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Etymology: A Plea for Its Use in Early Education

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High school teaching, high school science teaching in particular, is an art! Those of us in so-called higher education appreciate the wonders of the art. We feel especially appreciative of it after Career Days, Visiting Scientist chats, and observing annual teachers conventions. Frankly, my bent is not of this art!

However, I do offer an idea to these artists of secondary education. I would suggest they increase the exposure of students to the values of etymology. My belief, based upon watching numerous students mature at Iowa State University, is, if etymology were stressed in primary and secondary schools, more older students would feel less burdened with so-called big, scientific names as well as nonscientific terms. The "innominate bone" would be recognized simply as the "unnamed bone"; "duodenum" would mean "two-ten" referring to the twelve-finger-width of this part of the small intestine; the "brachiocephalic artery" when its etymology is understood obviously courses to the arm (brach-) and head (ceph-). The etymology of these words helps a student understand them from his initial introduction to them. Furthermore, he does not have to memorize them mnemonically.

In truth, he does have to exercise

rote memory, for awhile at least. He must learn the basic Latin and Greek word roots. For example, he must remember that "leuk-" refers to "white," "chrom-" refers to "color," and "tom-" refers to "cut." However, in learning these and other roots he should realize that once he learns them, they will mean the same wherever encountered. Knowing this, a student's spelling as well as his understanding of what he reads should improve.

College students complain about the length of scientific names and terms. They ask why do they have to learn these. One answer is that many scientific names and terms were propounded to help anyone remember an organism or a structure. For instance, from the generic name *Osteodontornis* a zoology student who is slightly familiar with etymology can determine the answers to three questions: Plant or animal? Peculiarity of this plant or animal? Extinct or extant? Extracting all this information from just one term indicates somewhat the value of etymology. Because the stem "osteo-" (osteopath) is commonly recognized, a student may know that this part of *Osteodontornis* refers to bone. This entire term, therefore, refers to an animal. The second stem gives the clue to what is peculiar about this animal.

"Dont" refers to "tooth" as in "orthodontist," a dentist specializing in straightening (ortho-) teeth. In fact, the word "dentist" may be an accepted misspelling of what should be "dontist." The last stem in *Osteodontornis* is modified from "ornith-" as in "ornithology," the study (-logy) of birds. So, this so-called long word refers to a bone-toothed bird. Such birds have been extinct for a long time. All this information on the background of this animal comes from only one word.

Etymology not only improves understanding and spelling, but it has other practical values. More than one Ph.D. candidate has passed his final examination because he understood some etymology. If asked where to look for *Osteodontornis*, because of his knowledge of etymology, he would never answer "in a tree"! Younger students also could benefit from this "trick of the trade."

Etymology has a side benefit for many people, students and nonstudents alike. It provides intellectual amusement. The word "osteopath," for instance, includes not only "bone" (osteo-) but the stem referring to pain or suffering (-path); hence, "osteopath" means "suffering bones"! The term "home economics" provides the knowledgeable reader with a smile inasmuch as it is a stuttering word. The suffix "nomic" refers to "name" as in "nominate." The prefix "ec-" refers to "home" as in "ecology," so "economics" literally means "name the home." Yet, popular usage puts the word "home" with "economics" which, literally translated, redundantly says "name home home"!

Many people believe that etymological information is of no interest to them. At the same time they say they do not understand words such as "trichrome." Yet, they probably do realize that the prefix "tri-" means three. If they knew the meaning of "chrome," they would know the meaning of the entire word. Because "chrome" means "color" (even in "chromeplate") trichrome refers to something that is three colored. Less well-known words, such as "uriniferous," can be understood by the person who knows etymology. The "-fer-" is a corruption of the root "phore" meaning "to bear or carry." Hence, uriniferous tubes carry urine.

Everyone knows that "supercalifragilisticexpialidocious" is a nonsense word. However, one word nearly as long which not only makes excellent sense but which illustrates the thesis of this article is "hysterosalpingo-oöphorectomy." The etymological analysis of this word is tom - cut; ect - outside; phor - carry; öö - egg; salpingo - oviduct (Fallopian tube); hyster - uterus. Together these word roots literally mean "to cut out the carrier of the egg, the oviduct, and the uterus." This surgical process is followed when a veterinarian spays a female animal.

Perhaps the major drawback to the benefits of etymology is the time and effort consumed in building a vocabulary of word roots. But, the more roots in one's vocabulary, like any language, the more proficient is the person; the more time available, the more word roots learned. Therefore, the student should be as young as possible when exposed to this ma-

terial. And, that is my plea. Start early! Start early to teach these word roots to students. Teaching these roots need not, perhaps should not, be done as separate units. However, each teacher to his own method as long as this material is taught. But, someone will say that many words are too long and can not be learned by young people. I was told this during my early years in teacher education. And my answer is short: nonsense! Someone suggested that we should say "little animals" instead of "paramecium." To test this hypothesis I taught our 3-year-old son *Paramecium multimicronucleatum* (do you know a longer scientific name?). He could say it, and he knew to what it referred.

It seems well established now that children can learn and retain far more information than we had thought previously. For instance, how many years ago would we have thought of teaching calculus in senior or junior high school? Would you have taught RNA and DNA in junior high school ten years ago? Yet, both of these subjects are being taught as mentioned. So why not expose these students to the actual terms they will use as college students or as men and women on the street? Give them the advantages that etymology offers. Give it to them *now* along with their history, biology, mathematics, art, and yes, even with their athletics and band.

Apparently, the classical languages, Greek and Latin, have all but disappeared and are taught in few secondary schools. This deletion from these curricula makes it even more important that etymology be taught somehow. It should be taught, at least

theoretically, as soon as a student is aware of the fact that not everyone in the world speaks American (English?).

One point to be emphasized whenever etymology is discussed should be that Latin and Greek roots and stems are used for practical reasons and not because they are languages better than English, French, or Russian. These two old languages are the basis for many modern languages and, hence, are well-known throughout the civilized world. Latin, in particular, and classical Greek as well have not changed since they themselves were popular, modern languages. In turn, this means that they do not change with usage such as the English language which on the west shore of the Atlantic Ocean has evolved into the American language. In modern languages today one word means one thing while tomorrow because of current usage it may mean something entirely different (in American, the word "bread" for instance). However, this metamorphosis of language is not true of classical Greek and of Latin. They are not used popularly today; currently they are dead and do not change. The old Greek word "logos" to Aristotle meant "to study or discourse upon" and it means the same today; the word root "phore" meant "to carry or bear" and it means the same today.

"Etymology," meaning "to study the derivation of words," is a science which can benefit us all, nonstudents, students, and teachers. It will benefit the teachers by helping them to teach; it will benefit the students by helping them to learn. Let's make this benefit available especially when the recipients are young.