

Clubs, quips, phrases, and hype: Musings for the new millennium

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In our euphoria as we enter the new millennium, it is important that we display complete candor and objectivity. It is a well-recognized phenomenon that among learned academic groups, there are clubs and cliques that gather to expound on their own ideas as led by notable gurus to the profession. These groups often have a religious fervor, superior attitude, and the trappings of a cult. They are often closed to ideas differing from their own, and merely belonging to a group obviates the need for scientific rationale, evidence, and proof as is typically presented in the literature. In this vein, one prominent Angle Society founder, leader, and academic once intoned to his students, "Don't quote any other sources of information. The only true research comes from this Society." These informal "clubs" are usually associated with the invention of a specific appliance type and diagnostic process, vocabulary, or jargon, which then identifies the group or club by technique, language, or belief.

As an example of this group think, I was often stunned by the explanations offered as an excuse for knowledge during the years I spent as an examiner for the American Board of Orthodontics. When questioned how the cranium, face, and mandible grew, one reply was, "as a gnomonic spiral from the foramen ovale, like a chambered nautilus!" Alas, this was a serious reply and credited to a well-known guru, but the answer was totally incorrect, lacked reason, and was not supported by any known studies. Relationships of the face, which are made to fit the "golden rectangular standard," were also dubious.

Today, there are those who explain the dental arch as "Ponts Index," there are those who wish to expand all lower premolars to 34 mm, and there are those who wish to stimulate the bones of the face and jaws to grow to "the patient's genetic potential." Unfortunately, Ponts Index has been proven wrong in scientific studies. Second, expansion of all lower premolars to 34 mm denies



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the individuality of dental arch shape and size and differences in tooth size. Finally, it is not established how one determines a patient's genetic potential and what criteria are used to know when such has been achieved. We are also subject to another current myth that is supposedly based on esthetic concern: "the buccal corridor." Its consideration is used to justify expansion and to use a certain "patented arch shape," which will guarantee that the buccal corridor will not have black triangles in the corners of the mouth during smiling. But, it must be realized that almost all of these dark triangles appear only in patient photographs and can be corrected by using a different type of flash on the camera.

In addition to a "culture of beliefs," we also have been subjected to catch phrases that expound unfounded notions but still become part of the orthodontic vocabulary! We hear speakers at forums use a new orthodontic jargon, that they have "de-compensated" a malocclusion, or have "compensated" a malocclusion. Who has

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not heard that surgery was done on a patient to prevent the “radical” extraction of teeth and to preserve the “nasolabial angle”? The phrases, “decompensation,” “nasolabial angle,” “chin line,” “neck line,” “buccal corridor,” etc, have become catch phrases, demonstrating knowledge about the superfluous, to allow one’s acceptance into a group.

The “fracture prone profile” has often been cited as a reason to do early or preventive orthodontics. Yet, a study done at USC indicated that this was an observational fallacy. When maxillary incisors are fractured while they are protruded, it is easy to believe that the cause of the fracture is due to the protrusion. However, if they are retruded and the incisors are fractured, then it is an unfortunate accident!

The jingoism of the profession also includes such words and phrases as “deprogramming of the patient,” with a suitable appliance to do just that! However, the question must be asked, “How do you know when the patient is “deprogrammed.” This pseudophysiology is based on the action of muscles. The object is to determine the true centric relationship to habitual occlusion.

One often hears the word “development” instead of “expansion.” Expansion is a dirty word. I once heard a speaker who had his name attached to broad arch forms exclaim, “These new wide arches are used to develop the arch form to the genetic potential of the patient and to fill the buccal corridor until tissue adaptation takes place.” Can this be gibberish? What has really been said? Is development synonymous with expansion and instability? The tissues do not adapt well!

In addition, there is much made about the word “camouflage,” in the sense that teeth are not placed properly, but rather, a “camouflaged result” is made. This was once called a “compromised result.” Alas, is the French alternative a true synonym? Too little attention is now being paid to diagnosis and the goals of treatment. A mouth mirror handle extended from chin to nose is often sufficient to decide when to extract teeth or not to extract.

We must ask ourselves if it is indeed necessary to “mount” all cases. Many of these “mounted” cases do not seem to have better function, nor stability, than the average orthodontic case. Many of these “mounted” cases, as displayed to ABO, still have slight Class II malocclusions. The explanation for the Class II is to have a better canine rise. Often the result is canine trauma. Only when the slope of the condyle and canine contact are made together, without trauma to the canines, is true canine rise permissible.

At the American Board case reviews, we have seen surgery done (ie, 3-piece maxilla and mandibular advancement) for a 2.0 mm discrepancy. In one example, tracings indicated less than a 1.0-mm correction

and the dentition was still protrusive. The case in question was a simple 4 premolar extraction treatment, but the orthodontist was so concerned by the nasolabial angle, he elected to do surgery and also risk an unstable result. This type of mind-set incorporates an unfounded esthetic ideal and is often used as an excuse to ward off poor orthodontic treatment.

Another fallacy is “unlocking of the bite,” especially in Class II, Division 2 cases, to let the mandible be stimulated in a forward direction. In a simple unpublished study that I did 35 years ago, I found this not to be true. However, more recently, Lysle Johnston, with a more elaborate study, also found the locked-bite hypothesis to be another dogmatic fallacy. Often, the belief system is based on questionable teleology, which without evidence may seem to be true. It is easier to *believe* something, than to *know* something that is based on solid evidence!

The belief that belonging to a “bracket and wire” school, group, or club is to be superior is still too common a misconception. There are those who hold their lapels and proclaim, “I use the Dr So-and-so’s bracket prescription because it meets ABO standards.” Is this a true statement? Is it rational or scientifically proven? Some say, “I use the Dr So-and-so’s brackets and preformed wire sequences,” as if it were a shield to justify poor orthodontics and to allow collision of the maxillary roots between the canines and premolars. Still others exhort the use of various gurus’ appliances as if the appliances themselves were solutions to orthodontic problems and provide automatic diagnostic solutions by their use! Can we, as trained orthodontists, believe this? There are no studies, except the word of the manufacturer and gurus that the pretipped and pretorqued angulations are correct! It seems that each millimeter of change in tip and angulation has been hailed as a scientific breakthrough, as new appliance prescriptions proliferate.

Further, in the widespread use of pretorqued and preangulated brackets, I have noted that the final arch wires are not straight as the “straight wire” tag implies! I have found little evidence in the literature that the bracket angulations are ideal for all cases, or that Asians have special bracket needs, and that the present preformed arch forms (for a given system) are ideal for all cases. Does Cinderella’s shoe fit everyone?

In addition, it is an interesting observation to see that the largest wire at finishing is often an .016 square, or .016 × .025 rectangular arch wire, with up-down elastics. Is this good control or a good finishing procedure? Often, the wires are so light and flexible that the original curve of Spee still remains, even after rotations are corrected. Class II elastics are often used in the beginning of treatment on flexible wires, which may increase the curve of Spee. There seems to be a lack of

understanding of basic orthodontic mechanics and physics, as such apply to good control and treatment.

The use of so-called "functional" appliances to "stimulate or guide growth" has been shown to fail in a significant number of cases, even in early treatment. What about influencing growth direction? Is an appliance worn only at night, during sleep, really functional or more likely a splint? Proper case selection and diagnostic assessment are critical. All patients do not fit the same Procrustean bed of appliances. Sexual dimorphism, level of compliance, appliance choice and design, and treatment timing are just as important, or more important, than comprehensive multi-attachment treatment. One guru proclaimed that, "wearing this functional appliance, even if it did not work, kept the patient from going elsewhere until bonded treatment could be started." Where is the humanity, motivation, and ethics in this statement? If this statement is true, this is not a "growth stimulating" appliance, but one of "retention"; It retains the patient until full treatment can be started.

We have been through the unproven virtues of "myofunctional therapy," which had limited value in most cases of malocclusion. We have even been faced with the challenges of "holistic" orthodontics, and even through a phase involving Class I, Class II, and Class III vitamins, where proper vitamin therapy was supposed to enhance treatment outcome. The best that can be said is that the vitamins probably did no harm. I sincerely believe that those who gain attention through hype, by the support of appliance manufacturers, and by establishing cult-like clubs and cliques, should be held to the same "scientific proofs" as all scientists in orthodontics.

At the AAO meeting, too many of the speakers sell and promote their systems, their specialized brackets and wires, with little or no valid proof or scientific data founding utility. Many show only before and after photos of "happy patients," without a traced cephalogram

and a complete dossier. This is appalling and misleading. I have never had an unhappy patient once the appliances are removed. And, when is a happy patient a criterion of good treatment?

This type of promotion is also seen in some practice or practice management presentations at AAO meetings, in which, during the conclusions, the audience is urged to call or write, in order to take the presenter's course for a large sum of money. I sincerely believe that it is not the province of the AAO to promote, condone, or allow advertisement of courses. I believe that such courses should be given in university continuing education departments to assure less hype and a more objective academic atmosphere.

Many speakers on the AAO roster have remained on the yearly program because they are popular, but most only show rehashed ideas and results for many years. Should not the AAO be as strict in the choice of speakers and data as with the research section of the AAO programs? The titles on the AAO program seem to change, but, unfortunately, the message is the same. Under the umbrella of total honesty and ethics, we must avoid slogans and hucksterism of concepts that are unfounded or misleading. We must return to putting the plaster on the table, as well as panoramic radiographs and cephalograms, fully traced, before, during and after treatment (ie, complete records) to truly evaluate our results 5 and 10 years after treatment. Only then can we serve our patients and ourselves best.

As a long-time member of the AAO, it has been my belief that the purpose and function of the AAO has been to stimulate thought, encourage the basis of scientific and clinical discussion, and to promote the highest standards possible for the good of our patients. I wonder, at times, if this is happening. May the millennium focus on the sanity of the specialty by discarding the chaos.