

AFTER TWENTY-FIVE YEARS.

AD ADDRESS AT THE OPENING OF THE SESSION OF THE MEDICAL
FACULTY, MCGILL UNIVERSITY, SEPT. 21st, 1899.

BY

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I.

From two points of view alone have we a wide and satisfactory view of life—one, ere the dew of youth has been brushed off, as we stand at the foot of the hill, eager for the journey, amid the glorious tints of the early morn ; the other, wider, perhaps less satisfactory, as we gaze from the summit, at the lengthening shadows cast by the setting sun. From no points in the ascent have we the same broad outlook, as the steep and broken pathway affords few halting places with an unobscured view. You remember in the ascent of the Mountain of Purgatory, Dante, after a stiff climb, reached a high terrace encircling the hill, and sitting down turned to the East, remarking to his good leader—"all men are delighted to look back." So on this occasion, from the terrace of a quarter of a century, I am delighted to look back, and to be able to tell you of the prospect.

Twenty-five years ago this Faculty, with some hardihood, selected a young and untried man to deliver the lectures on the Institutes of Medicine. With characteristic generosity the men who had claims on the position in virtue of service in the school, recognizing that the times were changing, stepped aside in favor of one who had had the advantage of post-graduate training in the subjects to be taught. An experiment on the part of the Faculty, enthusiasm, constitutional energy, and a fondness for the day's work on my part led to a certain measure of success. I have tried to live over again in memory those happy early

days, but by no possible effort can I recall much that I would fain remember. The dust of passing years has blurred the details, even in part the general outlines of the picture. The blessed faculty of forgetting is variously displayed in us. In some, as in our distinguished countryman, John Beattie Crozier, it is absent altogether, and he fills chapter after chapter with delightful reminiscences and descriptions of his experiences and mental states.* At corresponding periods—we are about the same age—my memory hovers like a shade about the magic circle which Ulysses drew in Hades, but finds no Tiresias to lift the veil with which oblivion has covered the past. Shadowy as are these recollections, which,

“be they what they may
Are yet the fountain light of all our day,
Are yet a master light of all our seeing,”

they are doubly precious from their association with men who welcomed me into the Faculty, now, alas! a sadly reduced remnant. To them—to their influence, to their example, to the kindly encouragement I received at their hands—I can never be sufficiently grateful. Faithfulness in the day of small things may be said to have been the distinguishing feature of the work of the Faculty in those days. The lives of the senior members taught us youngsters the lesson of professional responsibility, and the whole tone of the place was stimulating and refreshing. It was an education in itself, particularly in the amenities of faculty and professional life, to come under the supervision of two such Deans as Dr. George Campbell and Dr. Palmer Howard. How delightful it would be to see the chairs which they adorned in the school endowed in their memories and called by their names!

One recollection is not at all shadowy—the contrast in my feelings to-day only serves to sharpen the outlines. My first appearance before the class filled me with a tremulous uneasiness and an overwhelming sense of embarrassment. I had never lectured, and the only paper I had read before a society was with all the possible vaso-motor accompaniment. With a nice consideration my colleagues did not add to my distress by their presence, and once inside the lecture room the friendly greeting of the boys calmed my fluttering heart, and, as so often happens, the ordeal was most severe in anticipation. One permanent impression of the session abides—the awful task of the preparation of about one hundred lectures. After the ten or twelve with which I started were exhausted I was on the treadmill for the remainder of the session. False pride forbade the reading of the excellent lectures of my predecessor, Dr. Drake, which, with his wonted goodness of heart, he had offered.

* *My Inner Life*, Longmans, 1898.

I reached January in an exhausted condition, but relief was at hand. One day the post brought a brand-new work on physiology by a well-known German professor, and it was remarkable with what rapidity my labors of the last half of the session were lightened. An extraordinary improvement in the lectures was noticed; the students benefitted, and I gained rapidly in the facility with which I could translate the German.

Long before the session was over I had learned to appreciate the value of the position entrusted to me, and sought the means to improve the methods of teaching. I had had the advantage of one of the first systematic courses on practical physiology given at University College, London, a good part of which consisted of lessons and demonstrations in histology. In the first session, with but a single microscope, I was only able to give the stock display of the circulation of the blood, ciliary action, etc., but a fortunate appointment as physician to the smallpox department of the General Hospital carried with it a salary which enabled me to order a dozen Hartnack microscopes and a few bits of simple apparatus. This is not the only benefit I received from the old smallpox wards, which I remember with gratitude, as from them I wrote my first clinical papers. During the next session I had a series of Saturday demonstrations, and gave a private course in practical histology. One grateful impression remains—the appreciation by the students of these optional and extra hours. For several years I had to work with very scanty accommodation, trespassing in the chemical laboratory in winter, and in summer using the old cloak room downstairs for the histology. In 1880 I felt very proud when the faculty converted one of the lecture rooms into a physiological laboratory and raised a fund to furnish and equip it. Meanwhile I had found time to take my bearings. From the chair of the Institutes of Medicine both physiology and pathology were taught. It has been a time-honoured custom to devote twenty lectures of the course to the latter, and as my colleagues at the Montreal General Hospital had placed the post-mortem room at my disposal I soon found that my chief interest was in the pathological part of the work. In truth, I lacked the proper technique for practical physiology. For me the apparatus never would go right, and I had not a *Diener* who could prepare even the simplest experiments. Alas! there was money expended (my own usually, I am happy to say, but sometimes my friends', as I was a shocking beggar!) in apparatus that I never could set up, but over which the freshmen firmly believed that I spent sleepless nights in elaborate researches. Still one could always get the blood to circulate, cilia to wave and the fibrin to digest. I do not think that any member of the ten successive classes to which I lectured understood the structure of a lymphatic gland, or of the spleen, or of the placental circulation. To those structures I have to-day

an ingrained hatred, and I am always delighted when a new article comes out to demonstrate the folly of all preceding views of their formation. Upon no subjects had I harder work to conceal my ignorance. I have learned since to be a better student, and to be ready to say to my fellow students "I do not know." Four years after my college appointment the Governors of the Montreal General Hospital elected me on the visiting staff. What better fortune could a young man desire! I left the same day for London with my dear friend, George Ross, and the happy days we had together working at clinical medicine did much to wean me from my first love. From that date I paid more and more attention to pathology and practical medicine, and added to my courses one in morbid anatomy, another in pathological histology, and a summer class in clinical medicine. I had become a pluralist of the most abandoned sort, and by the end of ten years it was difficult to say what I did profess, and I felt like the man to whom Plato, in Alcibiades II. applies the words of the poet :—

" Full many a thing he knew ;
But knew them all badly."

Weakened in this way, I could not resist when temptation came to pastures new in the fresh and narrower field of clinical medicine.

After ten years of hard work I left this city a rich man, not in this world's goods, for such I have the misfortune—or the good fortune—lightly to esteem, but rich in the goods which neither rust nor moth have been able to corrupt,—treasures of friendship and good fellowship, and those treasures of widened experience and a fuller knowledge of men and manners which contact with the bright minds in the profession necessarily entails. My heart, or a good bit of it at least, has stayed with these treasures. Many a day I have felt it turn towards this city to the dear friends I there left, my college companions, my teachers, my old chums, the men with whom I lived in closest intimacy, and in parting from whom I felt the chordæ tendineæ grow tense.

II.

Twenty-five years ago the staff of this school consisted of the historic septenary, with one demonstrator. To-day I find on the roll of the Faculty 52 teachers. Nothing emphasizes so sharply the character of the revolution which has gradually and silently replaced in great part for the theoretical, practical teaching, for the distant, cold lecture of the amphitheatre the elbow to elbow personal contact of the laboratory. The school, as an organization, the teacher and the student have been profoundly influenced by this change.

When I joined the faculty its finances were in a condition of delight-

ful simplicity, so simple indeed that a few years later they were intrusted to my care. The current expenses were met by the matriculation and graduation fees and the government grant, and each professor collected the fees and paid the expenses in his department. To-day the support of the laboratories absorbs a much larger sum than the entire income of the school in 1874. The greatly increased accommodation required for the practical teaching has made endowment a vital necessity. How nobly, by spontaneous gifts and in generous response to appeals, the citizens have aided the efforts of this faculty I need not remind you. Without it McGill could not have kept pace with the growing demands of modern methods. Upon one feature in the organization of a first-class school permit me to dwell for a moment or two. The specialization of to-day means a group of highly trained experts in the scientific branches, men whose entire energies are devoted to a single subject. To attain proficiency of this sort much time and money are required. More than this, these men are usually drawn from our very best students, with minds above the average. For a majority of them the life devoted to science is a sacrifice ; not, of course, that it is so felt by them, since the very essence of success demands that in their work should lie their happiness. I wish that the situation could be duly appreciated by the profession at large, and by the trustees, governors and the members of the faculties throughout the country. Owing these men an enormous debt, since we reap where they have sown, and garner the fruits of their husbandry, what do we give them in return ? Too often beggarly salaries and an exacting routine of teaching which saps all initiative. Both in the United States and Canada the professoriate as a class, the men who live by college teaching, is wretchedly underpaid. Only a few of the medical schools have reached a financial position which has warranted the establishment of thoroughly equipped laboratories, and fewer still pay salaries in any way commensurate with the services rendered. I am fully aware that with cobwebs in the purse not what a faculty would desire has only too often to be done, but I have not referred to the matter without full knowledge, as there are schools with large incomes in which there has been of late a tendency to cut down salaries and to fill vacancies too much on Wall Street principles. From Harvard comes a most encouraging announcement. By the will of the late Dr. Calvin Ellis the Medical School receives nearly half a million dollars, the income from which is to be used in raising the salaries of the scientific chairs to \$5000 per annum. And not for relief of the pocket alone would I plead. The men in charge of our Canadian laboratories are overworked in teaching. A well organized staff of assistants is very difficult to get, and still more difficult to get paid. The salary of the professor should be in many cases that of the first assistant. When the entire energy of a laboratory

is expended on instruction, research, a function of equal importance, necessarily suffers. Special endowments are needed to meet the incessant and urgent calls of the scientific staff. It is gratifying to know that certain of the bequests to this school have of late been of this kind, but I can safely say that no department is as yet fully endowed. Owing to faulty conditions of preliminary education the medical school has to meet certain illegitimate expenses. No one should be permitted to register as a medical student who had not a good preliminary training in chemistry. It is an anomaly that our schools should continue to teach general chemistry, to the great detriment of the subject of medical chemistry, which alone belongs in the curriculum. Botany occupies a similar position.

But *the* laboratories of this medical school are not those directly under its management. McGill College turned out good doctors when it had no scientific laboratories, when the Montreal General Hospital and the University Maternity were its only practical departments. Ample clinical material and good methods of instruction gave the school its reputation more than fifty years ago. Great as has been the growth of the scientific half of the school, the all-important practical half has more than kept pace. The princely endowment of the Royal Victoria Hospital by our large-hearted Canadian Peers has doubled the clinical facilities of this school, and by the stimulus of a healthy rivalry has put the Montreal General Hospital into a condition of splendid efficiency. Among the many changes which have occurred within the past twenty-five years, I would place these first in order of importance, since they assure the continued success of McGill as a school of practical medicine.

Equally with the school as an organization, the teacher has felt deeply the changed conditions in medical education, and many of us are much embarrassed to know what and how to teach. In a period of transition it is not easy to get *orientirt*. In some subjects fortunately there is but the single difficulty—what to teach. The phenomenal strides in every branch of scientific medicine have tended to overload it with detail. To winnow the wheat from the chaff and to prepare it in an easily digested shape for the tender stomachs of first and second year students taxes the resources of the most capable teacher. The devotion to a subject, and the enthusiasm and energy which enable a man to keep abreast with its progress, are the very qualities which often lead him into pedagogic excesses. To reach a right judgment in these matters is not easy, and after all it is in teaching as Izaak Walton says of angling, "Men are to be born so, I mean with inclinations to it." For many it is very hard to teach down to the level of beginners. I was told a good story illustrating this a few weeks ago. One of the most distinguished—no, the most distinguished of Scotch professors had gone off for a few weeks

during the term, leaving his first assistant, named Day, in charge of his work. As is not infrequently the case, the junior caught the ear of the class better than the master. On the blackboard just before the Professor returned one of the students wrote, "Work while it is Day, for the (k)night cometh when no man can work." The old time lecture room teacher is rapidly giving place to the demonstrator and the class instructor. Professors, like doctors, may be divided into four classes. It was a parson (Mr. Ward, Rector of Stratford-on-Avon shortly after Shakespeare's day) who gave the well-known libellous division of doctors :— "first, those that can talk but doe nothing ; secondly, some that can doe but not talk; third, some that can both doe and talk; fourthly, some that can neither doe nor talk—and these get most monie." Of professors the first is the man who can think but who has neither tongue nor technique. Useless for the ordinary student, he may be however the leaven of a faculty and the chief glory of his university. A second variety is the phonographic professor, who can talk but who can neither think nor work. In the old régime he repeated year by year the same lecture. A third is the man who has technique but who can neither talk nor think ; and a fourth is the rare professor who can do all three—think, talk and work. With these types fairly represented in a faculty, the diversities of gifts only serving to illustrate the wide spirit of the teacher, the Dean at least should feel happy.

But the problem of all others which is perplexing the teacher to-day is not so much what to teach, but how to teach it, more especially how far and in what subjects the practical shall take the place of didactic teaching. All will agree that a large proportion of the work of a medical student should be in the laboratory and in the hospital. The dispute is over the old-fashioned lecture, which has been railed against in good set terms, and which many would like to see abolished altogether. It is impossible, I think, to make a fixed rule, and teachers should be allowed a wide discretion. With the large classes of many schools the abolition of the didactic lecture would require a total reconstruction of the curriculum and indeed of the faculty. Slowly but surely practical methods are everywhere taking the place of theoretical teaching, but there will, I think, always be room in a school for the didactic lecture. It is destined within the next ten years to be much curtailed, and we shall probably, as is usual, go to extremes, but there will always be men who can present a subject in a more lucid and attractive manner than it can be given in a book. Sir William Gairdner once remarked that the reason why the face and voice of the teacher had so much more power than a book is that one has a more living faith in him. Years ago Murchison (than whom Great Britain certainly never had a more successful teacher of medicine) limited the lecture in medicine to the consideration of rare

cases, and the prominent features of a group of cases, and to questions of prognosis which cannot be discussed at the bedside. For the past four years in the subject of medicine I have been making an experiment in teaching only by a weekly examination on a set topic, by practical work in the wards, in the out-patient room and the clinical laboratory, and by a weekly consideration in the amphitheatre of the acute diseases of the season. With a small class I have been satisfied with the results, but the plain would be difficult to carry out with a large body of students.

The student lives a happy life in comparison with that which fell to our lot thirty years ago. Envy, not sympathy, is my feeling towards him. Not only is the *ménu* more attractive, but it is more diversified and the viands are better prepared and presented. The present tendency to stuffing and cramming will be checked in part when you cease to mix the milk of general chemistry and botany with the proper dietary of the medical school. Undoubtedly the student tries to learn too much, and we teachers try to teach him too much—neither, perhaps, with great success. The existing evils result from neglect on the part of the teacher, student and examiner of the great fundamental principle laid down by Plato—that education is a life-long process, in which the student can only make a beginning during his college course. The system under which we work asks too much of the student in a limited time. To cover the vast field of medicine in four years is an impossible task. We can only instil principles, put the student in the right path, give him methods, teach him how to study, and early to discern between essentials and non-essentials. Perfect happiness for student and teacher will come with the abolition of examinations, which are stumbling blocks and rocks of offence in the pathway of the true student. And it is not so Utopian as may appear at first blush. Ask any demonstrator of anatomy ten days before the examinations, and he should be able to give you a list of the men fit to pass. Extend the personal intimate knowledge such as is possessed by a competent demonstrator of anatomy into all the other departments, and the degree could be safely conferred upon certificates of competency, which would really mean a more thorough knowledge of a man's fitness than can possibly be got by our present system of examination. I see no way of avoiding the necessary tests for the license to practice before the provincial or state boards, but these should be of practical fitness only, and not, as is now so often the case, of a man's knowledge of the entire circle of the medical sciences. It is satisfactory to know that close attention is being paid to the problem how to relieve the present congested state of the medical curriculum, and a number of interesting experiments are in operation. Of the special measures of relief which have been proposed the concentration of courses and a wide system of electives in the special branches are the most impor-

tant. A strong feeling prevails that we tie up the student too tightly in leading strings, and do not allow, particularly to good men, sufficient liberty. In our present system we make no distinction whatever between the poor, the mediocre and the good student. It is interesting to note that the question has been dealt with most fully and most warmly in the interests of the practical student by two of the leading scientific teachers in the United States, Dr. Henry P. Bowditch, of Harvard (*Boston Medical and Surgical Journal*, Dec. 29th, 1898), and my colleague at the Johns Hopkins, Dr. Mall (*Philadelphia Medical Journal*, April 1st, 1899). Their papers are to be carefully pondered by all teachers who feel that reform is necessary. I would commend them particularly to the younger men, in whose hands alone such radical changes can be carried out. A man who has been teaching for twenty-five years is rarely in a position to appreciate the necessity of a change, particularly if it touches his own special branch.

(Dr. Osler then referred briefly to the subject of Dominion Registration, and expressed the hope that the necessary legislation would be carried through at an early date. He hoped that it might prove a prelude to a more extensive measure of Imperial Registration which would enable registered graduates of Canadian universities to practice in any part of Her Majesty's possessions.)

III.

But what is most important in an introductory lecture remains to be spoken, for dead indeed would I be to the true spirit of this day, were I to deal only with the questions of the curriculum and say nothing to the young men who now begin the serious work of life. Personally, I have never had any sympathy with the oft repeated sentiment expressed originally by Abernethy, I believe, who, seeing a large class of medical students, exclaimed, "Good God, gentlemen! whatever will become of you?" The profession into which you enter to-day guarantees to each and every one of you a happy, contented, and useful life. I do not know of any other of which this can be said with greater assurance. Many of you have been influenced in your choice by the example and friendship of the doctor in your family, or of some country practitioner in whom you have recognized the highest type of manhood and whose unique position in the community has filled you with a laudable ambition. You will do well to make such an one your exemplar, and I would urge you to start with no higher ambition than to join the noble band of general practitioners. They form the very sinews of the profession—generous-hearted men, with well-balanced, cool heads, not scientific always, but learned in the wisdom not of the laboratories but of the sick room. This school can take a greater pride in her graduates scattered throughout

the length and breadth of the continent than in her present splendid equipment ; they explain in great part the secret of her strength.

I was much interested the other day in reading a letter of John Locke's to the Earl of Peterborough who had consulted him about the education of his son. Locke insisted that the main point in education is to get "a relish of knowledge." "This is putting life into a pupil." Get early this relish, this clear, keen joyance in work, with which languor disappears and all shadows of annoyance flee away. But do not get too deeply absorbed to the exclusion of all outside interests. Success in life depends as much upon the man as on the physician. Mix with your fellow students, mingle with their sports and their pleasures. You may think the latter rash advice, but now-a-days even the pleasures of a medical student have become respectable, and I have no doubt that the "footing supper," which in old Coté street days was a Bacchanalian orgie, has become a love feast in which the Principal and even the Dean might participate. You are to be members of a polite as well as of a liberal profession and the more you see of life outside the narrow circle of your work the better equipped will you be for the struggle. I often wish that the citizens in our large educational centres would take a little more interest in the social life of the students, many of whom catch but few glimpses of home life during their course.

As to your method of work, I have a single bit of advice, which I give with the earnest conviction of its paramount influence in any success which may have attended my efforts in life—*Take no thought for the morrow*. Live neither in the past nor in the future, but let each day's work absorb your entire energies, and satisfy your widest ambition. That was a singular but very wise answer which Cromwell gave to Belle-vire—"No one rises so high as he who knows not whither he is going," and there is much truth in it. The student who is worrying about his future, anxious over the examinations, doubting his fitness for the profession, is certain not to do so well as the man who cares for nothing but the matter in hand, and who knows not whither he is going !

While medicine is to be your vocation, or calling, see to it that you have also an avocation—some intellectual pastime which may serve to keep you in touch with the world of art, of science, or of letters. Begin at once the cultivation of some interest other than the purely professional. The difficulty is in a selection and the choice will be different according to your tastes and training. No matter what it is—but have an outside hobby. For the hard working medical student it is perhaps easiest to keep up an interest in literature. Let each subject in your year's work have a corresponding outside author. When tired of anatomy refresh your mind with Oliver Wendell Holmes ; after a worrying subject in physiology, turn to the great idealists, to Shelley or Keats for

consolation; when chemistry distresses your soul, seek peace in the great pacifier, Shakespeare ; and when the complications of pharmacology are unbearable, ten minutes with Montaigne will lighten the burden. To the writings of one old physician I can urge your closest attention. There have been, and, happily, there are still in our ranks notable illustrations of the intimate relations between medicine and literature, but in the group of literary physicians Sir Thomas Browne stands preëminent. The *Religio Medici*, one of the great English classics, should be in the hands—in the hearts too—of every medical student. As I am on the confessional to-day, I may tell you that no book has had so enduring an influence on my life. I was introduced to it by my first teacher, the Rev. W. A. Johnson, Warden and Founder of the Trinity College School, and I can recall the delight with which I first read its quaint and charming pages. It was one of the strong influences which turned my thoughts towards medicine as a profession, and my most treasured copy—the second book I ever bought—has been a constant companion for thirty-one years,—comes *via vitæque*.* Trite but true, is the comment of Seneca—“If you are fond of books you will escape the ennui of life, you will neither sigh for evening disgusted with the occupations of the day—nor will you live dissatisfied with yourself or unprofitable to others.”

And, finally, gentlemen, remember that you are here not to be made chemists or physiologists or anatomists but to learn how to recognize and treat disease, how to become practical physicians. Twenty years ago, during the summer session, I held my first class in clinical medicine at the Montreal General Hospital, and on the title page of a note book I had printed for the students I placed the following sentence, which you will find the alpha and omega of education in practical medicine.

“The knowledge which a man can use is the only real knowledge, the only knowledge which has life and growth in it and converts itself into practical power. The rest hangs like dust about the brain or dries like rain drops off the stones.”

* There are two excellent editions of the *Religio Medici* available, the one in the Golden Treasury Series, MacMillan & Co., edited by the late Dr. W. A. Greenhill, the other edited by Dr. D. Lloyd Roberts, of Manchester, Smith, Elder & Co., London.

A movement is on foot to erect a memorial to Sir Thomas Browne in his native city, Norwich, subscriptions towards which will be received by Sir Peter Eade, Norwich.