A photographic study on Visagism

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ABSTRACT

Background: Designing the smile based only on mechanical parameters such as shape and size of the face will give a monotonous and stereotype appearance whereas customizing it with the person's attitudes and behavior will make it more life-like.

Aim: To find out as to whether the concept of Visagism is present in dentate individuals.

Setting and Design: The dominant temperaments of 50 subjects were determined with a self-reporting questionnaire which highlighted their reaction to different situations in life and hence their personality.

Materials and Methods: The photographs of teeth of same subjects were taken, and their tooth forms, long axes, and embrasure lines were drawn using the software.

Statistical Analysis Used: These parameters were then statistically analyzed and correlated with the individual personality.

Results and Conclusion: A definite correlation was found between the temperament and the parameters of a smile. The parameter of tooth form was more closely related to the personality.

Key words: Esthetics, personality, smile design, Visagism

Introduction

Smile is the primary expression of a variety of human emotions. Dental professionals are obligated to create natural looking restorations which allow completely uninhibited smile. The esthetic dentist needs to have a thorough knowledge and appreciation of the artistic principles that can be applied to the dentofacial complex and should combine artistic creativity with scientific discretion. For decades, dental clinicians have sought to harmonize the shapes of the teeth based on parameters such as sex, age, and personality.[1-6] Personality is the best measure of each person's individuality. Personality is difficult to determine but is the most reliable source of knowledge by which we may express patient's dignity through prosthodontic methods.[7-9]

Esthetics in dentistry has come a long way and with the technologies available today we can promise our patients a great smile.[10,11]

Our restorations are going to be esthetic only if they harmonize with the description of an individual's unique personality. Personality can be determined through various methods, but the most popular technique is the self-reporting questionnaire asking the participants to mark the statements that describe their own behavior. This forms the basis of a novel concept called Visagism. The concept of Visagism is derived from a French word “visage” meaning face. It involves the creation of a customized personal image that expresses a person's sense of identity. It makes possible to determine the emotions and personality traits, which the patients wish to express through their appearance and smile. With the Visagism concept, clinicians...
can design a smile that blends patient’s physical appearance with his personality and desires.\textsuperscript{2,3}

According to Hippocrates, an individual’s personality is formed by a unique combination of four types of temperaments – choleric, sanguine, melancholic, and phlegmatic. These terms were later substituted with strong, dynamic, sensitive, and peaceful. The shape of the face and teeth in relation to the four temperaments can be described as follows:

- **Choleric/strong:** These individuals are characterized by strong leadership qualities and fearlessness. They have a rectangular face with well-defined angles. The maxillary anterior teeth are positioned with their long axes perpendicular to the horizontal plane. These individuals have dominant rectangular central incisors. The connection line of the embrasures is horizontal between the central and lateral incisors.

- **Sanguine/dynamic:** They are very active, communicative, and extroverted. They have an angular face. The long axes of the maxillary anterior teeth are inclined slightly distally. The central incisors are usually triangular or trapezoidal. The connection lines of the embrasures and the incisal plane are ascendants from the medial line.

- **Melancholic/sensitive:** This personality is characterized by gentleness and abstract thinking. This type of individual has an oval face with rounded features. The long axes of the maxillary anterior teeth are distally inclined. The central incisors are usually oval in shape. The connection lines of the embrasures descend from the medial line, creating an inverted incisal plane.

- **Phlegmatic/peaceful:** These individuals are gentle, discreet and diplomatic. They have a round or a square face. The maxillary anterior teeth have their long axes perpendicular to the horizontal plane. The central incisors are square and small. The connection line of the embrasures is straight.

Based on this concept, a photographic study was planned to find:

1. The correlation between tooth form and the temperament
2. The position of long axis of maxillary anterior teeth to the horizontal plane in each temperament
3. The connection lines of the embrasures between the maxillary central and lateral incisors in each temperament.

Ethical Committee clearance and informed consent from the selected subjects were taken.

**Selection criteria**

Fifty subjects aged between 18 and 30 years were selected whose identity was kept confidential. It was made sure they had a symmetrical face and a full complement of properly aligned natural teeth. Subjects had not undergone any fixed or removable prosthodontic or orthodontic treatment. They did not have any history of oral destructive habits.

**Materials and Methods**

A laptop with an LCD color monitor Hewlett-Packard Company, Palo Alto, California, United States and a Digital camera (DSLR, Canon, Ota, Tokyo, Japan) was used. Windows XP professional Adobe Photoshop Adobe Systems, USA. version 7.0 in a photo editing software was used for studying the photographs.

Each subject was seated upright in a comfortable position, cheek retractors were applied, the subject was instructed to close his/her teeth and look at the camera lens while shooting the photograph. The camera was positioned and adjusted so as to obtain a sharp frontal image of the teeth [Figure 1].

Method to evaluate temperament: A questionnaire [Appendix 1] was prepared to help discover temperament of the subject. The questions were to be answered honestly. They refer to the natural inclination of the subject rather than the present practice, acquired by effort and self-control. The questions were based on the subject’s self-interpretation in terms of various aspects such as inclination to retaliate and oppose an insult immediately, confidence, provoked by disorder or injustice, easily distracted, enthusiasm, unwilling to admit a weakness, or a defeat, to love silence and solitude, command, constant fear, feeling discouraged by difficulties, speaking among strangers, keen interest to look good, feeling ignored, feeling as always right, to remain composed, poke fun at others, lack of courage, talkativeness, sympathy, and other facts about oneself.

The subjects were to answer yes/no or doubtful. The answers in the affirmative were evaluated, and temperament which scored the maximum out of the list of answers...
given at the end of the questionnaire was found out. That temperament was said to be dominant in that subject.

The photographs were evaluated on the computer with the help of software to determine the form and long axis of maxillary central incisors and the connection line of the embrasures between the central and lateral incisors. The results so obtained for each subject were compared with the type of temperament of that subject.

Results

In subjects with choleric/strong temperament, 70% had rectangular tooth form of maxillary anterior teeth [Figure 2]. In sanguine/dynamic temperament, 60% of subjects had triangular tooth form [Figure 3]. In subjects with melancholic/sensitive temperament, 66% had oval tooth form [Figure 4] and in subjects with phlegmatic/peaceful temperament, 71% had square tooth form [Figure 5 and Table 1].

It was found that in more than 50% of subjects in all the temperaments the long axis of the maxillary anterior teeth was perpendicular [Figure 6 and Table 2].

The connection line of embrasures between the maxillary central and lateral incisors was ascendant from medial line in 58% of subjects in choleric/strong temperament, in 81% subjects with sanguine/dynamic temperament, in 80% subjects with melancholic/sensitive temperament, and in 71% subjects with phlegmatic/peaceful temperament [Figure 7 and Table 3].
Restoration design has entered a new technological age. However, observation remains a key to replicating nature and working within the artistic parameters of smile design. Clinicians are required to understand beauty, harmony, balance, and proportion as perceived by society when planning for treatment. The most important factors contributing to esthetic anterior dentition are the size, shape, and arrangement of the maxillary anterior teeth, particularly the maxillary central incisors as viewed from the front.

Visagism is a novel concept that applies the principles of visual art to the composition of a customized smile. The aim is to create a smile design that expresses the patient’s personality and lifestyle, ensuring harmony between the restorations and the patient’s physical appearance, values, and attitudes.

An attempt was made in this study to find a correlation between different kinds of temperaments with the shapes and inclinations of natural teeth and to determine whether similar patterns can be incorporated in designing artificial restorations. Based on these assessments, a definite correlation was found between the temperament and different parameters of a smile. The parameter of tooth form was more closely related to the personality. The long axis of central incisor was perpendicular in more number of cases except in sensitive patients where distal inclination was seen in an almost equal number of persons. The connecting line of embrasures was ascendant in most of the cases. Therefore, these guidelines can be safely applied in clinical practice to create a satisfactory and personalized smile for each patient.

### Discussion

Restoration design has entered a new technological age. However, observation remains a key to replicating nature and working within the artistic parameters of smile design. Clinicians are required to understand beauty, harmony, balance, and proportion as perceived by society when planning for treatment. The most important factors contributing to esthetic anterior dentition are the size, shape, and arrangement of the maxillary anterior teeth, particularly the maxillary central incisors as viewed from the front.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

### References

Appendix 1

Questionnaire
To help you discover your temperament. Be completely honest in answering the questions. They refer to your natural inclination rather than your present practice, acquired by effort and self-control. Answer yes/no or doubtful. The numbers at the end will give the key to the respective temperament.

1. Are you quickly excited at offenses and inclined to retaliate and oppose an insult immediately?
2. Do you look at life always from the serious side?
3. Do you easily lose confidence in your fellow men?
4. Are you greatly inclined to flatter those whom you love?
5. Are you won by a quiet explanation of reasons and motives, but embittered and driven to strong resistance by harsh commands?
6. Do you love company and amusements?
7. Does your thinking easily turn into reflection which may stir you up profoundly, yet not let your excitement be noted outwardly?
8. Are you vehemently provoked by disorder or injustice?
9. Do you have, and show, very little interest in what goes on about you?
10. Do you find it hard to trust people, and are you always afraid that others have a grudge against you?
11. Do you dislike prolonged reflection, and are easily distracted?
12. Do you usually not feel offense at the moment, but feel it so much more keenly a few hours later, or even the next day?
13. Is it very hard for you to deny yourself some favorite food?
14. Do you easily get angered by an offense, but soon are pleasant again?
15. Are you a person of enthusiasm, that is, are you not satisfied with the ordinary, but aspire after great and lofty things, temporal or spiritual?
16. Are you unwilling to admit a weakness or defeat, and consequently try to deceive others, even by outright lies?
17. Do you love silence and solitude and seclusion from the crowds?
18. Do you easily become jealous, envious, and uncharitable?
19. Do you feel happy when in a position to command?
20. Do you spend much time deliberating, yet reach decisions only with difficulty?
21. Do you like to be flattered?
22. Do you easily complain of insignificant ailments, constantly fear grave sickness?
23. Are you very much inclined to ease, to eating, and drinking?
24. Do you feel discouraged by difficulties in your undertakings?
25. Do you find it difficult to form new acquaintances, to speak among strangers, to find the right words to express your sentiments?
26. Do you pay keen interest to your appearance and that of others; to a beautiful face, to fine and modern clothes?
27. Do you persevere under great difficulties until you reach your goal?
28. Do you become suspicious and reticent by a rude word or unfriendly men?
29. Is it very hard to guard your eyes, ears, tongue, and keep silent?
30. Are you loathe to appear in public and to be praised?
31. Do you allow others to be preferred to you, but at the same time feel slighted because you are being ignored?
32. Do you dislike even hate, caresses, and sentimentality?
33. Can you be heartless, even cruel, in regard to the sufferings of others, even trample cold-bloodedly upon the welfare of others, if you cannot otherwise reach your goal?
34. Do you have little inclination to work, preferring repose and leisure?
35. Do you lack perseverance; does interest in things fade quickly?
36. Are you inclined to inordinate intimacy and flirtation?
37. Do you lack courage in correcting people; it may show itself in these two forms: (a) You go about it so carefully and tenderly that it can hardly be called a correction, or (b) you shout your correction excitedly and angrily?
38. Do you see everything, hear, and talk about everything?
39. Do you love light work which attracts attention, where there is no need of deep thinking or great effort?
40. Do you consider yourself as somebody; as extraordinary, as always right, and not needing the help of others?
41. Do you belittle, or by remarks and unfair means even persecute those who dare oppose you?
42. Can you quickly pass from tears to laughter, and vice versa?
43. Are you easily captivated by every new idea or mood?
44. Do you love variety in everything?
45. Do you remain composed, thoughtful, deliberate, with a sober and practical judgment, in the face of suffering, failure, offenses?
46. Do you like to poke fun at others, tease them or play tricks on them?
47. Does a strong aversion easily take root in your heart against persons from whom you have suffered or in whom you find fault, sometimes so strong that you do not want to speak to them or cannot stand the sight of them without new excitement?
48. Do you get vehemently excited by contradiction, resistance, and personal offenses and do you show this excitement in harsh words which may be, and sound like being polite, yet hurt to the core?
49. Which of these bad dispositions are yours (check one or two): (a) Obstinacy, anger, pride? (b) sloth, lack of energy? (c) lack of courage, the dread of suffering? (d) talkativeness, inconsistency?

50. Which of these good traits come naturally to you (check one or two): (a) Good nature, repose of mind? (b) sympathy for others, love for solitude and prayer? (c) strong will, energy, fearlessness, ambition? (d) cheerfulness, the facility to get along well with difficult people?

Some of the preceding questions refer to two or more temperaments; they are overlapping. The choleric temperament is indicated by the affirmative answer to the following numbers: 1, 5, 8, 15, 16, 19, 27, 32, 33, 40, 41, 47, 48, 49a, 50c.

The sanguine temperament: 4, 6, 11, 13, 14, 20, 21, 24, 26, 29, 34, 35, 36, 38, 39, 42, 43, 44, 46, 49d, 50d.

The melancholic temperament: 2, 3, 5, 7, 10, 12, 13, 17, 18, 20, 22, 24, 25, 28, 30, 31, 37, 47, 49c, 50b.

The phlegmatic temperament: 9, 23, 34, 35, 45, 49b, 50a.

Note: Answer the questions first, honestly, simply, and sincerely; then try to classify according to the numbers.