

The Six Elements of Orofacial Harmony™

The University of the Pacific's Arthur A. Dugoni School of Dentistry's 122nd Alumni Annual Meeting

Frederick West Lectureship

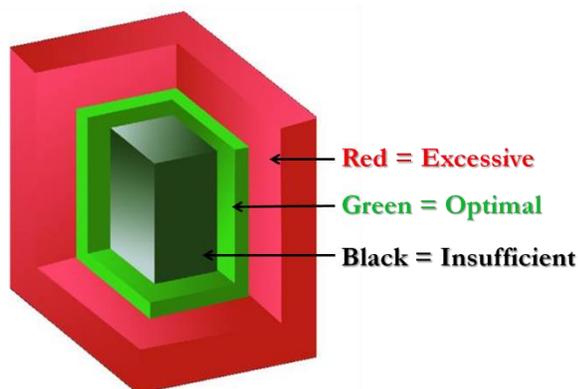
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The *Six Elements of Orofacial Harmony*™ describe the tooth, arch, and jaw characteristics associated with optimum health, function, and appearance. The *Six Elements*™ serve as the treatment goals for the six areas of the orofacial complex for which orthodontists have diagnostic and treatment responsibility: **1)** The arch: teeth individually (morphology and positions) and collectively (arch width, depth, shape, length, and symmetry), **2)** AP jaw positions, **3)** Jaw widths, **4)** Jaw heights, **5)** Chin prominence and, **6)** Occlusion.

Associated with the Six Elements™ are universal landmarks and referents by which the quality of tooth, arch, and jaw positions can be measured relative to the treatment goals. As a byproduct of treating teeth and jaws the *harmony* of the temporomandibular complex, oral tissues, and external facial tissues are maintained or improved. A patient with *optimal orofacial harmony* may or may not be beautiful but will have optimum health, optimum function, and the best possible appearance.

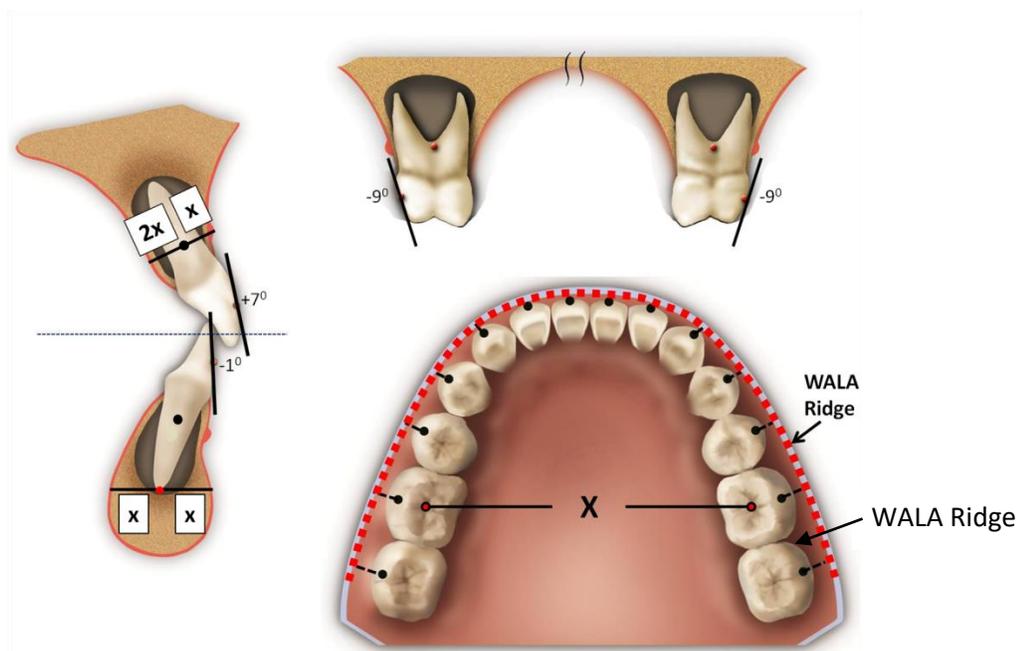
The Six Elements™ are also the basis for a three-dimensional and positionally-correct classification system. The qualities of arches and jaws can be clearly and concisely communicated using a numeric and color-coded system.



ELEMENT I– Optimal Arch: teeth individually (morphology and positions), teeth collectively (arch width, shape, length, depth, and symmetry)¹⁻¹⁴

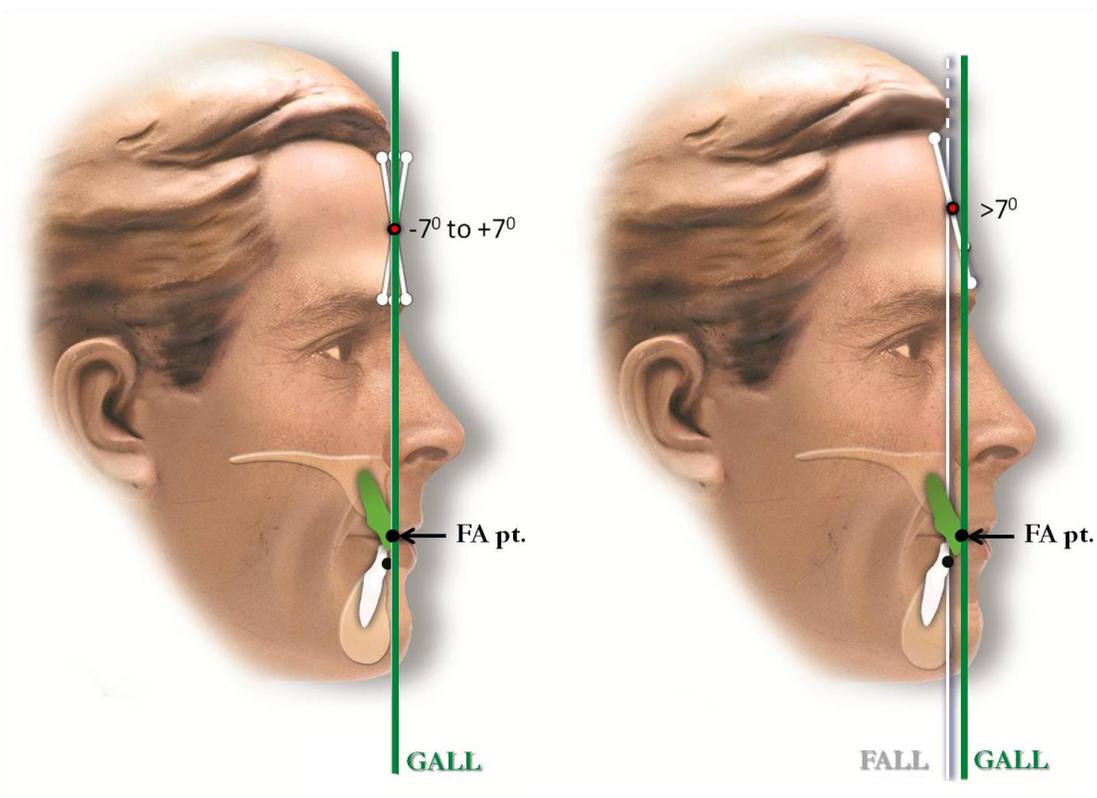
An optimal arch is the foundation for the remaining Elements. An arch is optimal when:

- tooth morphology is normal and there is 1 central incisor, 1 lateral incisor, 1 canine, at least 1 premolar, and at least 2 molars per quadrant
- roots are centered faciolingually over basal bone
- roots are surrounded by healthy alveolar bone (maxillary incisor roots in the anterior third of the alveolus)
- crowns are inclined, angulated, and rotated so that their occlusal surfaces can interface and function optimally with teeth in the opposing arch (see *Element VI*)
- the contact areas abut
- the depth of the core line is between 0.0 and 2.5 mm
- the length of the core line equals the sum of the mesiodistal diameters of the teeth in the arch
- the dental midline coincides with the skeletal midline of the jaw
- the skeletal width of the maxilla is in harmony with the skeletal width of the mandible and the shapes of the maxillary and mandibular arches are compatible (see *Element III*)
- there is ample space distal to the terminal molars to allow access for oral hygiene



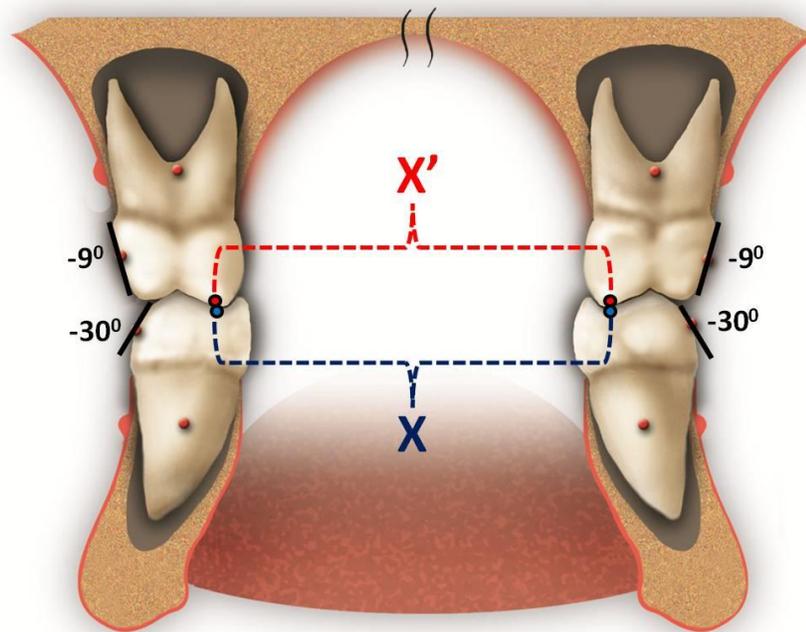
ELEMENT II – Optimal Anterior/Posterior (AP) Jaw Positions ¹⁵⁻²³

The AP position of the maxilla is optimal when the Facial Axis points (FA pts.) of *Element I* maxillary incisors are on the Goal Anterior Limit Line (GALL). The best method for assessing this relationship is clinical judgment. The AP position of the mandible is optimal when it is in *centric relation*, the incisors are *Element I* and they interface optimally with *Element I* incisors in an optimal maxilla.



ELEMENT III – Optimal Jaw Widths ^{24,25}

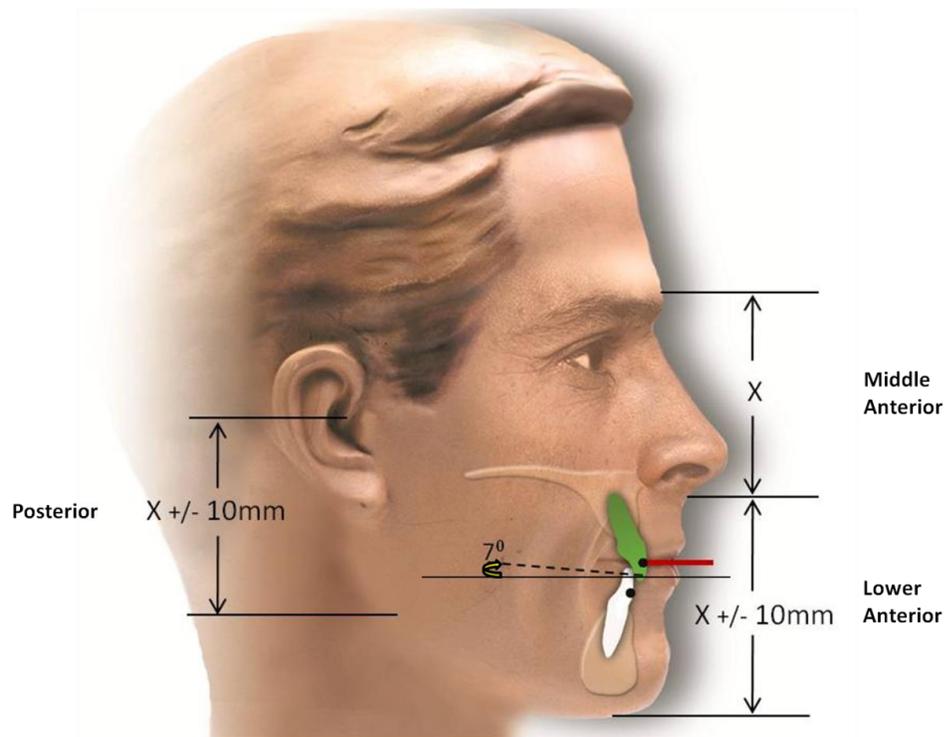
The width of the mandible is naturally optimal for most individuals. The width of the maxilla is optimal when distance X' mm (measured between the mesio-palatal cusp tips of *Element I* maxillary first molars) is equal to distance X mm (measured between the central fossae of *Element I* mandibular first molars).



ELEMENT IV – Optimal Jaw Heights ²⁶⁻³⁶

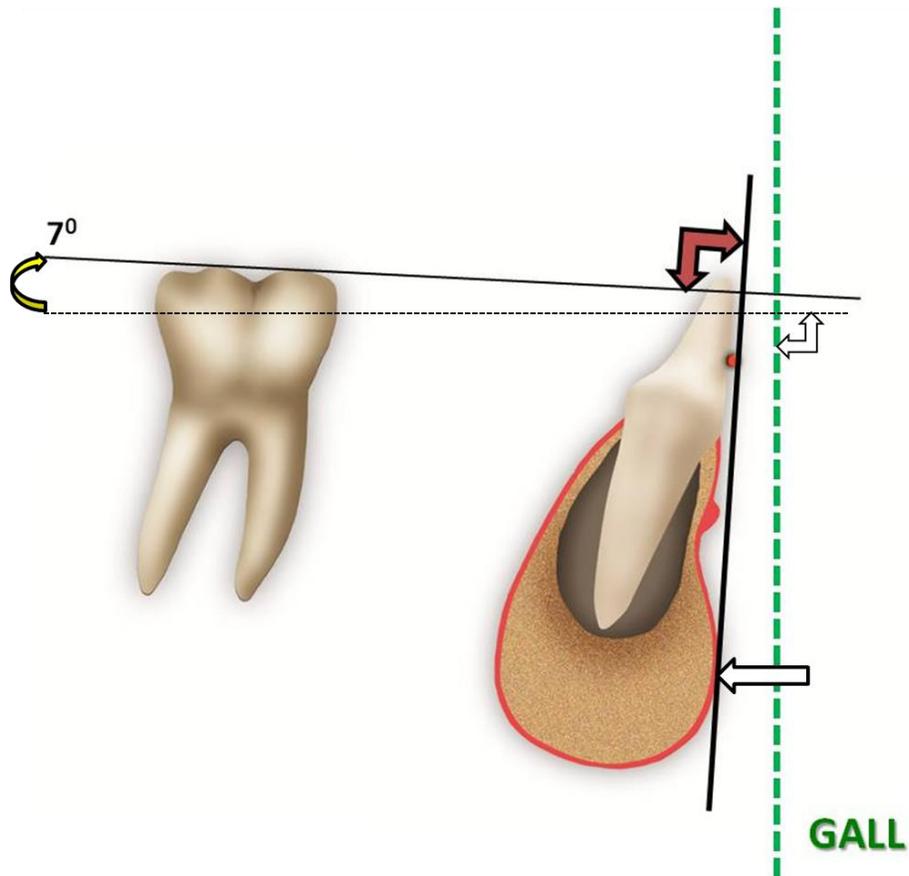
Jaw heights are optimal when:

- the arches are *Element I* and in full occlusion
- the middle anterior, lower anterior, and posterior face heights are in harmony with each other
- the FA pts. of the maxillary incisors are level with the inferior border of the upper lip in repose
- the occlusal plane orientation (inclination and cant) is in harmony with function and esthetics



ELEMENT V – Optimal Chin Prominence ³⁷⁻⁴²

Chin prominence is measured independently of the mandible's AP position. Assuming normal soft tissue thickness, chin prominence is optimal when the AP prominence of pogonion matches the AP prominence of the FA pts. of *Element I* mandibular central incisors.



ELEMENT VI – Optimal Occlusion 43-45

The requirements for an optimal occlusion include: *Element I* arches, *Element II, III,* and *IV* jaw characteristics, and the **Six Keys to Optimal Occlusion**®. Collectively, the presence of *Elements I-IV* creates the environment within which an esthetic, functional, and healthy occlusion can exist. The *Six Keys to Optimal Occlusion* are:

Key I (interarch relationships)	
Key II (angulations)	
Key III (inclinations)	
Key IV (rotations)	
Key V (tight contacts)	
Key VI (curve of Spee)	

SUMMARY

The **Six Elements of Orofacial Harmony**™ are scientifically defensible goals compatible with optimum health, function, and appearance. Differences in size, shape, gender, age, and/or ethnicity between individuals have little influence upon the optimal positions and relationships of the teeth, arches, jaws, and chin when measured relative to the *Six Elements*.

Each Element is diagnosed using landmarks and referents that are tangible, reliable, and universal. They make possible a new three-dimensional and positionally-correct classification system called the **Six Elements Classification System**®™. This system provides the means to accurately communicate a patient's condition relative to the intended post-treatment goals.

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