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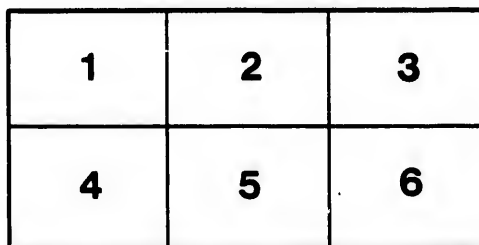
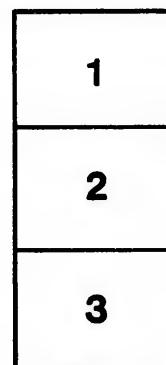
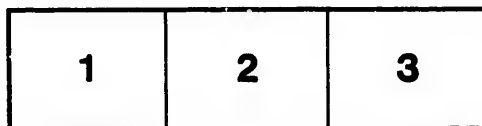
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On

Shepherd, F. J

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**ON THE TEACHING OF ANATOMY TO MEDICAL STUDENTS.**  
**INTRODUCTORY REMARKS ON THE OPENING OF THE COURSE IN**  
**ANATOMY AT THE MEDICAL FACULTY OF MCGILL UNIVER-**  
**SITY, SEPTEMBER 21st, 1900.**

BY

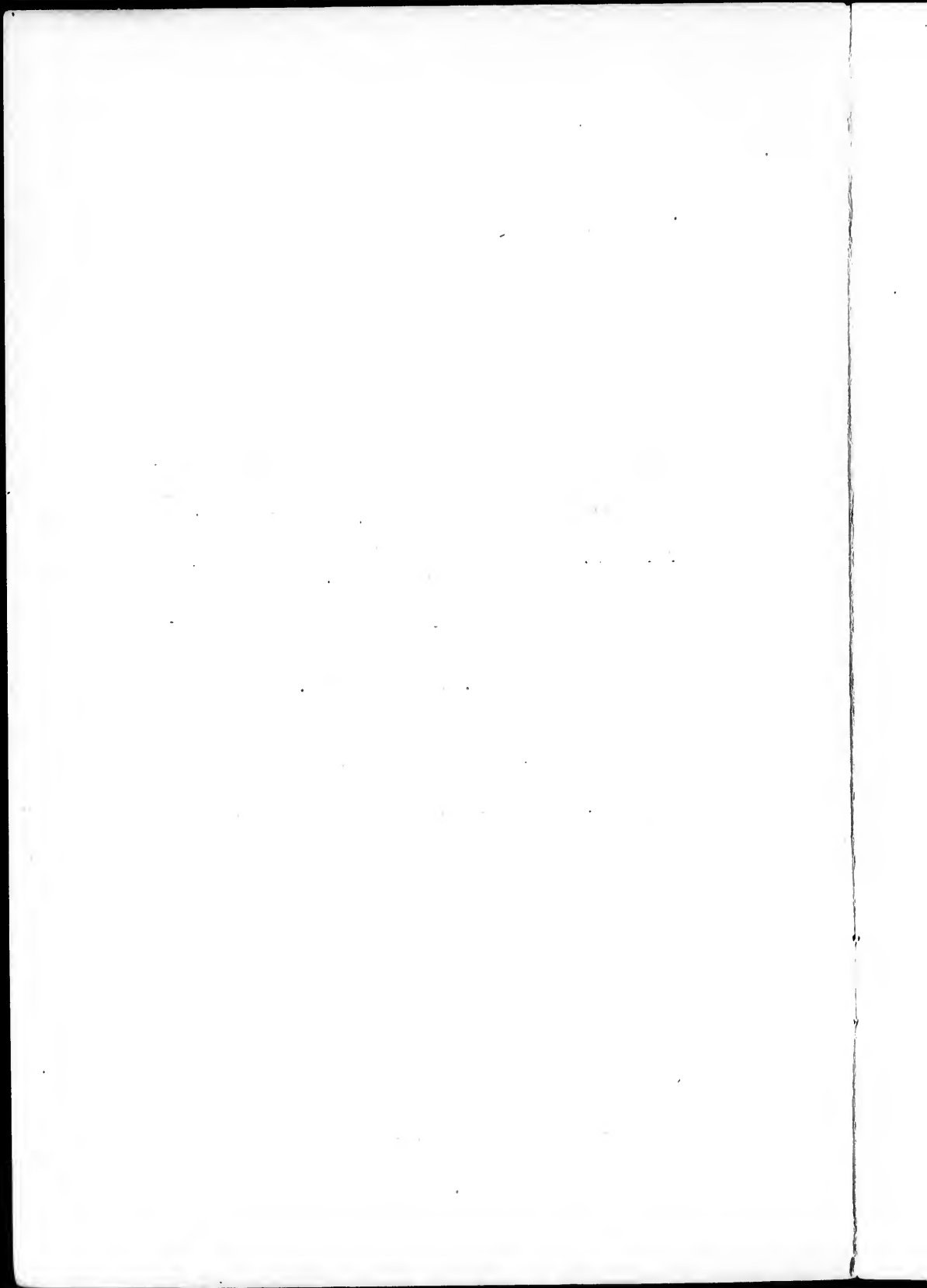
**FRANCIS J. SHEPHERD, M.D.,**  
Professor of Anatomy, McGill University.

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*Reprinted from the Montreal Medical Journal, November, 1900.*

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ON THE TEACHING OF ANATOMY TO MEDICAL STUDENTS.  
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After welcoming the new students and the old and giving some good advice, the lecturer then spoke on the subject of "Anatomy as a Science, and Anatomy for Medical Students." He said:—

The physiology of one vertebrate animal is exactly like that of another. Human physiology is not, one would say, specialised. But it is very different with anatomy—the anatomy of the human animal is very much specialised and his anatomy, for obvious reasons, has to be learned for medical and surgical purposes in a more exact and minute way than the anatomy of the lower animals.

Although approving of teaching anatomy from a morphological point of view when taught as a pure science, still, for medical students, with their multitudinous subjects and the yearly increasing amount of new work, a little morphology goes a long way. Of course it adds interest to the course, as does the introduction of comparative anatomy,—it clears up many obscure points and the reason of apparently useless structures is explained. For the more advanced students morphology has its uses. However, to the average students, who find it hard to keep up with the work gone over daily, the essentials only of anatomy should be taught, his memory should not be loaded with useless details, such as the anastomoses of arteries about joints, the minute description of such bones as the palate, wrist bones and many other points which will suggest themselves to the senior student.

It is argued that the learning of such things is a good discipline to the mind, but there are many more important things that may be dwelt on for that purpose. I always hold that the dissecting room is the place where a student should learn his anatomy. In the lecture room he is told how and what to learn, and now-a-days the lecture is more of a demonstration than anything else. The introduction of a beautifully dissected subject is useful to the student after the lecture, but to try and show a large class special points in the dissected subject is impossible. It is in fact a survival of the time when subjects were only obtained at long intervals, and when obtained, all the neighbouring medical

men were called together, and the subject was dissected and demonstrated before them.

Lectures should be demonstrative and explanatory, and should elucidate those points which are difficult to understand; here diagrams, blackboard drawings and lantern slides, are of use, and specimens may be passed around showing the points the lecturer wishes to emphasize. The occurrence of anomalies, the bearings of comparative anatomy and embryology on the points alluded to, should be noted, in order to awaken the interest of the student which is usually dormant.

After osteology, I consider the nervous system and the viscera the most important. A medical student cannot know too much about the viscera, both as an aid to the study of physiology and as the most necessary part of his preparation for the diagnosis and knowledge of disease. He should know the position of the viscera so well that in looking at a patient he should be able to picture to himself exactly how they are lying and what relation they bear to one another, as if in fact he had a skiagraphic eye.

The anatomy of the blood-vessels, save from a surgical standpoint, has ceased to be of such importance as it was. When the chief major operations were the tying of blood-vessels, special attention was paid to this branch of anatomy, but now that operations are performed daily on all the cavities and their contained organs, the ligature of blood-vessels is not regarded with much dread. Anæsthesia and antiseptia, together with the modern means of arresting hæmorrhage, have relegated the surgery of the blood-vessels to a very subordinate position. Of course it is most important to know all the main vessels and their relations, but the knowledge of the smaller vessels and their anastomoses is not of much importance, especially as it will probably exclude the acquisition of other matters more essential.

Of late years the anatomy of the lymphatics has become more and more important, and the intimate bearing this system has in the spread of malignant disease has been well shown of late by many surgical observers. A knowledge of the situation of the glands, and the course of the lymphatics entering them, is necessary to every one of you who expects to practice medicine and surgery.

The nervous system, within a few years, has much widened in importance from a practical point. The knowledge of diseases of the nervous system has grown apace and operations on the greatest nerve centre, the brain, are not uncommon, and are often brilliantly successful.

The importance of knowing the action of muscles and their nerve supply, need not be dwelt upon, as it is so self evident. So you see there is still a good deal of anatomy that is essential, though many of the older ideas about it have become obsolete.



Still medical students now-a-days have so much to carry in their heads that I feel when teaching anatomy that only such points as will be of real service, and a knowledge of which is absolutely necessary, should be dwelt on with any great minuteness. It is the average students I am now alluding to, for they will form in the future the chief bulk of the practitioners of the country. The fact is, the amount of knowledge that it is necessary to acquire for a medical degree has increased with so great rapidity that impossibilities are often expected, and it is overlooked that the brain power of the student has not increased, *pari passu*, with the amount of knowledge required.

In the dissecting room your work will be supervised by demonstrators and the student will be examined from time to time on the part dissected, and special demonstrations will be frequently given by the various demonstrators to small classes, on the viscera, organs of special sense, brain, etc. The first year student should endeavour to most regularly attend the demonstrations of the teacher to whom he is allotted, and should before Christmas be very familiar with osteology.

Now I wish to impress on you all the necessity for individual work. Rely on your own exertions and find out things for yourselves; verify your dissecting manuals by accurate observation; do not be always running after the demonstrators to have your anatomical work digested for you. Everything you work out for yourselves will be much better remembered than what will be told you by the demonstrators. Feed yourselves! Don't rely on spoon feeding! If you do you will be sure to suffer from anatomical rickets or scurvy. Hear what Solomon says, "In all labour there is profit, but the talk of the lips tendeth only to penury."

In this college histology is taught separately from anatomy or physiology—a questionable proceeding I think—and embryology is an appendage of physiology; however embryology is from time to time touched on in this course in a brief way and the development of blood vessels, organs, etc., is shortly described before discussing the organ itself.

It seems to me that in teaching anatomy to medical students one should always keep in view the use they are afterwards to make of their knowledge; hence, one should not insist on the acquisition of certain obscure and difficult but interesting points of no particular value—it is difficult for the average man to retain even a small part of what he is taught, and for this reason the useful should predominate over the interesting but useless matter. The chief object of all medical teaching is to make the student into a good practitioner, not an anatomist, a chemist, a pharmacist, a biologist or even a bacteriologist. In every class there are certain men of more capacity and industry than others,

these men I am always anxious to encourage and lead into the higher walks of anatomy, and I urge them to make independent investigations and interest themselves in morphology. But to the average man (to whom I have so often alluded in this address), morphology must take the place of something else which is more useful. I often find a student will retain a smattering of morphology of the shoulder girdle while he will fail to answer the simplest question on the liver and brain, and not be able to find the healthy appendix in the cadavre while he can tell all about the labyrinth of the ear.

The longer I teach the more I am humbled and the less pride I have in my capacity as a teacher, and the more I wonder at the small amount of receptivity of the average man; many apparently absorb knowledge readily, but when squeezed little comes out. Perhaps they might be compared to casks in which the spigot is carefully closed but the bung *hole* is left open.

I speak not only as a teacher of anatomy but as a practitioner, one who has daily to apply his knowledge acquired in the dissecting room and one who is also a teacher of surgery in the hospital wards, and I say this, and I wish to impress it upon you, viz: that I and my colleagues are daily amazed at the small amount of anatomy retained by a fourth year man. I am frequently astonished at the gross ignorance of men who did well in anatomy in their second year and who now, when the time has come to apply that knowledge, are weighed in the balance and found wanting. I wish to impress upon you the importance of retaining all the practical knowledge of anatomy you can. When you have passed your second year examination, don't, pray, throw away your anatomy as you would a coat on the approach of summer! Remember that winter will come when you will need your coat, or that the hospital wards will have to be attended, where in the diagnosis and treatment of disease you will want all the anatomy you have ever learned. I never yet met any man who knew, or thought he knew, too much anatomy. So endeavour all you can to keep up the most practical parts, at any rate, of your anatomy.

I have conversed at medical meetings and other places with numbers of intelligent and thoughtful practitioners, and their daily regret was that they had not more time when at college to devote to the practical study of anatomy, or that they did not more fully take advantage of the opportunities that were offered them. This question of time for practical anatomy is becoming yearly more important, for with advancing science, new subjects (and the newest are always the most important) are constantly cropping up and old ones are developing, and more and more demands are made upon the student at the expense of anatomy.

It is sad to think of anatomy being pushed into the background, but so it is. The study of the most practical and daily useful of all subjects to the practitioner of medicine, is having less and less time given to it, notwithstanding the extension of the courses.

The experience of years has considerably modified my views as to the teaching of anatomy. Teachers of anatomy now in the most modern medical schools are too much specialised, as are the teachers in the other primary subjects, and though it is perhaps heresy to say it, if pure anatomists would take an occasional hospital course, it would do them good and give them much insight into the needs of medical students.

I beg of you all to make the best use of your privileges and opportunities while you may, be thorough in all you do; do not slur over your work, and do not work for examinations only, for they are not the end of all things—work to know the subject and then you need have no fear of examinations.

