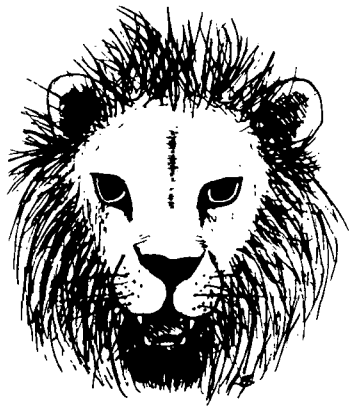
Editorial

Names and Other Symbols

The words in this and other printed media are just a small sample of the present state of the ongoing evolution of language. Technical languages such as that of orthodontics are a conglomeration of bits and pieces from various technical areas, all patched onto a central core of more-or-less widely recognized words.

Even the core varies from time to time and place to place, but what especially interests us as dentists and orthodontists is the globs of professional jargon that we hang onto that core. Some of that jargon is our own, and some is adopted and adapted from other disciplines; but whatever the source, we still depend on it for our professional communication.



*Who said **canine**?*

There are risks as well as benefits in making up one's own language, but it's our language and our problem. The risks go up when many different individuals are casting about for words for the same things; duplication and ambiguity are inevitable.

Two Types of Words

Some words in the specialized vocabularies are unique, put together for specific applications. They are usually assembled from other words, often from foreign or archaic languages. They may or may not be decipherable through an analysis of their components. They are seldom ambiguous.

That unambiguous character, that uniqueness, is a most important attribute of technical words.

A second category consists of words pulled out of the common language pool for our own special needs. These are the risky ones. They look familiar, and that familiarity can be a trap to someone outside the circle of initiates who understand their special meaning.

We in dentistry share a wide assortment of professional jargon derived in both ways with each other and with allied professions. In a Journal such as this we must try to use the words and terms from either group that will carry the author's

message as clearly and unambiguously as possible.

Two most important subjects in orthodontics are teeth and cephalometrics, and these areas present us with some interesting problems and options.

Teeth

Common tooth names are inconsistent, ambiguous and sometimes amusing.

Teeth have been named after their function, appearance, position, animals, other anatomical structures and even such vague concepts as "wisdom." As orthodontists, we are concerned mostly with human teeth; this narrows the field a little, but we still have to face some decisions.

Incisors and molars

Incisor and *molar* names are clearly descriptive of the functions of those teeth in the human. *Incisors* cut, and the name certainly fits. *Molars* grind, and again their name describes their function.

That ends the list of logical names for human teeth, but even those names fall short in the animal world. Herbivore incisors are used more for grasping than for cutting. Canine molars are anything but grinders; their sharp, jagged edges make them far more efficient cutters than the human incisors.

Cuspids

The functions of the teeth between molars and incisors are less clear, and their names reflect the confusion.

Sometimes fame requires nothing more than being in the right place at the right time, and that appears to be the basis for one of the common names of the third human tooth from the midline. Surely it must have been the presence of a pet dog that provided the inspiration for calling that tooth a *canine.*

While this tooth is very conspicuous in the canine species, they certainly have no monoply. If that early writer had a pet cat instead of a dog, we might now be talking about the *feline* tooth, and under different circumstances many more exotic creatures might have vied for the name of this most conspicuous tooth.

The human analog is a poor imitation of most of those animal versions. In fact, modern humans usually dislike the appearance of those teeth that exhibit even a modest resemblance to a true canine or feline shape. We actually use the adjective form of the name in a derogatory sense when we speak of a "canine appearance."

Even the colloquial *eye tooth* is no less descriptive, and it does not carry such unpleasant connotations.

The alternate name of *cuspid* clearly describes the form of this tooth as it is found in the human. This is the only tooth with a single cusp, so the name is descriptive, unambiguous and carries no negative connotations.

Bicuspids

The comparable name for the next two teeth is equally descriptive—two cusps make *bicuspid* a literal description of those teeth.

The other popular name, *premolar,* is one of the strangest hybrids among the tooth names. The prefix *pre* relates it to the molars that lie distal to it, while the specific identifiers *first* and *second* that are used to identify individual teeth relate to the midline.

We count from the front for the first word and from the back for the

second! The second premolar occupies the first pre-molar position, while the second pre-molar tooth is called the first premolar. In less technical applications such illogically ambiguous names would be classical subjects for comedy routines.

Preferred Names

Trying to fit the same names to all species is a hopeless effort. Shapes, functions and numbers vary so much that we are usually left with a series of arbitrary, ambiguous compromises.

For cross-species identification, we can still use broad categories such as I, C, P and M and number within the groups, but that is too restrictive within species where we like to use individual tooth names. If we want to go beyond letters and numbers, and apply names that already have widely understood meaning in the language, it seems appropriate to use names that fit the teeth in question.

We will leave *eye tooth* and *wisdom tooth* for the popular press, and *premolar* for other disciplines. The preferred names for human teeth in this Journal are *incisor, cuspid, bicuspid* and *molar.*

Cephalometrics

Cephalometrics can be an even more confusing area of terminology. An effort is made to define less familiar terms within each article, but we do assume some reader familiarity with commonly-used landmarks in order to avoid endless repetition of definitions.

Terminology is standardized as much as possible within the framework of authors' preferences and the broad differences in subject matter and sources of articles.

Consistency is most strictly observed in the conventions for describing lines, planes and angles. These are not always easy to follow in printed form, and we do not want to burden readers further with a need to learn a new system in each report.

Points

Cephalometric points are usually abbreviated with a single capital initial, or with a capital letter followed by small letters. Two capital letters are used only when they represent two separate words. The single letter *P* is reserved for Porion, while Pogonion is identified as *Po* or *Pog.*

Lines

Lines are identified by points or by name. Where possible, they are identified by specific points joined by a hyphen. The hyphen, which is itself a line, is symbolic of the line joining the two points. The terms S-N and A-B represent lines joining Sella with Nasion and A with B.

Planes

Most cephalometric planes are viewed from the edge, so they look like lines on an illustration.

It is important to differentiate between a one-dimensional line and a two-dimensional plane. A line can be defined by two points, while a plane requires at least three points for its definition. *Facial line* is used in preference to *Facial plane* for the line that connects Nasion with Pogonion.

Planes are often known by name instead of by the points that define them. These are abbreviated as appropriate, often using capitalized initials for planes named with more than one word. The Mandibular

Plane and Frankfort Horizontal are abbreviated *MP* and *FH*.

Angles

An angle is formed by the intersection of two lines. In cephalometrics that intersection is often outside of the field of view, so we need different notations.

The most straightforward situation is where two lines intersect inside the picture. If both lines are defined by points, and one of those points is the intersection forming the angle, we need only combine our identifiers for the two lines. For example, *S-N-A* represents the angle formed at Nasion by the intersection of lines S-N and N-A.

When the intersection is outside the illustration, or one of the lines is identified by name rather than by two points, we use a diagonal slash mark / to indicate the angular relationship between the lines that it separates. The angle between S-N and the Mandibular Plane is represented by *S-N/MP*. The angle between the Mandibular Plane and Frankfort Horizontal is represented by *MP/FH*.

Those are some of the conventions used in this Journal, but as we said in the beginning, language is continually evolving. There will undoubtedly be changes and additions as we go along. Since the objective of all this is to ease the burden on the reader in understanding the author's message, we always welcome input from our readers and the authors that we serve.