



Summary

The great denturists of the mid-20th century, Dr Lombardi and Dr Pound, mastered and taught the art of creating a natural smile as it pertained to edentulous mouths with full and partial dentures. The cosmetic dentists of the 21st century use the same basic guidelines in their creation of beautiful smiles in dentate mouths using the adhesive porcelain systems that are currently available.

Key words

cosmetic dentistry; Golden Proportion

Cosmetic Choreography - The Basis of a Beautiful Smile

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A natural smile has as its foundation the following parameters (Figs 1–2):

- dental midline parallel or coincident to the midfacial plane
- edges of the upper teeth run parallel to the lower lip line in full smile
- gingival edges of the upper teeth just covered by the internal aspect of the upper lip line.



High smile lines with excessive gingival display constitute about 10% of cases with low smile lines being present in around 20% of cases.

When creating an aesthetically pleasing smile, whether it is via porcelain veneers, all porcelain crowns or implant supported crowns, there is a sequence of steps that should be followed in order to create a pleasing, harmonious and natural smile.

The centre line is made parallel to or coincident with the mid-facial plane. Dental floss is held vertically on the face from the chin point to the mid point of the hairline. The mid-lines are viewed from the front of the patient and any discrepancy is shown to the patient in the mirror. Discrepancies of <2 mm can be managed restoratively. Discrepancies >2 mm need to be orthodontically managed if the patient requests coincident midlines.



Fig 1



Fig 2



Fig 3



Fig 4

Using the Golden Proportion for proportioning the teeth viewed from the front of the patient will create balance in the smile. The ratio of the teeth width is commonly 10 : 6.2, that is the laterals are around 62% of the width of the centrals and the canines are 62% of the width of the laterals when viewed from the front. Common problems in veneering the front six teeth relate to under-preparation of the canines with resultant visual blackout of the premolars. The reference between length and width is 5 : 4 (Fig 3).

The creation of the incisal silhouette is the final and yet most important step, as it imparts life and soul to the smile. Understanding the difference between lengths of the teeth, comparing centrals to laterals and the signature curvature of the distal incisal edges controls the secret to life-like restorations (Fig 4).

Centrals are normally at least 0.50 mm longer than laterals but around the same length as the canines. The gingival levels of the centrals are higher than those of the laterals yet around the same horizontal line of the canines.

There must be a life-like recreation of the incisal silhouette where the marginal ridges flow into the incisal corners. Commonly, lack of preparation in the marginal ridge area creates a square, false look to the veneers since the ceramist does not have enough depth

of preparation to shape the porcelain back to its ideal position and create correct depth of colour and light reflection to match the adjacent natural teeth.

The true creation of cosmetic choreography occurs with the understanding of the role that the individual front teeth play in the smile (Fig 5):

- Centrals are longer and have more translucent edges in younger individuals, commonly called "the age teeth". With ageing and bruxing wear the incisal edges flatten and translucency is lost.
- Laterals dictate the masculine or feminine traits of a smile. Women commonly have more rounded sweeping distal incisal corners whereas men have square corners.
- Canines are referred to as "the personality teeth". We all remember the first screen Dracula, Bela Lugosi, and his dominant aggressive canines. Softer rounder curves on the canines are found in gentler personality styles.

The final component of a natural bright smile is the production of coloured reflected light from both the surface of the tooth and the internal components, i.e. dentine (Fig 6). Natural teeth have a layer of enamel covering the inner core of dentine. The dentine produces the basic colour (hue) of a given tooth with the enamel layer controlling the overall value on degree of brightness. The veneering or crowning process replaces some if not all the enamel layer and it is important to carry out this replacement with the most life-like recreation of the depth of colour to fool the observing eye.

This is one of the reasons why porcelain veneers are more life-like than PFM crowns, which often lack the depth of translucency of natural teeth. We are too quick to discharge the beautiful young non-decayed mouth to the realms of 6-12 month recall rather than spending time observing what makes a young natural tooth appear to be so life-like.

Photographic recording of these opportunities should be carried out with the patient's or parent's permission to create an opportunity to review the visual display of natural teeth on a regular basis, and in order to imprint on the generally non-stimulated "right brain" the parameters of a beautiful smile that is "mother nature's" signature.

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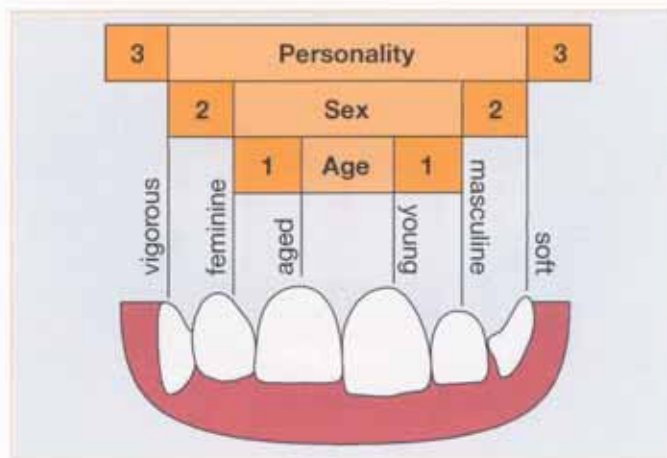


Fig 5

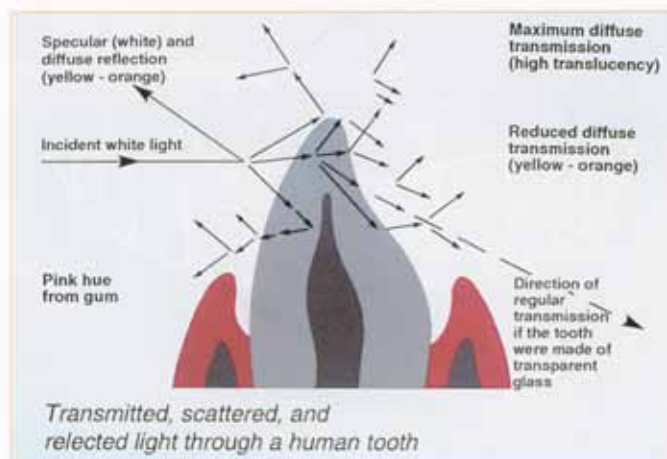


Fig 6

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