A CRITICISM OF OUR MODERN TEXT-BOOK OF ANATOMY

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It may be claimed that the criticism the writer is about to make applies more to the previous training of the medical student in high schools and college than it does to the text-book of anatomy, but even admitting that it does, there is no reason why the authors of text-books should not consider the conditions as they are. It seems to make but little difference whether the student is a college graduate or whether he has had but two years of college training, the fact remains that he does not know the meaning of most of the names in the anatomical terminology. It is no exaggeration to say that even such simple words as *tuber*, *sartorius*, *buccinator* and even *caput*, do not convey anything to the student. Latin and Greek are taught as methods in the high school and college and little stress is laid upon the importance of the vocabulary that the student of these subjects should naturally acquire. It is evident that he forgets the vocabulary in order to leave his mind more receptive for such subjects as mathematics, chemistry and biology. It is deplorable that most students who intend to study medicine do not learn enough Greek to be able to at least read the Greek characters. However, it is not within the scope of these remarks to suggest reforms in the early training of our students; it is the writer's intention to merely call attention to the status quo, and point out where our present text-books fail to attempt to remedy the evil caused by the early training of the medical student.

Four hundred years ago, Jacobus Sylvius, following the example set by Galen, gave names to most of the muscles of the human body. In doing so he considered their origin (*brachialis*), their structure, (*biceps*, *membranosus*), their shape (*serratus*), and their size (*magnus*, *brevis*). Previous to his time numerals were applied. It goes without saying that it made the memorizing of anatomical terminology considerably easier. That Sylvius should have used Latin and Greek words is evident. Latin was the language of the learned, and all scientific treatises were written in Latin. From Hippocrates he took the Greek words. In those days every student understood the meaning of the terms and it is unlikely that any should have made the mistake of calling the *serratus anterior*

muscle the latissimus dorsi, as some of our students do to-day. Yet most students would resent the inference that they do not know the meaning of the term latissimus.

What is the condition of affairs to-day? It has been the writer's habit frequently to ask the student the meaning of the terms thyreoid, ilium, azygos, etc., and of prefixes, mesa, meta, supra, semi, etc. The ignorance displayed by the student was sometimes amazing and one wonders how it was possible for him to graduate from high school, let alone college. Ask a student of average ability to demonstrate the extensors of the wrist and fingers. He will probably do so in the following order: extensor carpi radialis longus, ext. carp. rad. brevis, extensor digitorum communis, ext. digiti quinti proprius, ext. capri ulnaris. Make him begin his demonstration on the ulnar side and see the result. It has the same effect as asking a person to say the alphabet backwards. This means nothing else but that the student has memorized the muscles in a certain order, and he would be far better pleased if, instead of having long Latin names attached, the muscles were known as muscles I, II, III, etc. Now in the cases cited there is no name which ought to leave any doubt in the student's mind as regards its meaning, and a demonstration ought to be very simple provided the muscles have been dissected out from their origins to their insertions. The student, however, has so accustomed himself to take most of the names found in the anatomical terminology as so many meaningless words, that he even ignores the meaning of those which have been anglicized and are used by the layman. Thus the term fascia is defined by the student, and unfortunately by a number of anatomists, as a layer of areolar connective tissue. The derivation from the Latin fascia meaning band or bandage is entirely lost sight of, although it gives us the true meaning of the term. Pertioneum is another instance. Let the student know the derivation, which means to stretch around, and he will not get absurd notions of its being thrown into folds without the intervention of some organ or other structure. Let the student adhere to the idea of "stretching" and many wrong impressions will be dispelled. The derivation of the term oesophagus explains its function, of parotid its position, of thyreoid its shape, etc.

The result of this ignorance about the derivation of words is far-reaching. In the clinics the same student may characterize a condition whose name ends in "itis" as a swelling, and the meaning of such important prefixes as haemo, rhino, ileo are absolutely lost to him. He must learn the name of every disease just as he would the name of so many persons. It never occurs to him that about 90 per cent of all the names are descriptive of the disease. Even if most of the blame of this condition is to be laid on the high school and college, there is no valid reason why we anatomists should not begin with a training that is of such vital importance. We have other duties in the dissecting room besides the teaching of anatomy, such as training the student's power of observation, his self-control, his tactile sense, and trying to inculcate a critical or scientific attitude. In a word, we strive to make the student fit to enter upon the study of medicine. It seems but a small additional

duty to make the student realize the importance of word-derivation. To make this the subject of a lecture-course is not feasible with the present crowded schedule in our medical schools. It is sufficient for the instructor to repeatedly call attention to derivations, provided the student can find a reliable source of information. What would be simpler than to have this information incorporated into our text-books. It was done in some of our older text-books. The omission is probably due to the publisher who is instilled with fear at the very sight of a Greek letter.

The conditions in Germany are far different. It is attributable partly to the better elementary training in the classic languages and partly to the custom prevailing among the authors on anatomical subjects to use German instead of Latin names. There is no reason why we should not follow the example of our German confrères in at least the latter respect. Why not speak of the tailor muscle, the straight abdominal muscle, the two-headed muscle, the calf-muscle, the medial skin nerve of the fore-arm? It is evident that it cannot be carried through as consistently as is possible in German, because we have but comparatively few Anglo Saxon roots to build upon. Yet the interspersing of a few of such terms will take away a great deal of the oppressing formality of the present text-book and make it far more pleasant reading matter for the students. If any one should doubt that Anatomy can be made the subject of most delightful literature he ought to read the text-book of Hyrtl.

The diadactic importance of these suggestions cannot be over estimated. The student will lose that antagonistic attitude toward the subject of anatomy because this attitude is only bred in ignorance. To the average American student of Anatomy at first, especially if he begins with a lecture course in osteology, means merely the memorizing of numerous names. The instructor speaks an unfamiliar language,. With the aid of our next text book let the student's attention be called to common prefixes and suffizes, and the derivation of terms. His horizon will be widened immediately, he will use the terms with greater assurance and familiarity and incidentally learn something of the history of anatomy.