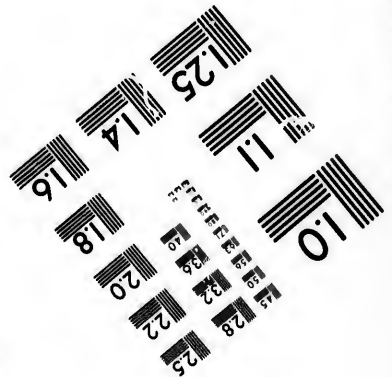
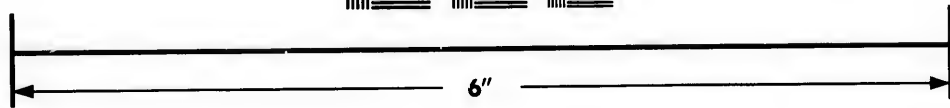
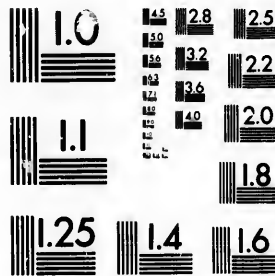


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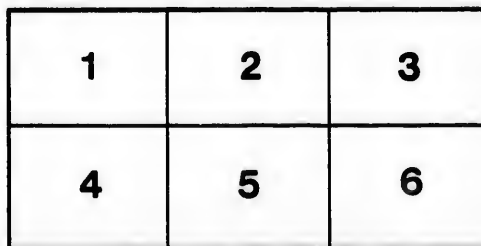
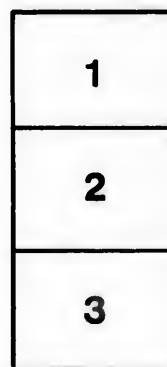
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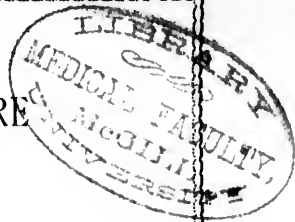
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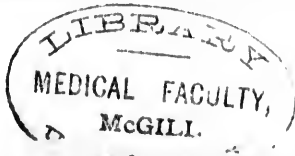
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BY

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PROFESSOR OF ANATOMY.

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INTRODUCTORY LECTURE

DELIVERED AT THE OPENING OF THE FIFTY-FOURTH SESSION OF
THE MEDICAL FACULTY OF MCGILL UNIVERSITY,
OCTOBER 1, 1886.

BY FRANCIS J. SHEPHERD, M.D., Professor of Anatomy.

Gentlemen—It has fallen to my lot to welcome you to these halls in the name of the Faculty, and I do so with the greatest pleasure. Students, new and old, we are glad to see you here, and trust that none of you will ever regret having selected this school as the one in which to prosecute the study of that profession which will hereafter be your life's work. We know that you have come to us, not that after having spent a certain period of time here you may be able to write M.D. after your names, for if that were the reason, other institutions might be selected where the degree could be obtained more easily and in a much shorter time, but that you may obtain the best medical education that the country affords. Any student among you who has entered upon the study of medicine expecting to have a good time and pass four years in comparative idleness is vastly mistaken. We are all workers here, and want no drones; if there are any such, we beg of them to go home and start life anew in some other sphere more adapted to their tastes and aptitudes, for here the environment will not suit them. To all who come determined to work and learn, we extend a most hearty welcome. Your four years will not be easy ones, but when they have ended and you have received your reward, you will feel yourselves

amply repaid for all your hard work and close application, and will find that having commenced life well, the obstacles which arise in the future will be the more easily overcome. One great mistake made by students is to work solely for examinations; of course, this aim should not be altogether neglected, but it should not be the only one, for examinations are not the end of all things, and the man who, during his apprenticeship, endeavors to get the best knowledge of his subject irrespective of the examination bugbear will be the one who will succeed best in after life. Remember, there is something beyond the examination, viz., the practice of your profession; examination is only a crude method of testing a man's knowledge, and by no means always a certain one. When I was demonstrator of anatomy, and knew all my students personally, I could have easily picked out those who were fitted to become final men from those who were not, and I often found at the examination that it was not always the best men that came out at the head of the list. In many subjects, the man with the best memory takes the prize, not the one who afterwards proves most competent to successfully practice his profession or conduct scientific investigations.

There are two kinds of students: book students and practical students. With the former, lectures and books are most popular; and with the latter, work which trains the powers of observation and develops the investigating faculties. Now, neither class is to be altogether commended, but all of you should endeavor to make a judicious mixture (a chemical, not a mechanical mixture) of the two, and success will surely follow. If you depend solely on your memory, you will find that memory will be developed at the expense of the reasoning powers and the acquiring of scientific methods of thought. It is much better to understand your subject than to remember it, to know the why and the wherefore, and not say such a thing is so because you read it in a book or heard it in a lecture.

Speaking about lectures, I might here remark that lectures should not be too much depended upon for the acquisition of knowledge; they are only aids to knowledge, finger-posts to show us the way. As Mr. Guthrie remarked many years ago, "No man can

be taught any practical branch of learning by lectures ; they can only point out to him what he ought to learn, and by giving him a general knowledge of the subject, enable him afterwards to work it out practically." Three hundred years ago Malgaigne said, "'Tis the custom of pedagogues to be eternally thundering in their pupils' ears, as if they were pouring into a funnel, whilst the business of the student is only to repeat what the teacher has said." I have frequently seen students who could describe parts accurately in a written examination, unable to recognize the same parts when placed before them in an actual dissection ; they could also glibly go over the points of diagnosis between a hernia, hydrocele and a varicocele, and yet, when confronted with these diseases in hospital, be unable to recognize any one of them. These men had developed their memory at the expense of their powers of observation, trusted too much to book knowledge, and too little to practical work.

In this college, it seems to me that note-taking has always played too great a part, and that much energy has been wasted on it which might have been otherwise beneficially and usefully employed ; the cause of this, no doubt, has been the examination bugbear and the idea that the professor only examines on the subjects treated of in his lectures, and that he prefers students who answer questions in his own peculiar way. Now, in my opinion, there are no lectures so valuable that it is necessary for students to make a verbatim report of them. What he ought to do is this : the evening before, he should, in a good text-book, make himself fairly well acquainted with the subject of the next day's lecture, and then, if the professor throws any new light, gives more information about it, or puts the subject in a simpler way, to note these points down, he should also endeavor to put down the most important points treated in the lecture. I remember when a student spending much valuable time and giving much labor for the sake of having full and legible reports of all lectures. I have seen the error of my ways, and think that the only good this labor did me was to qualify me at some future time for a newspaper reporter or a lawyer's clerk. If the taking of accurate

and full notes of all lectures delivered be such an important thing to the medical student, then why not include shorthand writing in the subjects necessary to be passed at the preliminary examination. Now that I am giving advice, it might be as well to say a few words to the men who, this year for the first time, are entering upon the study of medicine. The old students, I dare say, are not so anxious for advice and having already had their opinions crystallized on many subjects, it would be a difficult thing to alter them. Well, I need not tell you that you have a severe course of study before you and the sooner you set to work to overcome the difficulties the better, you should not take it easy the first year because the examinations are not so severe as in the primary or second year, but make up your minds to work as hard during the first session as in the subsequent ones, and if you thus make a good beginning you will find the work each year becoming easier and the interest in it increasing. Habits of work thus early acquired are likely to be lasting. If, at the end of the first year, you find you have no love for your work, it would be far better not to go on with it, for your future success is very problematical. In the first year, you ought to get a good grounding on all the primary subjects; you should pay great attention to your practical anatomy, histology and other subjects, which are taught by demonstrations. I should not advise you to attend the hospital at all during your first session. Your attendance there with your present want of technical and other special knowledge will be of but little service to you, and will take away much valuable time from the study of those purely scientific subjects, which will form the foundation of all your future knowledge of medicine, and for the acquirement of which the time at your disposal is far too short.

In all your studies you should strive after exactness. Whatever you learn, learn well, and do not be satisfied with a general or superficial knowledge. In subjects such as anatomy, histology, physiology, etc., do not depend too much upon your books; verify their statements by your own work. Your motto should be, "Prove all things: hold fast that which is good." When I tell

you to strive after exactness I do not wish you to sacrifice other sources of knowledge for it. I have heard it said that many able diagnosticians are poor therapists simply because of their too great exactness, for remedies occasionally do good whose exact method of action we do not know. I have said a good deal about work, but I do not wish it to be thought that I disapprove of play. Recreation is necessary to most people, and taken in proper amount, like some remedies, is of great service. As a rule, few students need to be advised to take relaxation ; many, however, need much stimulus and pushing on to get them to work. Take recreation in moderation, but do not let such occasions, for instance, as the Winter Carnival interfere with your work ; do not neglect your physical culture, and remember the old saying, "Mens sana in corpore sano." Join the University gymnasium, and do not neglect daily exercise in the open air. The importance of good food and fresh air cannot be too much insisted on. The necessary eight hours sleep should not be curtailed. Stimulants may be left out of the dietary as totally unnecessary. There is one kind of recreation which will prove of the greatest service to you in future when engaged in your profession, and one which is not sufficiently appreciated by students. I refer to the Students' Medical Society. Here you will have an opportunity of discussing various medical subjects and of reporting cases which you have seen. You will get into the habit of expressing yourselves more or less fluently, and of having your ideas and opinions exposed to the purifying fire of criticism. There is no one who cannot add to the entertainment of the meeting by stating some fact, reporting some case, and, if a first year student, describing some anatomical abnormality, etc. Students, by means of this Society, get to know one another and are stimulated to take a greater interest in the work of their future profession. I consider it one of the best accessory means we have of educating students. I advise you all to join the McGill Medical Society, to attend the meetings regularly, and let each one of you endeavor to make it a great success.

I little thought when s a fourth year student fourteen

years ago, I sat on these benches and listened to the first introductory lecture delivered in this, then new, college that I myself would, at some future time, have to perform a similar duty. Yet so it has happened. Prof. Wm. Wright, in the course of an eloquent lecture delivered on the occasion to which I refer, spoke of the changes which had taken place in the school since its foundation as the Medical Institute in 1824; he then congratulated the students and professors on the magnificence of the building they were to occupy, and also described what constituted a well-equipped medical school.

It might be interesting to compare the present condition of the Medical Faculty with that of 1872, when it, for the first time, possessed a new and spacious building for teaching purposes on the University grounds. I have in my hand the calendar for 1872. Compare it with that of 1886. The great improvement in appearance and increase in size is a very good index of the present state of this school, which has, like nearly everything else, been evolved from something lower in the scale. In 1872 there were 11 professors, 1 demonstrator of anatomy, and an extra academical lecturer on hygiene. In 1886 we have 4 emeritus professors, 14 ordinary professors, 3 demonstrators of anatomy, 1 demonstrator of pathology, 1 instructor in laryngology, 1 instructor in diseases of children, 1 assistant to the professor of chemistry, 1 clinical instructor to the Maternity Hospital, and 1 assistant to the professor of clinical surgery,—in all, 22 men actively engaged in teaching, against 13 in 1872. Subjects are taught in a manner unheard of in 1872. Take, for instance, the chair of the institutes of medicine, as it was then called. In regard to instruction in microscopic work, in 1872, we thought ourselves fortunate if we once in the year, after waiting our turn for no inconsiderable period, saw the circulation of the blood in the frog's foot. Now there is a special course on histology and the use of the microscope, which every student is compelled to take. In 1872 there was no pathologist to conduct post-mortems at the hospital, and all that a student afterwards knew of practical pathology he picked up from post-mortems hastily made by house surgeons. He could graduate

without ever having seen a post-mortem. It is true that our present Dean, Dr. Howard, at that time, in his lectures on the practice of medicine, took every opportunity to illustrate his lectures with fresh morbid specimens, but these specimens were necessarily shown at the end of the lecture hour to a crowd of students who jostled one another, and of whom only the most *pushing* could see and hear much; the modest, retiring, and, perchance, hard-working and thoughtful student went to the wall. Now, every student has himself to perform post-mortems under the direction of the demonstrator, and no one can possibly go out of this college altogether ignorant of practical pathology. In addition to this, there is a special course of lectures on the subject and a demonstration of specimens every week. In 1872 the lectures on pathology were crowded into the last two or three days of the session, and were included in institutes of medicines. It was fully understood that no questions would be asked on this subject at the examinations.

In 1872, gynæcology was not taught as a separate subject, and students had but few opportunities of seeing at the hospital any special work, though at that time everybody dabbled in gynæcology. Now this is changed, and all have instruction in that most important branch of modern medicine. In this school we do not endeavor to make you all gynæcologists, but we wish you all to know something about gynæcology—a subject which is so often used by charlatans to work on the pockets and credulity of the female public, who are now conscious to an enormous extent that they possess internal genital organs, the different positions and conditions of which, according to our most eminent authorities, vary as greatly as the figures in the kaleidoscope, though all have a family resemblance. In other subjects, although the change and improvement in the teaching has not been so phenomenal, yet progress has been continuous. The lectures on practice of medicine were as able, eloquent and instructive then as now. The same may be said of surgery, midwifery, materia medica, and anatomy. The method of teaching these latter subjects, however, has much improved, and the student has the advantage of becoming more

practically acquainted with his subject,—the teaching is now less mediate and more immediate, to use Mr. Herbert Spencer's words. In practical anatomy, much improvement has taken place. In 1872 we only had one demonstrator; now we have three. At that time a student put in his time in the dissecting room more to get his ticket certified than to learn anything, and he had no fear of a future examination testing his practical knowledge of the subject. The dissecting-room was used more as a room for gossip and smoking than work; demonstrations were few and far between, and the anatomy of the internal organs was completely neglected. It was only those who thirsted for knowledge and had the spirit of investigators in them who managed to learn anything. Now, the dissecting-room is a real work-room, where students are taught anatomy by frequent demonstrations, and where diligent dissecting goes on from 8 in the morning till 10 at night. No man can now pass through this college without a practical knowledge of anatomy, and before coming up for examination he must furnish satisfactory evidence of two years actual work done in the dissecting-room.

The improvement in the clinical courses at the hospital is quite as marked as the improvement in anatomy. In 1872, the principal clinical teaching was by didactic lectures in the operating theatre, with the patients in the wards. There was but little systematic bedside teaching such as now exists, and the clinical examinations at end of session were far from stringent, being more on the lectures delivered in the theatre during the winter than on the cases in hospital. Now all this is changed, and by a process of evolution has reached a high state of development. The daily clinical teaching is most systematic, and it is one of the boasts of McGill medical school and the Montreal General Hospital that nowhere on this continent is so much attention paid to clinical teaching, and in no other hospital have students such great clinical advantages. I speak from a personal knowledge of the various hospitals of the United States and Canada.

The curriculum has been much extended since 1872; at that time it was possible for a student to graduate after three ses-

sions spent at college and one with a doctor, which latter really amounted to nothing but paying a fee of \$50 or \$100 to the doctor for a certificate of a year's study. Now, four full six-months sessions are required and one three-months summer session. I hope the time is not far distant when a second summer session (after the first winter) will be compulsory, and when histology, botany, and practical chemistry will be taught in that session. In this way we will be able to do all the practical anatomy in the day-time, and so avoid dissecting by gaslight and the taking away from students the early evening hours which should be devoted to study in preference to the later ones as at present. Night dissecting and night lectures are survivals of an old custom, when students followed other occupations in the day-time. In the early days of this school lectures were only given before nine in the morning and after six at night; and up to a few years ago, chemistry was still an evening lecture. Night dissecting is all that remains of this pernicious old custom.

The six-months session is another survival of old apprenticeship days. There is no reason why medical students should be idle for six months in the year; many forget in one six-months what they learn in another. The way to avoid this too equal division of work and play, is to have compulsory summer sessions in which the more practical parts of the profession are taught, and the student is not lectured at to excess. In this way his powers of observation can be cultivated and the knowledge acquired in the lecture-room tested by actual practice.

But to resume my comparison of 1886 with 1872. Students now enjoy many advantages in addition to the ones already enumerated, which were not even thought of 14 years ago. They are instructed in practical physiology and physiological chemistry. They can take part in the very interesting and important experiments continually being undertaken by the able and enthusiastic professor of physiology. At the University Dispensary they have an opportunity of seeing special clinics in diseases of children, nervous diseases, and diseases of the skin. At the hospital they can attend special courses on ophthalmo-

logy and otology ; also, they can receive special instruction on laryngology and its allied branches. In summer they can attend courses on clinical microscopy, general microscopy, operative surgery, operative midwifery, operative ophthalmology, electro-therapeutics, clinical chemistry and bacteriology, without a knowledge of which latter at the present day a medical man is regarded as nothing worth. All these advantages are open to the students of 1886, and every one is invited to partake of the great intellectual and scientific feast which is yearly spread in so generous a manner, and with the digestion of which a moderate infusion of bacilli and microbes will not interfere but act as a piquante sauce. As you are aware the faculty has not been content with merely improving the curriculum, but the building itself has been almost doubled in its capacity, and, as regards laboratories, work-rooms, etc., has been arranged to meet the requirements necessary for teaching modern scientific medicine. A new Maternity Hospital is in course of construction in a convenient locality, and I am happy to announce that the day is not far distant when the old General Hospital will be replaced by one of greater size and of the most modern type ; we do not yet consider our course a perfect one or that the building cannot be still further improved in the future. It will be the perpetual desire of the faculty to introduce, as occasion offers, still greater reforms which will keep us abreast with the rapid scientific progress which characterizes the present century. He who imagines that the present state of affairs cannot be improved upon, or is sighing for the good old times, will never assist in that great advance which has during the last quarter of a century so remarkably distinguished medical and surgical science. Such people forget, or are indifferent to the fact, that the world moves, and will soon find that they are out of the stream ; stranded before half the journey is completed and like the wrecks one sees occasionally on dangerous coasts, serving as a warning to those that afterwards navigate the same seas. As with individuals so it is with communities, corporations and colleges—our motto shall ever be “ Excelsior.”

I should like to say something about the tendency of the

Colleges of Physicians and Surgeons of the various Provinces to restrict the number of students entering upon the study of medicine. It was publicly stated by a late president of the Ontario College that something must be done to prevent the over-crowding of the profession, and it was suggested, among other things, that the entrance examination should be made more stringent. The College of Physicians and Surgeons of Quebec have actually elaborated a scheme, which they hope to have confirmed by the Legislature when it meets, which, when enforced, will certainly have the effect of restricting the number of English students who will, in the Province of Quebec, be desirous of entering upon the study of the medical profession. The feeling seems to be this with the profession at present, "Now we are in, let us protect ourselves against too great competition by increasing the difficulty of entrance into the profession, so that the struggle for existence may not be so severe." This is a very narrow view to take of any liberal profession. Of course they are all over-crowded, but not with good men and earnest workers, for, as the saying is, there is always "lots of room at the top." The Colleges seem to think with Majendie, that "the doctor is often superfluous, sometimes mischievous, and occasionally fatal." They, of course, mean the doctor of the future, not the present. The inclination seems to be to increase the number of studies which are supposed to add culture to a man, such as philosophy (so-called), logic, metaphysics, belles-lettres, astronomy, geology, and even theology, and not to include those subjects the study of which are to be of benefit to the student in the after acquirement of his profession. Now, it is my opinion that the preliminary examination need not be of a very exalted or elaborate character, that a man who has a good elementary knowledge of mathematics, Latin, English composition and spelling (of which but the smallest amount seems at present to be required), and one modern language and some elementary knowledge of the sciences, such as biology, physics and chemistry, is fitted to undertake the study of the medical profession. Where we should be most strict and severe is in the after-professional examination. No man should be allowed to graduate or be licensed to practice

with the small amount of knowledge required by many of the Examining Boards. Is it not absurd that at the preliminary examinations in this province that some 50 to 60 per cent. of students (including B.A.'s from the best universities) are rejected annually, while dozens of men are admitted to the practice of the profession with the smallest modicum of knowledge of medicine and surgery? I am certainly an advocate of extending the scope and character of the preliminary examination in the direction of giving it a more scientific character, and think that physics, botany, biology and elementary chemistry should be subjects learned before entering on the study of medicine, but this extension requires time, and more facilities for teaching these subjects are needed in the ordinary schools of the country before they can be included in the compulsory subjects of the preliminary examinations.

I have another fault to find with the various boards—that is, the character of their professional examinations. The examiners are selected not on account of peculiar fitness or knowledge of the subject in which they examine, but because of some medico-political, territorial or other reason, and the feeling that the good things ought to be distributed irrespective of the fitness of the man for the position. I should advocate that no one who does not teach should be an examiner, for it is chiefly the teachers who are *au courant* with the progress of the more scientific subjects, and who know what students should be examined in and how the subject should be treated. I have heard of medical men in a neighboring province being selected to examine on such a subject as physiology, and who, a short time before the examination, cram up certain portions of a text-book used when they were students, and perhaps some 15 or 20 years behind the times, and then examine on these portions. I think this system an iniquitous one, and the sooner it is done away with the better. These appointments should only be given to the best men, and men who have some reputation in the subject on which they examine.

Before closing this fragmentary lecture, I wish to say something about the subject in which I am particularly interested,

and which I have the honor to teach--viz., Anatomy. I know that the opinion is commonly held that professors desire to make the most of their own subjects, and to unduly magnify their importance; still, I think every unprejudiced man who has thought out the matter will admit that anatomy is the foundation on which not only the superstructure of scientific surgery is built, but also scientific medicine. Dr. Wm. Hunter, in an introductory lecture delivered over 100 years ago in London, said, "When we hear any man of the profession talking of all the knowledge of anatomy that is necessary for a physician, and of as much as a surgeon needs to know, we cannot but lament the singularly hard fortune of his patients: first, in being sick or diseased, and then, in falling under the care of so ignorant a counsellor. Who is the man of practice and integrity that can lay his hand on his heart and say that he has not, in some case or other, had occasion for all his anatomical knowledge; and who has not wished at times that he had been possessed of more? Who, then, are the men in the profession that would persuade students that a little of anatomy is enough for a physician and a little more too much for a surgeon! God help them! They have it not themselves, and are afraid that others should get it." (*Hunter's Introductory Lectures, Lond., 1784.*)

Anatomy forms the basis on which all other sciences, as physiology, pathology, etc., are built, and without an accurate knowledge of it no man can hope to become a scientific practitioner of medicine. There is no royal road to learning anatomy, and no easy method. The student must rely principally on his own exertions, for by constant and thorough dissections only can any real knowledge of the subject be acquired. Books are useful in so far as they tell the student what he should see and look for, and lectures enable the student to get a general view of the whole subject and to appreciate its more scientific aspects; but the kind of knowledge which remains with you longest, and is of the most benefit in the after practice of your profession, can only be obtained by assiduous dissection.

Gentlemen, you can never learn too much anatomy, and you will probably never have so good an opportunity as the present

for acquiring a real knowledge of this vast subject; so work while you can. After you leave college you may be able to continue many of your studies practically, but your chances of studying anatomy will be few indeed. In practice, it is possible to get along without much knowledge of microscopy, practical chemistry, physiological chemistry, botany, pharmacology, and even bacteriology, but without a knowledge of anatomy and physiology, "the practice of medicine and surgery must degenerate into the mere empiricism of the quack." Anatomy is not the dry subject it is usually represented to be. Studied in the light of modern science, especially when taken in connection with development and animal morphology, it opens up many new fields of inquiry and puts us in the way of solving many of these problems which are exercising the greatest minds of the day. What an intense fascination there exists in seeking for the explanation of the existence of rudimentary organs and muscles "primæval heirlooms," as they have been called, is known only to those who make the study of anatomy a labor of love.

Again, there are many disputed points in anatomy and many old errors in the books which have been perpetuated for centuries, and which it would be well for some of you to look into. Every year shows us how human anatomy, which was once supposed to have reached its finality, is advancing: the true anatomy of the brain is yet in its infancy, and surface and applied anatomy are departments quite modern in their origin. The exact position and relation of many of the organs are being only now determined by means of frozen sections. But I must not say anything more of this great and fascinating subject, lest I should excite the envy of my colleagues by inducing you all to become anatomists.

In conclusion, gentlemen, I again exhort you to be earnest in everything you do, and avoid frivolous superficiality. To use the words of that greatest of all Books, "Whatever thy hand findeth to do, do it with thy might: for there is no work, nor device, nor knowledge, nor wisdom in the grave whither thou goest."

