



Figure 1

"ORTHODONTOSIE. This important division of the dental art is capable of completely removing congenital or accidental oral deformities. Mr. MARCO will undertake, using standard to newly developed techniques, to straighten the teeth, even the most poorly aligned, with success guaranteed."

A history of words

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ABSTRACT

1 – The word "**orthodontics**". In 1841, Lefoulon suggested the term "orthodontosie," which the Americans simplified to "orthodontia" and, later, to "orthodontics". But the French resisted. A long struggle began between "orthopedics" and "orthodontics," which wound up in 2007 with "orthognathodontics." Have we reached a truce?

2 – The word "**malocclusion**". E. Angle decided that the word "irregularity" employed in the 19th century was inappropriate. He proposed the term "malocclusion", which the French for a long time denigrated only to begin to employ it recently. But beneath new vocables new concepts are hidden.

KEYWORDS

Orthodontosie

Orthognathodontics

Dental orthopedics

Malocclusion

Terminology.

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1 - THE WORD "ORTHODONTICS"

This word, which, throughout the world designated the ensemble of the knowledge and the practices that characterize our profession, gave rise to tumultuous hesitation and reluctance when pioneer practitioners first began to use it. These worthy dentists, while confident that they could accurately describe what they actually did as "straightening teeth", didn't have a term that encompassed the whole of their (quite modest) knowledge.

In 1839, J. Lefoulon, in the "Gazette des Hôpitaux"⁹ introduced the term "dental orthopedics", which he defined as "the science that deals with the deformities that can affect the teeth". (The term "orthopedics" had first appeared 100 years earlier in a work reputedly written by d'Andry.) Then, in 1841, Lefoulon changed his mind. In his major treatise, "The Art of the Dentist", he wrote, "The word "orthodontosy" refers to that important sector of the dental art that is devoted to congenital deformities of the mouth as well as those caused by accidental factors" (fig. 1).

In 1840 the first dental school in the United States, and the world, the Baltimore College of Dental Surgery opened in Maryland. Only a few dental works in English were then available, so French texts were systematically translated. In 1844 Thomas E. Bond³, "The Father of Oral and Maxillofacial Pathology" and one of the founders of the new dental school, published an English version of Lefoulon's work, translating "orthodontosie" as "orthodontosy". According to Bernard Weinberger¹⁴ an American dental

historian, it was Chapin Harris, another founder and the first dean of the Baltimore College of Dental Surgery, and the author of a highly respected text, the "The Dental Art, a Practical Treatise on Dental Surgery"⁷, who corrected, and shortened, the term to "orthodontia". But when Harris's text was translated into French in 1874, orthodontia was transformed back into orthodontosie. Almost all American dental writers, including Kingsley and Angle, but not Case, used the word orthodontia until the end of the 19th century. Case⁴ disapproved of "orthodontia" because its etymological sense was limited to the teeth. This pioneering orthodontist, who examined the whole face, utilizing plaster face casts to help in this assessment, preferred the term "dental orthopedia" whose meaning seemed to him to encompass a broader field. In Great Britain, finally in 1909, a philologist explained that the termination "ia" of "orthodontia" had the meaning of condition, as in amnesia, and suggested that "orthodontics" would be more appropriate. Lisher¹² adopted this correction immediately, and, little by little, other authors did too. This didn't stop Strang, however, from entitling his text "Orthodontia" and retaining this form of the word in successive editions until 1958.

In France, the matter was even more complicated. In 1859 Lefoulon had already written another book¹¹, published, oddly enough at 5, rue Garancière, in which he returned to the use of the term "dental orthopedia". French dental writers were embarrassed. Many obviated the diffi-

culty by preferring to talk about the status of the teeth as "anomalies", "irregularities", and "deviations", among other terms, instead of the science that dealt with them.

Gaillard, in 1921, said that the term *orthodontia* is "borrowed from abroad, too concise, and badly formed". He proposed a compromise with *orthopedia*, coining the awkward term "*orthodontopédia*", which, not surprisingly, didn't have much success. *Orthodontologia* had even less.

The terms "*orthodontia*" and "*orthopedia*" alternated as the preferred term. American influence prodded Martinier (1903), G. Vilain (1907) and Pont (1909) to adopt *orthodontia*. But in 1921, Quintero, who found Case's thinking more attractive than Angle's, at an epoch when the influence of anthropologic cranio-facial measurements enjoyed widespread popularity, baptized the new organization that he had just formed the "*Société Française d'Orthopédie Dento-Faciale*" when Anglo-Saxon societies were calling themselves "orthodontic". But, at the same time, the French group, the SFODF, without much logic, began publishing its journal "*l'Orthodontie française*", (French Orthodontics).

In 1930, Izard's book⁸, a bible, many called it, bore the title "*Orthodontia*".

Although Izard stressed the restrictive character of the term. And since 1950, the word *orthodontics* has been used more frequently than *orthopedics* in the titles of books written in French.

In 1970, the National Education department assigned teachers in new university departments to the section "*dento-facial orthopedics*", at a time when cephalograms of the entire face were coming into wide use.

The specialty of *orthodontics* was firmly established in France when American methods came to be better known, and the public authorities designated practitioners in the field as "*orthodontists*", which boosted their international relationships with their orthodontic colleagues throughout the world.

In 2007, the commission on terminology of the SFODF analyzed the etymological data of the problem. In its view the term "*orthodontics*" is too limited and the locution "*dento-facial orthopedics*" is not accurate because our specialty is incapable of treating the upper part of the face. It suggested the word "*orthognathodontia*" which precisely encompasses our sphere of action.

The battle, it appears, has not yet ended.

2 - THE WORD: "MALOCCLUSION"

In what terms should we describe the disorder and the deformities of a dentition? The first to respond to this question, Fauchard, in 1728, did it in the title: "tortured teeth, badly arranged, and luxated, or out of posi-

tion". The writers who followed him employed the same type of expressions: "teeth in disorder (Bourdet), "poorly aligned" (Laforgue) or "deviated" (Schange).

Fox⁶, one of the first English authors to address the subject, preferred the phrase "irregularity of the teeth". Because he became the author of reference for English speaking dentists, who, shortly after publication of the Fox text, were beginning to become widely established in the United States.

Angle, in the beginning of his career, conformed to this usage, but, after reflection, he wrote¹ in 1899, *"The term 'irregularities of the teeth as it is usually applied to teeth that are twisted or unevenly arranged does not in the author's opinion fully express the full meaning of these deformities. It would seem that the term malocclusion would be far more expressive; for in studying the subject we must not lose sight of the importance of the dental apparatus as a whole and the important relations not only of the two arches to each other but also of the individual teeth to one another. We make occlusion the basis of the classification of anomalies and **we define orthodontics as the science whose objective is the correction of malocclusion of the teeth**".* Angle then, in 1907, used "malocclusion" as a key word in the title of the 7th edition of his text, which was immensely successful.

Soon after, in 1908, Case adopted the term "malocclusion" and in 1912 Lisher did too. Little by little all those writing in English followed suit.

But the French have been reluctant to join in, deeming the term imprecise, considering the prefix "mal" to be too vague. The nomenclature of the S.F.O.D.F., published, until 1971, in every yearly volume of "Orthodontie Française", an attempt to situate

every morphological element in its proper dimension of space, and to state precisely the relationships between those elements. Thus, this glossary preferred pro, retro-gnathia or mesio, disto-cclusion. But, without using the word malocclusion it is difficult to adopt Angle's classification, which, in spite of lively opposition, has steadily gained ground in France. A. Pont, in 1913, appears to have been the first Frenchman to use the word malocclusion and some others, Tellier and, Villain, for example, followed his example beginning in 1922. But until 1950 neither Izard⁸ nor Chateau⁵, two leading authorities, employed the term malocclusion. In fact, the word did not begin to be really accepted in France until a new generation, more open to American orthodontic literature, assumed teaching positions in 1970 after the government took control of assigning professors.

Even though occlusion is certainly a French word, derived from Latin (see the note at the next page), malocclusion, nowa days so at home on our tongues, is a totally new word that arrived on our shores from across the sea.

The reader should not misunderstand the state of affairs; we are not dealing with a simple change of nomenclature, this usage issue represents a turning point in orthodontic thinking. From now on, orthodontic specialists will not be able to content themselves with "straightening irregular teeth" but will be constrained, quite willingly, without doubt, in adherence to what Angle called the "science of orthodontia", to aim at the goal of treating "malocclusions".

And ineluctably, without denying the necessity of correcting those malocclusions and the dental irregularities that accompany them, another therapeutic objective will see the light of

day: the search for a biometric norm, and, yet, that, too, will only be a stage.

That is the way progress proceeds...

The term "occlusion".

Etymology: from Latin "ob", before and "cludere", to close or occlude.

"A state of natural closing of a natural opening" (Littré). The space is not eliminated, it is closed in a forward movement: "ob". The "b" of "ob" is transformed into "c", which is where the two "c's" in occlusion come from.

The prefix "in" expresses the idea of negation or absence, from which "in-occlusion" is derived, while "ob" or the double "c" is retained, not to be confused with "in-clusion".

The prefix "de" expresses the notion of distance, separation, from whence we get "dis-occlusion".

The prefix "mal" has a pejorative sense, as in malpractice or malodorous, from which Angle derived "malocclusion".

With a strong prefix such as "supra" and "mesio" among others, "ob" disappears and only a single "c" remains in the word.

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