thereby prevent our highest success. This principle being kept in view, the cultivation of interest and enthusiasm for college work at once secures progress and peace. In short, the control of young men or young women is to be exercised rather in the way of inducing them to like their work and duty than by any influence of the nature of coercion or restraint. In this way only can they be trained to control themselves and, when their turn comes, to control others. They who would rule must themselves learn willing obedience. Of course, there is place here for all the elevating influence of spiritual religion, and there is scope for that most important power which arises from the exam-

ple of punctuality, self-denial and honest work on the part of professors. I fervently pray that the good traditions of McGill in all these respects may ever be maintained.

THE RELIGIOUS LIFE

of McGill university has been of a quiet and unofficial character. We have not sought to make any parade of religious services as such, but by personal influence and example to foster piety among the students and to facilitate as far as possible their taking advantage of the religious privileges afforded in the city. In this connection I attach paramount importance to the spontaneous action of the students themselves, more especially as manifested in their Christian Associations. These have, I think, been sources of unmixed good and have largely contributed to maintain and extend religious life. I could wish that they should have from the university or its friends means to provide proper accommodation for meetings and social reunions, and that the utmost aid and countenance should be extended to them by the college authorities.

THE PRINCIPALSHIP OF THE FUTURE.

My function in this university has been that of a pioneer; and viewed in this light it has not been compatible with the dignity and the authority which are usually attached to the heads of more firmly established colleges in older countries. It is time, however, that this should be changed, and my successor should enter upon office under more favorable conditions than those of the feeble and struggling university of the past. In 1855 the University had twenty Professors and Lecturers and about eighty students. It now has seventy-four Professors and Lecturers and a thousand students. This fact alone is sufficient to indicate the increase in the work and responsibility of the officer who has to superintend and harmonize all these workers in many distinct departments. I would therefore more especially ask in his behalf that he should have means to support the dignity of the university in its social aspect, to entertain distinguished stran-

gers as well as the members of the university, and to take a place in society becoming the magnitude of the interests committed to his care. Under our constitution he cannot be an autocrat, since he can only enforce regulations enacted by the governors and corporation, but he should at least have full information as to all contemplated movements, and should be consulted respecting them, and should be recognized as the only official medium of communication between the different portions of the university. The operations of McGill are now so extensive and complicated that the dangers of disintegration and isolation have become greater than any others, and the Principal must always be the central bond of union of the university, because he alone can know it in all its parts and weigh the claims, needs, dangers, difficulties and opportunities of each of its constituent faculties and departments. Much of this must without doubt depend upon his personal qualities, and I trust those who are to succeed me in this office may be men not only of learning, ability and administrative capacity, but of unselfish disinterestedness, of large sympathies and wide views, of kindly, generous and forgiving disposition, and of that earnest piety which can alone make them safe advisers of young men and women entering on the warfare of life.

SOME PERSONAL REMARKS.

In conclusion, let me say a word as to myself and my retirement from office. My connection with this university for the past thirty-eight years has been fraught with that happiness which results from the consciousness of effort in a worthy cause, from the aid and support of my dear wife, who has cheered and sustained me in every difficulty, and from association with such noble and self-sacrificing men as those who have built up McGill College. But it has been filled with anxieties and cares and with continuous and almost unremitting labor. I have been obliged to leave undone or imperfectly accomplished many cherished schemes by which I had hoped to benefit my fellow-men, and leave footprints of good on the sands of time. Age is advan-

cing upon me, and I feel that if I am fittingly to bring to a close the business of my life I must have a breathing space to gird up my loins and refresh myself for what remains of the battle. I have, besides, as you know, been somewhat abruptly deprived by a serious illness of my accustomed strength, and in this I recognize the warning of my Heavenly Father that my time of active service is nearly over. In retiring from my official duty I can leave all my work and all the interests of this university with the confidence that, under God's blessing, they will continue to be successful and progressive. The true test of educational

work well done is that it shall have life and power to continue and extend itself after those who established it are removed. I believe that this is the character of our work here, and I shall leave it with the confident expectation that it will be quite as successful in my absence as in my presence. Such a result I shall regard as the highest compliment to myself. To this end I ask your earnest consideration of the sketch of our progress which I have endeavored to present, and I pray that the blessing of God may rest on the university and on every part of it, and that it may be strengthened with His power and animated with His spirit.



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P. 4
WITH KIND REGARDS
OF THE LECTURER.

THIRTY EIGHT YEARS

OF

McGILL.

BEING THE ANNUAL UNIVERSITY LECTURE OF MCGILL UNIVERSITY,
MONTREAL, FOR THE SESSION OF 1893-4.

BY

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

Montreal:
GAZETTE PRINTING COMPANY.
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1893.

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THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

REPORT

ON THE THEORY OF THE

RELATIONSHIP BETWEEN

THEORY AND EXPERIMENT

THIRTY EIGHT YEARS OF MCGILL.

BY

SIR WILLIAM DAWSON, C.M.G., LL.D., &C.

(FROM THE GAZETTE, Montreal, 1st Dec., 1893.)

Having been invited by the acting Principal and the Corporation to deliver once more the annual University lecture, this has appeared to be an occasion on which you would bear with me in retracing some of the footsteps of the past, as a suitable close to the official work of nearly a lifetime, and as a farewell address to the friends and colleagues with whom I have labored so long and with so much happiness to myself. We may have perfect faith in the practical wisdom of the apostolic maxim "forgetting the things that are behind, press forward to those that are before." Yet we may have equal faith in recalling the memories of the past, in "remembering the mercies that are of old," as well as the errors and shortcomings of former years, that we may draw lessons from all as to the present and the future. It may, for instance, be interesting, perhaps even useful, to young men, to know how I first became connected with McGill.

My plans for life lay in an entirely different direction. I had prepared myself, as far as was possible at the time, for field work in geology; and my ambition was to secure employment of this kind; or next to this, to have the privilege of teaching my favorite science, with sufficient spare time to prosecute original work. In connection with this ambition, after having attained to some little reputation by papers published under the auspices of the Geological Society of London, I accepted an invitation to deliver a course of lectures on geology and allied

subjects in Dalhousie college, Halifax, in the winter of 1849-50. When in Halifax, I had some conversation with Messrs. Young and Howe, afterwards Sir Wm. Young and Sir Joseph Howe, at that time governors of Dalhousie college and the leaders of the provincial Government, as to a new school-law they were preparing for Nova Scotia, and in which important improvements were introduced. I had at the time no thought of being connected with the administration of the act. In the following spring, however, I was surprised with the offer of the position of superintendent of education, established under the new law. I had many reasons for declining the task, but my friends would take no refusal, and I consoled myself with the consideration that the visitation of the school districts throughout the province, which was one of the duties of the office, would give great facilities for making myself acquainted with the geology of the country. For three years I was engaged in this work, and, besides writing educational reports, and administering the new school law, conducting an educational journal, visiting schools, and holding teachers' institutes, had collected the materials for several papers published in England, as well as for my "Acadian Geology," which, however, did not appear till 1855. In 1852, when on a geological excursion with my friend Sir Charles Lyell, I was introduced by him to Sir Edmund Head, the governor of New Brunswick, who was much occu-

pied at the time with the state of education in that province, and in particular that of its provincial university; and in 1854 he invited me, along with the late Dr. Ryerson, to be a member of a commission which had been appointed to suggest means for the improvement of the provincial university. This work was scarcely finished when Sir Edmund was promoted to be the Governor-general of Canada, and removed to Quebec, where, under the new charter granted to McGill college in 1852, he became Visitor of the university; and as he was known to be a man of pronounced literary and scientific tastes and an active worker in the reforms then recently carried out in the English universities, the governors of McGill naturally counted on his aid in the arduous struggle on which they had entered. Accordingly, soon after Sir Edmund's arrival, a deputation of the Board waited on him, and one of the subjects on which they asked his advice, was the filling of the office of principal, which was yet vacant. Sir Edmund mentioned my name as that of a suitable person. At first, as one of them afterwards admitted to me, they were somewhat disconcerted. They were very desirous for the best reasons to follow Sir Edmund's counsel, but with his knowledge of the available men in England, of some of whom they had already heard, they were somewhat surprised that he should name a comparatively unknown colonist. In the meantime, ignorant of all this, I was prosecuting a candidature for the chair of natural history in my alma mater, the University of Edinburgh, vacant by the death of Prof. Edward Forbes, and in which I was strongly supported by the leading geologists of the time. By a strange coincidence, just as I was about to leave Halifax for England in connection with this candidature, intelligence arrived that the Edinburgh chair had been filled at an earlier date than my friends had anticipated, and at the same time a letter reached me from Judge Day offering me the Principalship of McGill. I had determined in any case to visit England, to attend the meeting of the British Association in Glasgow and to thank the many friends who had promoted my Edinburgh candidature; but postponed my departure for a week that I might consult my family, and decided to accept the Montreal offer, provided

that a professorship of geology or natural history were coupled with the office. Thus it happened that I became connected with McGill in its infancy under its new management, and the story forms a striking illustration of the way in which Providence shapes our ends, rough hew them as we may. Its lesson is that young men should qualify themselves well for some specialty, but should also be sufficiently general in their training to adapt themselves to new and unforeseen pursuits.

OUR VISITOR.

As I have referred to Sir Edmund Head, I may say that he continued to be an active friend of the university during his term of office and after he returned to England. This is true also of his successors, all of whom have shown a kindly interest in our work, so that our visitor has all along been a power for good. The present Governor-General has already by his presence and words of cheer on a recent public occasion, given an earnest that in this respect he will, like his predecessors, prove a warm friend and kindly patron of the higher education in Canada.

FIRST IMPRESSIONS.

When I accepted the principalship of McGill, I had not been in Montreal, and knew the college and men connected with it only by reputation. I first saw it in October, 1855. Materially, it was represented by two blocks of unfinished and partly ruinous buildings, standing amid a wilderness of excavators' and masons' rubbish, overgrown with weeds and bushes. The grounds were unfenced and pastured at will by herds of cattle, which not only cropped the grass, but browsed on the shrubs, leaving unhurt only one great elm, which still stands as the "founder's tree," and a few old oaks and butternuts, most of which have had to give place to our new buildings. The only access from the town was by a circuitous and ungraded cart-track, almost impassable at night. The buildings had been abandoned by the new Board, and the classes of the Faculty of Arts were held in the upper storey of a brick building in the town, the lower part of which was occupied by the High school. I had been promised a residence, and this I found was to be a portion of one of the detached buildings aforesaid,

the present east wing. It had been very imperfectly finished, was destitute of nearly every requisite of civilized life, and in front of it was a bank of rubbish and loose stones, with a swamp below, while the interior was in an indescribable state of dust and disrepair. Still we felt that the Governors had done the best they could in the circumstances, and we took possession as early as possible. As it was, however, we received many of the citizens who were so kind as to call on us, in the midst of all the confusion of plastering, papering, painting and cleaning. The residence was only a type of our difficulties and discouragements, and a not very favorable introduction to the work I had undertaken in Montreal.

On the other hand, I found in the Board of Governors a body of able and earnest men, aware of the difficulties they had to encounter, fully impressed with the importance of the ends to be attained, and having sufficient culture and knowledge of the world to appreciate the best means for attaining these ends. They were greatly hampered by lack of means, but had that courage which enables risks to be run to secure important objects. I may mention here a few of these men. Judge Day was a man of acute legal mind, well educated and well read, a clear and persuasive speaker and wholly devoted to the interest of education, and especially to the introduction into the college course of studies in science and modern literature. Christopher Dunkin was a graduate of the University of London, educated first in Glasgow and afterwards in University college, and who had held a tutorial position in Harvard before he came to Canada. He had made college work and management a special study, and was thoroughly equipped to have been himself a college president or principal, had he not had before him the greater attractions of legal and political success. Hew Ramsay was an admirable example of an educated Scotsman of literary tastes and business capacity. David Davidson was also a product of Scottish college training and a warm and zealous friend of education, with great sagacity and sound judgment. James Ferrier should have been mentioned first. He was a member of the old Board of Royal Institution and senior mem-

ber of the new, but voluntarily resigned the presidency in favor of Judge Day, in the interest, as he believed, of the university. He was longer with us than any of the others, and no man could be a more devoted worker in the cause of education. Such men as these and their colleagues ensured public confidence and a wise and enlightened management.

The teaching staff of the university then consisted of three faculties, those of law, medicine and arts. The Faculty of Law, then recently organized, had two professors and two lecturers. The Faculty of Medicine, the oldest and most prosperous of the three, had ten professors and a demonstrator. The Faculty of Arts had four professors and a lecturer, and all of these except one gave only a part of their time to college work. They were, however, able and efficient men. Dr. Leach, who represented philosophy and allied subjects, was a man of rare gifts and of warm attachment to the college; Dr. Davies, a man of great learning, was shortly afterwards appointed to Regent's Park college, London; Dr. DeSola was an expert in Oriental languages and literature, and Mr. Markgraf represented modern languages, while Dr. Howe gave what time he could spare from the High school to his favorite mathematical and physical subjects. My own lectures in natural science came in aid of this slender staff, raising the professoriate in Arts to six. It was well for me that the Dean of the medical faculty, Dr. Holmes, was a man of scientific tastes and an accomplished mineralogist and botanist, as this led at once to my lectures being taken advantage of by the medical students as well as those in Arts. Thus while the whole students in Arts were only at that time 15, I began a course of lectures in 1855 with a large class, attended by some of the medical professors and by gentlemen from the city, as well as by the students. At the same time a good deal was done to perfect and render more definite the course in Arts, which even in the session of 1855-6 was becoming so moulded as to bear some resemblance to its present arrangements. The university at this time had no library and no museum, and its philosophical apparatus was limited to a few instruments presented to it some time

before by the late Mr. Skakel. I had to use my own private collections and specimens borrowed from the Natural History society to illustrate my lectures. The High school, under the rectorship of Dr. Howe, was an affiliated school, and we could look to it as likely in a few years to furnish us with a larger number of students—a hope not disappointed.

VISIT TO TORONTO.

But our great difficulty was lack of the sinews of war; and the seat of government being at the time in Toronto, I was asked to spend my first Christmas vacation in that city with the view of securing some legislative aid. There was as yet no direct railway communication between Montreal and Toronto, and of course no Victoria bridge. I crossed the river in a canoe amidst floating ice, and had to travel by way of Albany, Niagara and Hamilton. The weather was stormy and the roads blocked with snow, so that the journey to Toronto occupied five days, giving me a shorter time there than I had anticipated. I received, however, a warm welcome from Sir Edmund Head, saw most of the members of the Government, and obtained some information as to the Hon. Mr. Cartier's contemplated Superior Education act, passed in the following year, and which secured for the first time the status of the preparatory schools, while giving aid to the universities. I was also encouraged by Sir Edmund and Cartier to confer with the Superintendent of Education and the governors of McGill on my return to Montreal with reference to the establishment of a Normal School in connection with the university, which was successfully carried out in the following year. I may here remark, in passing, that the McGill Normal school has, in my judgment, been one of the most successful institutions of its kind. It has proved indispensable to the growth of our provincial education of every grade, has indirectly aided the university, has been deservedly popular throughout the country, and has had the good will and support of the successive superintendents of education, and of the provincial governments of both political parties.

AN APPEAL TO MONTREAL.

The direct aid, however, which could be obtained from the Government was

small, and the next movement of the board of governors was our first appeal to the citizens of Montreal, resulting in the endowment of the Molson chair of English language and literature with \$20,000 (subsequently augmented to \$40,000 by Mr. J. H. R. Molson), and \$35,000 from other benefactors. This was a great help at the time and the beginning of a stream of liberality which has floated our university barque up to the present date. In connection with this should be placed the gift of the Henry Chapman gold medal, the first of our gold medals. The liberality of the citizens in 1857 encouraged the board of governors to strengthen and extend the teaching staff in arts by the appointment of Professors Johnson and Cornish, and shortly afterward of Professor Darey, who still, after all these years of arduous and faithful service, remain to the university, and are now the senior members of its professoriate.

A LOSS BY FIRE.

To counterbalance these successes and advantages, in the early part of 1856 the building occupied by the High school and by the Faculty of Arts was destroyed by fire, along with some of the few books which had been collected and some of our apparatus, and a large part of my private collections which I had been using for my lectures. The specimens, apparatus and books were not insured, and the insurance on the building was quite insufficient to replace it, so that this was a great pecuniary loss, but one which our governors bore with admirable fortitude and equanimity and took immediate steps to repair. For the remainder of the session the college classes were transferred in part to the original college buildings above Sherbrooke street, and in part to the medical faculty's building on Cote street. The classes were not interrupted, and plans were at once prepared for the erection of a new and better building.

ADDITIONS AND IMPROVEMENTS.

The year 1857 was signalized not only by the opening of the McGill Normal school and by the additions to our staff already noted, but by the institution of a chair of civil engineering, the first small beginning of our Faculty of Applied Science. At the same time, in the hope that the Faculty of Arts might be able before

many years to occupy permanently the college buildings, the improvement of the grounds was begun, by planting, draining and making walks. At first I did this at my own cost, as a labor of love, with the aid of the late Mr. Sheppard in laying out the walks, merely asking permission of the Board. Dr. Howe, who resided at that time in the centre building, gave some aid, and the new secretary, Mr. Baynes, took a deep interest in the matter. The graduates undertook to plant trees along one of our walks, and eventually the Board gave small sums toward this object, and at a later date appointed a caretaker, for whom a lodge was erected by a subscription among our friends.

THE OLD BUILDING OCCUPIED, AND COMPLETED BY MR. W. MOLSON.

We had proposed that so soon as the students in arts should exceed fifty we would venture to occupy the old building. This happened in 1860, and we accordingly proceeded to move up and take possession of the centre block, the east wing being used for residences. The movement was a fortunate one, for it suggested to our friend, Mr. William Molson, the erection of a third block, corresponding to the eastern one, to be named the William Molson Hall, and which was to contain the convocation room and library. This was the original limit of Mr. Molson's intention; but, driving up one day in company with Mrs. Molson to note the progress of the work, she suggested that it would be a pity to leave it unfinished, and that it would be well at once to connect the three blocks of buildings in one pile, according to the original plan. The hint was taken, plans were prepared, and one of the connecting buildings became our first museum, while the other provided a chemical and natural science class room and laboratory. Both buildings, as well as the library, were seeds of greater things. The Library was provided with shelves for 20,000 volumes, while we possessed less than 2,000, and at first it was distressing to see its emptiness, but the time has long passed when, after crowding it with additional book-cases and extending it into an adjoining room, we began to desire larger space, now happily supplied by the magnificent Peter Redpath Library. The Museum, equally empty, received in the first instance a portion of my own collections,

and others obtained in exchange and by purchase from my own resources. In this way it was possible almost from the first to fill it respectably, for a museum without specimens is even more forlorn than a library without books. Dr. Carpenter's magnificent collection of shells was added in 1869. The whole furnished the nucleus for the Peter Redpath Museum, which stands at the head of Canadian educational museums. The other connecting building became the home of our chemistry and assaying, in which Dr. Harrington, with the aid for a time of the late Dr. Sterry Hunt, built up our schools of Practical Chemistry and of Mining and Assaying, which have trained so many young men for useful chemical and manufacturing employment, for mining enterprises and for the Geological Survey, and have sustained indirectly the honour course in geology in the Faculty of Arts. Thus our resuming possession of the old buildings was successful and fruitful of new enterprise, and Mr. Molson's timely aid laid the foundation of greater successes in the following years.

GRADUATES' SOCIETY.

About this time a number of our graduates resident in Montreal formed themselves into the nucleus of a university society, which has continued to grow and expand up to the present time, and has still room for further extension, more especially by the formation of branch or local associations, of which the Ottawa Valley Graduates' society has set the first and a brilliant example. One of the early efforts of this society, at the time under the presidency of Brown Chamberlin, M.A., D.C.L., was the institution of the Founders' Festival, a social gathering on Mr. McGill's birthday. It was continued with spirit for some years, but failed to attract graduates from a distance and was ultimately dropped in favor of other movements. The time may shortly come for its revival.

THE AFFILIATED COLLEGES.

In 1860 we entered on the new department of affiliating colleges in arts, by the affiliation of St. Francis college, Richmond, and this was followed in a year or two by Morrin college, Quebec. In this matter the president of the Board of Governors, Judge Day, and the Hon. Judge Dunkin were very earnest, believing that

these affiliated colleges might form important local centres of the higher education, and might give strength to the university. They have not, it is true, grown in magnitude as we had hoped; but so far they have maintained a useful existence, and have unquestionably done educational good; and, more especially, have enabled some deserving and able men to obtain an academical education which would otherwise have been denied them. In the circumstances of the Protestant population of the province of Quebec, this is an end worthy of some sacrifice for its attainment. The only additional college of this class is that of Stanstead, added at a comparatively recent date. In 1865 the Congregational College of British America, an institution for theological education only, was removed to Montreal and became affiliated to the university, and has been followed by three other Theological Colleges. The value of these to the university no one can doubt. They not only add to the number of our students in arts, but to their character and standing, and they enable the university to offer a high academical training to the candidates for the Christian ministry in four leading denominations, thus rendering it helpful to the cause of Protestant Christianity, and enabling us to boast that we have aided in providing for the scattered Protestant congregations of this province a larger number of well-educated pastors than they could possibly have obtained in any other way, while the ministers sent out into the country have more than repaid us by sending students to the classes in all our faculties. Our system in this respect, which has been imitated elsewhere, presents, for colonial communities at least, the best solution of the question how to combine Christian usefulness with freedom from denominational control.

THE EDUCATION OF WOMEN.

The year 1870 brings me to the beginning of a most important movement not yet completed, but which has already proved itself a marked success—that for the higher education of women, respecting which a few chronological statements may be in place here. At a meeting of citizens convened by the Board of Governors in the early part of the year 1870 for the purpose of soliciting additional

endowments, a resolution was moved by the late Rev. Dr. Wilkes, and unanimously adopted, to the effect that the university should at as early a date as possible extend its benefits to women. It is true that no special endowments for the purpose were at this time offered, nor were there any applicants for admission, but in spending the summer of 1870 in England, my wife and I made it our business to collect information respecting the movements in this matter then in progress in the mother country. The conclusion at which we arrived was that in our circumstances the methods of the Ladies' Educational Association of Edinburgh were the most suitable; and seconded by Mrs. G. W. Simpson, whose experience and influence as an educator were of the highest value, we endeavored to promote such an organization in Montreal. At a meeting of ladies, convened by our friend Mrs. Molson, of Belmont hall, in her drawing-room, the preliminaries were agreed on, and the classes were opened in October, 1871, on which occasion I delivered the introductory lecture. This association conducted an admirable and most useful work for fourteen years, until its place was taken by the Donalds Special Course for Women.

About the same time, with the organization of the Ladies' Educational Association, two other movements occurred bearing on the same question. One was the foundation by former pupils of Miss Hannah Willard Lyman of an endowment in commemoration of that gifted lady, and the income of which was to be expended to found a scholarship or prize "in a College for Women" affiliated to the university, or in classes for women approved by it. This endowment was used in the first instance for prizes in the classes of the association, and its terms furnished an indication as to the prevailing sentiment with respect to the education of women, and were in accordance with the fact that Miss Lyman had been the lady principal of one of the greatest and most successful colleges for women in the United States. The other, and practically more important, was the establishment of the Girls' High School of Montreal. This was suggested by the Rev. Dr. Jenkins, the chairman of the Protestant commissioners of schools, in his report

for 1871, and after some delays, owing to the claims of other objects, I moved, as a member of the Board, in February, 1874, the appointment of a committee with power to establish such a school. The committee acted promptly, prepared a plan, recommended teachers, and engaged a temporary building, and the school came into operation in the autumn of 1874. In moving in this matter I fully expected that the establishment of a school giving the training necessary for our matriculation examination would lead in a few years to a demand for college education on behalf of the passed pupils of the school, but trusted that means would be found to meet this when it should arise, though I deprecated any premature action on the part of the university itself in this direction. The attention of the corporation was directed to the subject by the Rev. Dr. Clark Murray in 1882, and the matter was referred to a committee to collect information; but the demand did not actually develop itself till 1884, when several pupils of the Girls' High school had distinguished themselves in the examinations for associate in arts, and formal application was made by eight qualified candidates for admission to university privileges. At first the only resource seemed to be to appeal to the public for aid in this new departure; but at the moment when the difficulty pressed, Sir Donald A. Smith voluntarily came forward with an offer of \$50,000 to provide separate classes in Arts for women for the first and second years, leaving the question of how their education was to be continued afterwards in abeyance. This generous offer was thankfully accepted by the university, and thus our classes for women were commenced in 1884. Subsequently the same liberal benefactor increased his gift to \$120,000 to continue the work over the third and fourth years, and besides contributed \$4,000 annually in aid of sessional lecturers, while the Corporation, without hesitation, admitted the women to all the privileges of examinations and degrees. Under these arrangements the Donalds special course for women has been going on successfully for eight years; but it still remains to carry out the development of the liberal plans of the founder into a separate college for women affiliated to the Uni-

versity. In this form, and with a suitable building in proximity to the other buildings of the university, and aided by our library, museum and laboratories, it cannot fail to attract a much larger number of students and to become more than ever a leading department of the work of the university.

Reference has been made to the Examinations for Associate in Arts. These were established in 1865, and at first were limited to pupils of the High School. With the aid of the University of Bishops College and the Protestant Committee of the Council of Public Instruction, they have now been extended to all the Protestant Academies and High Schools, and have become an important factor in the higher education.

A SEMI-JUBILEE.

In 1880, on occasion of the twenty-fifth year of my tenure of office as principal, I endeavored to assemble its graduates at a banquet in the William Molson hall. Much labor was necessary to secure accurate information as to their addresses, and this was made the means of preparing the first directory of the graduates. Eight hundred and fifty cards of invitation were issued, and answers expressing sympathy and affection for Alma Mater were received from nearly all. The result was that 360 gentlemen, nearly all graduates of the university, were able to attend and to take their seat at the tables occupying the hall. At this entertainment, after a few words of welcome to the guests and the usual toasts, addresses were delivered by representatives of the different bodies and interests connected with the University, and by representatives of sister institutions. The topics were naturally those connected with the past history and present state of the University; and the part which its governors, principal and fellows, its benefactors and its graduates had taken in elevating it to the condition to which it had attained, and in advancing the interests of education. As to the future, the evening was signalized by the announcement of the intention of Peter Redpath, Esq., one of the governors, to erect a costly and capacious museum building on the college grounds, and that of the Principal to place therein, as a gift to the university, his own large geological collections, and the further announcement that the

graduates proposed to commemorate the twenty-fifth year of the Principal's tenure of office by the erection of a university building to bear his name. The entertainment being a private one, reporters were not admitted, which, perhaps, was an error, as it would have been interesting now to have preserved a record of the addresses, more especially of those delivered by men who have since passed away. It had been hoped that entertainments of this kind might have been continued, but the labour and cost of meetings of scientific associations prevented this for the time.

THE AMERICAN AND BRITISH ASSOCIATIONS.

The university should, I think, take a large share of credit for the success of the meetings of the American Association for the Advancement of Science in Montreal in 1857 and 1882, and the still more important meeting of the British association in 1884. University men worked earnestly in aid of these meetings, the use of the college buildings contributed materially to their accommodation, and the results tended in many ways to the promotion of science in Canada. Such meetings, by bringing among us eminent men, widely known abroad, and by directing special attention to new scientific topics, contribute greatly to our advance in national improvement and in placing us abreast of the scientific movement in other countries. Each of these meetings has had its influence in these respects and has marked a distinct step in our upward progress.

THE UNIVERSITY'S FINANCES.

I have referred in these reminiscences to the financial affairs of the University. In this respect we have always been in straitened circumstances, but relief has often come just at our time of greatest need, though there have always been important fields of usefulness open to us, but which we had not room to enter on. Our last public appeal is thus referred to in a publication of the time: "At the close of the financial year 1880-'81, our income had ebbed in a most threatening manner. Being derived mainly from mortgages on real estate, it had run some risks and experienced a few losses in the commercial crisis of the preceding years. But when the tide

of commercial prosperity turned, a greater calamity befell us in the fall of the rate of interest, which reduced our revenue by nearly 20 per cent., and this at a time when no decrease of expenditure could be made without actual diminution of efficiency. In these circumstances the Board of Governors found it necessary to insist on most unwelcome retrenchments, injurious to our educational work, and which some of us would have been glad to avert even by much personal sacrifice and privation. At length, on the 13th of October, 1881, we convened a meeting, not happily of our creditors, but of our constituents, the Protestant citizens of Montreal, and our position and wants were laid before them most ably, and, I may say, even pathetically, by the chancellor, Judge Day and the non-ordinary treasurer, Mr. Ramsay. The meeting was a large and influential one, and I shall never cease to bear in grateful remembrance the response which it made. There was no hint of blame for our extravagance, no grudging of the claims of the higher education which we represented, but a hearty and unanimous resolve to sustain the university and to give it more than the amount which it asked. The result of the meeting was the contribution of \$28,500 to the endowment fund, besides \$26,335 to special funds, including the endowment of Mr. W. C. McDonald's scholarships, and of \$18,445 in annual subscriptions, most of them for five years. But this was not all, for it was followed by two of those large and generous bequests of which this city may well be proud. Major Hiram Mills, an American gentleman, resident for twenty years in Montreal, and familiar with the struggles of the university, left us by will the handsome sum of \$43,000 to endow a chair in his name, as well as a scholarship and a gold medal. On this endowment the Governors have placed the chair of classical literature. More recently our late esteemed friend and fellow-citizen, Mr. David Greenshields, has added to the many kind actions of a noble and generous life the gift of \$40,000 for the endowment of a chair to be called by his name (the David J. Greenshields chair of chemistry).

THE LATEST GIFTS.

It is perhaps unnecessary that I should continue this subject further. The great

steps in advance of the last few years are known to nearly all who near me. In so far as money is concerned these gifts include the following: The Thomas Workman endowment for mechanical engineering of \$117,000, supplemented by \$20,000 from Mr. W. C. McDonald; the W. C. McDonald Engineering Building, valued with its equipment at \$350,000, and an endowment of \$45,000 for its maintenance, and also the endowment of the chair of electrical engineering with the sum of \$40,000; the erection and equipment by the same gentleman of the Physics building, valued at \$300,000, and two chairs of physics with endowments amounting to \$90,000; the endowment of the Faculty of Law by the same benefactor with \$150,000, and the endowment of the Gale chair in the same faculty with \$25,000; the large gifts to the Medical Faculty by Sir D. A. Smith and Mr. J. H. R. Molson and other benefactors, amounting to \$269,000; the John Frothingham principal fund of \$40,000, founded by Mrs. J. H. R. Molson and the Rev. Fred'k Frothingham; the purchase of land valued at \$42,500 by Mr. J. H. R. Molson; the further endowment by the same gentleman of the chair of English Literature with \$20,000; the Philip Carpenter Fellowship with endowment of \$7,000; the Peter Redpath Library, valued at \$150,000, with \$5,000 annually for its maintenance. In the aggregate these gifts of citizens of Montreal within the past four years amounts to more than a million and a half of dollars. Many minor gifts also testify to the goodwill and liberality of the citizens generally. These great benefactions are not only a vast addition to our resources, but an earnest for the future, since it is not to be supposed that so great and useful endowments, attracting so many students and so highly appreciated by the public, shall ever be left to fall into decay, or fail to be supplemented by additional benefactions. It is to be observed also that the greater part of them have been given by men not graduates of the university, and it is to be expected that as our graduates increase in number, influence and wealth, some return will flow in from them for the benefits they have received. They need not think that their gifts will be declined. There are still great needs to be supplied. These may be ranged under the three

heads of the professional faculties, the academical faculty and the university as a whole.

ADDITIONAL AID REQUIRED.

In the former the Faculties of Law, Medicine and Veterinary Science are still deficient in regard to class rooms and laboratories. The Faculty of Applied Science is still unprovided with necessary outfit in reference to the departments of mining engineering and practical chemistry. It is, however, the Academical Faculty or Faculty of Arts that is in most need. It requires large additions to its staff, and more especially division of the heavier chairs. In this connection it should be observed that it is burdened with the general education of students of professional schools as well as with the training of its own students. It is also in great need of improved class rooms and extended accommodation of every kind for its work. The University as such needs a new Gymnasium, Lodging Houses and a Dining Hall, and an adequate Convocation Hall, with proper rooms for university Boards and general college societies and for university officers. It is not too much to say that in securing these ends the great benefactions already given might profitably be doubled. That these things will all be done in process of time I have no doubt, but it should be remembered that class after class of students is going forth into the world without having enjoyed these benefits. I have a large packet of papers labelled "Unfinished and Abortive Schemes" containing the details of these and other plans. I value these papers very highly, as representing creative thought not yet materialised, but I am quite willing to part with any of them to any benefactor who will carry it into actual effect. While personally it is necessarily a matter for regret that I cannot continue in office till the great improvements to which I have referred are realized, it is at least something, after our long and arduous journey through the wilderness of penury and privation, to see even afar off the goodly land into which my successors are entering, and in the enjoyment of which, I trust, they will forgive the shortcomings of those who had to lead the way, and will not forget the dangers and difficulties of the thorny paths through which we have passed.

ORDER AND UNITY.

One feature, however, of our history for which we cannot be too deeply thankful, is the comparative peace and mutual forbearance which have prevailed in all the past years, and the united and earnest action of all the members of the university in every crisis of our long conflict. Nor have we had any reason for anxiety respecting our students. I confess that if there is anything I have feared and have constantly prayed to be exempt from, it has been the possible occurrence of those rebellions and disorders that have troubled so many colleges on this continent. For this exemption I do not take credit to myself. McGill has had an able and devoted governing Board, a body of competent, diligent and popular professors, derived from a large number of different universities on both sides of the Atlantic, and the Canadian student is on the whole a hard worker, good-natured and patriotic, and not too self-asserting. Nor is our system of college government a cast iron constitution which has been set up by an act of legislation. It has grown up under experience and careful adaptation of methods to needs. In McGill each faculty exercises jurisdiction over its own students, the executive officer being the dean of the faculty. The principal intervenes only when desired to give advice or assistance, or when any case arises affecting students of different faculties; and the power of expelling students resides only in the corporation—a body including the governors, the principal and all the deans of the faculties, with elective representatives of the faculties, of the affiliated colleges and of the graduates. Under this system it is understood that each professor is supreme in his own classroom, but his power of discipline is limited to a temporary suspension from lectures, which must be at once reported to the dean. If necessary, the dean may lay the case before the faculty, which, after hearing, may reprimand, report to parents or guardians, impose fines, suspend from classes, or in extreme cases, report to the corporation for expulsion. No case involving this last penalty has, however, yet occurred, and the effort has been to settle every case of discipline by personal influence and with as

little reference to laws and penalties as possible. With this machinery a simple code of rules is sufficient. It provides for orderly and moral conduct in the buildings and in going and coming, and for the safety of the property of the university, and prohibits all action likely to obstruct the work of the college or to interfere with the progress of other students. In the case of college societies it is required merely that their objects shall be consistent with those of the university, and that their laws and officers shall be communicated to and approved by the faculty in whose rooms they meet. Above and beyond all such machinery and rules lies the obligation on principal, deans and professors to watch the beginnings of evil and to counteract by wise and kindly advice anything that may lead to disorder. On the other hand, the effort of the student should be to exercise all that liberty which tends to make him self-reliant and fit for the battle of life, while he endeavors to avoid the formation of any habits inimical to the interests of his fellow students or injurious to himself. In all this I proceed on the assumption that it is the business of a university to train young men and women for noble lives, not so much to teach them to do something as to train them to be something. Perhaps the tendency most to be feared in our age and country is that towards practical and profitable work without the previous education that should develop fully the mental powers and form the character. This tendency it is the duty of the university by all means to counteract, as one that will lower our national character and thereby prevent our highest success. This principle being kept in view, the cultivation of interest and enthusiasm for college work at once secures progress and peace. In short, the control of young men or young women is to be exercised rather in the way of inducing them to like their work and duty than by any influence of the nature of coercion or restraint. In this way only can they be trained to control themselves and, when their turn comes, to control others. They who would rule must themselves learn willing obedience. Of course, there is place here for all the elevating influence of spiritual religion, and there is scope for that most important power which arises from the exam-

ple of punctuality, self-denial and honest work on the part of professors. I fervently pray that the good traditions of McGill in all these respects may ever be maintained.

THE RELIGIOUS LIFE

of McGill university has been of a quiet and unofficial character. We have not sought to make any parade of religious services as such, but by personal influence and example to foster piety among the students and to facilitate as far as possible their taking advantage of the religious privileges afforded in the city. In this connection I attach paramount importance to the spontaneous action of the students themselves, more especially as manifested in their Christian Associations. These have, I think, been sources of unmixed good and have largely contributed to maintain and extend religious life. I could wish that they should have from the university or its friends means to provide proper accommodation for meetings and social reunions, and that the utmost aid and countenance should be extended to them by the college authorities.

THE PRINCIPALSHIP OF THE FUTURE.

My function in this university has been that of a pioneer; and viewed in this light it has not been compatible with the dignity and the authority which are usually attached to the heads of more firmly established colleges in older countries. It is time, however, that this should be changed, and my successor should enter upon office under more favorable conditions than those of the feeble and struggling university of the past. In 1855 the University had twenty Professors and Lecturers and about eighty students. It now has seventy-four Professors and Lecturers and a thousand students. This fact alone is sufficient to indicate the increase in the work and responsibility of the officer who has to superintend and harmonize all these workers in many distinct departments. I would therefore more especially ask in his behalf that he should have means to support the dignity of the university in its social aspect, to entertain distinguished stran-

gers as well as the members of the university, and to take a place in society becoming the magnitude of the interests committed to his care. Under our constitution he cannot be an autocrat, since he can only enforce regulations enacted by the governors and corporation, but he should at least have full information as to all contemplated movements, and should be consulted respecting them, and should be recognized as the only official medium of communication between the different portions of the university. The operations of McGill are now so extensive and complicated that the dangers of disintegration and isolation have become greater than any others, and the Principal must always be the central bond of union of the university, because he alone can know it in all its parts and weigh the claims, needs, dangers, difficulties and opportunities of each of its constituent faculties and departments. Much of this must without doubt depend upon his personal qualities, and I trust those who are to succeed me in this office may be men not only of learning, ability and administrative capacity, but of unselfish disinterestedness, of large sympathies and wide views, of kindly, generous and forgiving disposition, and of that earnest piety which can alone make them safe advisers of young men and women entering on the warfare of life.

SOME PERSONAL REMARKS.

In conclusion, let me say a word as to myself and my retirement from office. My connection with this university for the past thirty-eight years has been fraught with that happiness which results from the consciousness of effort in a worthy cause, from the aid and support of my dear wife, who has cheered and sustained me in every difficulty, and from association with such noble and self-sacrificing men as those who have built up McGill College. But it has been filled with anxieties and cares and with continuous and almost unremitting labor. I have been obliged to leave undone or imperfectly accomplished many cherished schemes by which I had hoped to benefit my fellow-men, and leave footprints of good on the sands of time. Age is advan-

cing upon me, and I feel that if I am fittingly to bring to a close the business of my life I must have a breathing space to gird up my loins and refresh myself for what remains of the battle. I have, besides, as you know, been somewhat abruptly deprived by a serious illness of my accustomed strength, and in this I recognize the warning of my Heavenly Father that my time of active service is nearly over. In retiring from my official duty I can leave all my work and all the interests of this university with the confidence that, under God's blessing, they will continue to be successful and progressive. The true test of educational

work well done is that it shall have life and power to continue and extend itself after those who established it are removed. I believe that this is the character of our work here, and I shall leave it with the confident expectation that it will be quite as successful in my absence as in my presence. Such a result I shall regard as the highest compliment to myself. To this end I ask your earnest consideration of the sketch of our progress which I have endeavored to present, and I pray that the blessing of God may rest on the university and on every part of it, and that it may be strengthened with His power and animated with His spirit.



