

EVALUATION OF FACE – A REVIEW ARTICLE

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ABSTRACT

The facial composition is one of the most important issues for the patient. This perspective influences most patients' notions of a perfect smile. The reason for this is that most media images of beauty focus on the face. The public is rarely used to scrutinising a smile at close distance, in the way routinely done by dental professionals.^[1] The optical illusion of a white band of teeth bordered by red lips is constantly put forward in society, where a perfect smile is depicted as a monolithic band of ivory.

KEYWORDS: facial aesthetics, morphopsychology, division of face.

In reality, the upper anterior teeth are not a white monolithic band bordered by lips, but distinct entities with specific proportions and embrasures. These facts should be clearly conveyed to the patient at the onset of treatment to avoid later disagreements. The reason for the apparent illusion of the smile is due to:

- Angle and distance of view
- Lighting
- Profound colour contrast between teeth and the lips
- Poor image quality or
- Image manipulation.

There are several ways of creating facial assessment including physiognomic, morphopsychological and geometric. The first two categories are subjective evaluations based on ideology, theology, sociology, culture and individuality, while conversely, geometric appraisal is an objective evaluation dictated by mathematics, devoid of idiosyncrasies inherent in the first two categories.^[4] First two categories are regarded as pseudo-science.

PHYSIOGNOMY

Physiognomy is the art of judging an individual's character or personality by the appearance of their face. This skill shares similar features with palmistry and astrology, dating back to antiquity, forming part of our collective consciousness. Although the relevance and meaning of facial features vary, physiognomic assessment is prevalent in Eastern and Western cultures.

Whilst this may seem superficial, it is the commonest way of social assessment.

MORPHOPSYCHOLOGY

The study of morphopsychology involves establishing a link between the morphology of the human body with psychological make-up. In dentistry, the face is the focus of attention, and the ensuing discussion on morphopsychology is therefore limited to facial features. The face is a reflection of our inner soul, influenced by both heredity and environmental factors. The former is beyond our control, while the latter is controllable by our will and certitude. Facial analysis is assessed by the following factors:

1. Facial typology
2. Facial zones and segmental expansion
3. Sensitive receptors
4. Tegumental texture and relief
5. Sexual type
6. Hemifaces.

From a typological perspective, faces are assigned to one of four

1. Lymphatic (rounded full features with a timid personality)
2. Sanguine (prominent thick well-defined features associated with intransigence and spontaneity)
3. Nervous (large forehead, thin delicate features with an anxious disposition)
4. Bilious (rectangular and muscular)



Fig. 1: Facial typology: lymphatic.

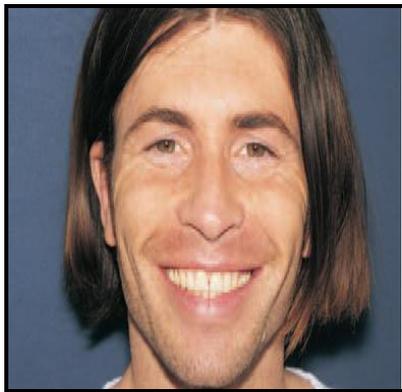


Fig. 2: Facial typology: sanguine personality.



Fig. 3: Facial typology: nervous personality.

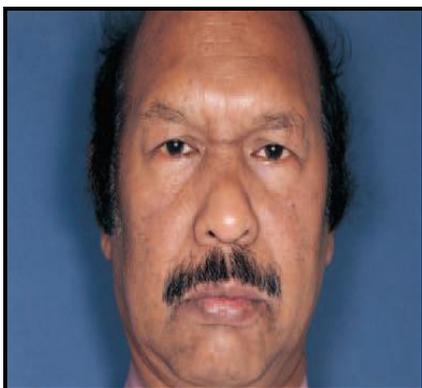


Fig. 4: Facial typology: bilious personality.

In both the frontal and sagittal views, the face is divided into three zones: upper, middle and lower. The upper segment is from the hairline to the glabella (root of the nose), the middle from the root of the nose to the subnasale, and the lower from the subnasale to the soft tissue menton (chin prominence). This morphological differentiation signifies specific psychological traits: the upper third is associated with creativity, the middle with emotions and the lower with instinctive and sensual activities.^[3]

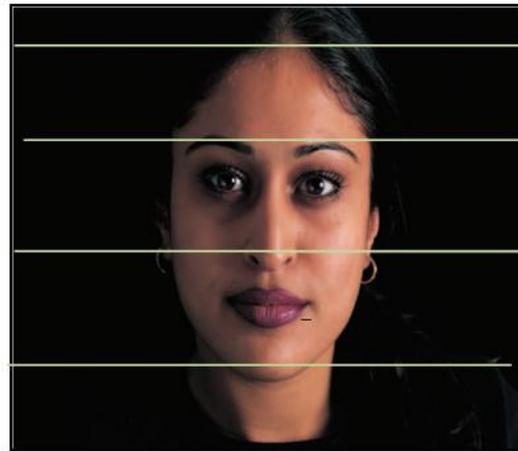


Fig. 5: Face is divided into three zones: upper, middle and lower.

Morphopsychological equilibrium is realized when the facial thirds are equal both quantitatively and qualitatively.

Each of the facial zones is assigned a sense organ (or receptor), the upper third: the eyes, the middle: the nose and the lower: the lips. The vestibular frame of the facial map of the face encloses these receptors, which can be either open or closed. Wide eyes, dilated nostrils and voluptuous lips have obvious psychological significance of welcome, arousal and sensuality, respectively. Conversely, closed receptors convey the opposite connotations of alienation, passivity and frigidity. A wide, curved, round angled tooth form is appropriate for patients with open receptors and vice versa for those with closed receptors.

The degree of tegumental relief is inherited, but laxness increases with advancing years. Rough, pitted and textured skin requires teeth with similar characteristics, while smooth silky soft tissue yearns for a glossy, smooth dentition.

In addition, younger patients with increased skin tone should have restorations that correspond to their vitality, while older generations should have prostheses that convey wear and maturity, conforming to reduced tone and more wrinkles. Qualities assigned to biological masculinity and femininity are blatant. Masculine facial features display prominent osseous structures, angular jaw lines, closed facial angle, and rectangular soft tissue

angles, etc. Feminine components encompass delicate osseous make-up, oval jaws, open facial angle and rounded soft tissues angles, etc. However, in contemporary society and aberrant life styles, the conventional sexual types may be ambivalent. Therefore, the clinician should ascertain the biological, as well as preferred sexual type, before prescribing anterior restorations, which may conflict with the patient's overt sexuality.^[4]

Geometric

The final, and most objective, method of facial assessment is based on mathematical principles of evaluating beauty. Methods for quantifying beauty preoccupied ancient Greeks, and have mystified philosophers and scientists throughout the centuries. While ideal facial features may be related to the Golden proportion, they have little significance in dentistry. However, in plastic or reconstructive surgery, facial landmarks according to the Golden proportion are valuable guidelines for the surgical team.

A geometric evaluation of the face is visualizing imaginary lines in the frontal and sagittal views. Commencing from the upper to the lower parts of the face, the horizontal lines are:

- Hair
- Ophriac
- Interpupillary
- Interalar
- Commissural.

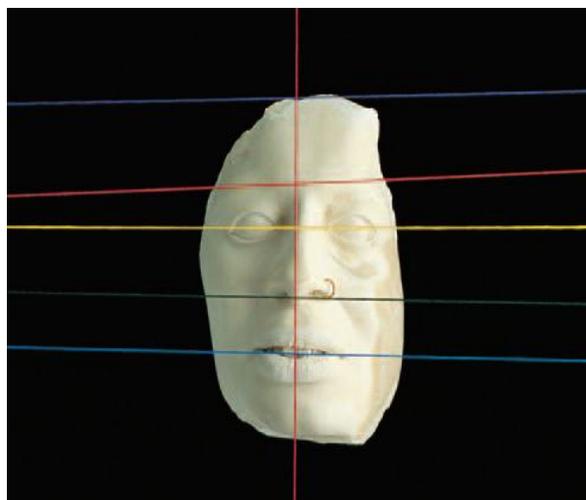


Fig. 6: geometric evaluation of face

It is not obligatory for all the facial horizontal lines to be parallel to gain aesthetic approval

These parallel lines create horizontal symmetry and act as cohesive forces unifying the facial composition. The facial midline is perpendicular to the horizontal lines and opposes their cohesiveness. The latter are termed segregative forces and are essential in a composition to give it interest and harmony. The cohesive forces are paramount in achieving pleasing aesthetics; the deviation

of the facial midline is a deleterious effect. It is the general parallelism of the horizontal lines, which is important, as opposed to the orientation of one single line. The interpupillary line is used as a reference for the occlusal and incisal plane orientations. The other horizontal lines can be eschewed and therefore do not act as definite references; they are however, useful accessory markers. The incisal edges of the anterior teeth should be parallel to the interpupillary line and perpendicular to the midline.

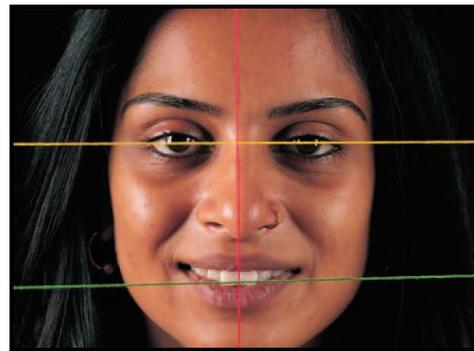


Fig. 6: the interpupillary line should be parallel to the incisal plane and perpendicular to the facial midline.

The nasolabial angle is the intersection of two lines using the nose and lips as reference points. The two lines are tangents of the subnasale and the maxillary lip profile (Fig. 7). For males, this angle ranges from 90° to 95° and for females from 100° to 105°. Assuming 90° as the normal, if the nasolabial angle is < 90°, the maxilla is prominent and a convex facial profile is manifested.^[4]



Fig. 7: nasolabial angle is the intersection of tangents of the subnasale and the maxillary lip profile.

A more systematic examination of facial and dental appearance should be done in three steps.^[4]

1) The face in all three planes of space (Macro - esthetics)

Examples of problems that would be noted in that first step would be

- asymmetry,
- excessive or deficient face height,
- Mandibular deficiency or excess, etc.

2) The smile framework (Mini - esthetics)

Smile framework is bordered by the upper and lower lips on smile animation and includes such assessments as

- excessive gingival display on smile,
- inadequate anterior tooth display,
- inappropriate gingival heights,
- Excessive buccal corridors.
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3) The teeth (Micro – esthetics)

This includes assessment of

- tooth proportions in height and width,
- gingival shape and contour,
- connectors and embrasures,
- black triangular holes
- Tooth shade.

REFERENCES

1. Ahmad, Anterior dental perspective, British journal, 2005; 199(1).
2. Ideal beauty, Facial analysis and symmetry, series B – Biological Sciences, Galveston, TX, Dept of Otolaryngology, Facial analysis, 1997.
3. David Sarver, William Proffit- Special considerations in diagnosis and treatment planning.
4. TB on Current principles and techniques- Graber Vanarsdall, Fourth edition, 4- 9.