

Profile Preferences Among Diversified Groups

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How well are we communicating with the public regarding facial profiles? How many of us have heard a parent refer to an "orthodontic face"? What is in the mind of the public regarding profiles? Do they share our feelings on esthetics? James Martin¹ found that American whites and American blacks share a common esthetic standard, the Caucasian facial model, for judging beauty at least in the female face. A. H. Iliffe² in England found with his study of photographs of twelve female faces judged by 4,355 Britons that the positive correlations were significantly high enough to suggest that a common basis for judging facial beauty indeed existed and was shared by men and women of all ages in all parts of England and in most occupations. But how about groups themselves, do American orthodontists have an inbred idea of esthetics based on their study of cephalometric ideals? Do black, oriental, or white groups in America have a preference based on their racial differences? How about general dentists? Furthermore, do these groups concur as to differences in age and sex?

These questions led me to pursue an idea originated by Dr. Dean Hausrath. He suggested a drawing be used and by altering the lip area in 2 mm stages a series of profiles from "retrusive" to "protrusive" could be constructed. This series could then be judged by various groups. Similar studies in the past have used photographs of different subjects² or silhouettes of different subjects³ but to my knowledge no silhouettes of the same individual have been used. Silhouettes have the advantage of reducing the variables by eliminating the distraction of the hairline, the cheek, the complexion and the shape of the

eyes. In this study no changes other than the lips were made to the drawing. The original profile was taken from the headfilm of an 18 year old Caucasian girl (Fig. 1). The original profile was altered from the photograph to straighten the nose and give more curl to the subnasale. This particular photograph became profile number four which is the center profile in the series (Fig. 2). Numbers three, two, and one to the left are successively 2 mm retrusive and numbers five, six, and seven to the right are successively 2 mm protrusive to number four. This makes number seven profile to the far right 12 mm fuller than number one to the far left. It was interesting to note as these drawings developed that those to the right suggested youth and femininity whereas those to the left suggested age and masculinity. This age difference was noted as early as 1865 by Woolnoth.⁴ He stated that "convex faces retain a youthful appearance beyond the natural periods and are found by observation and experience to last much longer than the concave or straight.

The series of profiles was sent to the following groups: general dentists, art students, orthodontists, a black lay group, a Chinese lay group, and a white lay group. The first thirty of each group who responded were tabulated. Each individual was asked to select one profile for each category from an 8 year old girl to an adult man. They were given the alternative of using one choice as often as they wished. All groups were located in the San Francisco Bay area with many of the orthodontists being from throughout Northern California. These profiles were not intended to set standards of ideal. The purpose was to determine whether these



Fig. 1

groups of people concur or have differences in preference for the seven profiles in age and sex. One black parent noted that none of the profiles resembled a black. This is true. Wuerpel⁵ drew his conception of racial differences in 1937 (Fig. 3). Sassouni's composites from his book *Face in Five Dimensions*⁶ show these racial differences (Fig. 4). A separate study might be done using facial features of each of these races. There were other just criticisms of these profiles. One orthodontist commented that "your younger profiles have too much midface height and, therefore, too much nasal length." This was to be expected since only the lips were moved. Again, a separate study might be done with more proportioned profiles at each age. Another commented that the lower lip was too prominent. This happened to be a characteristic of the subject chosen for the original profile. The choice of subject was un-

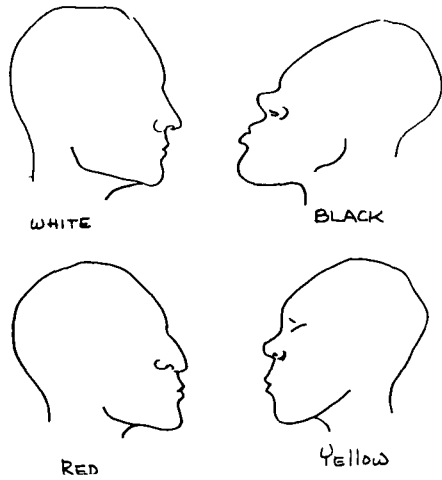


Fig. 3 Profiles suggested by E. H. Wuerpel in 1937.

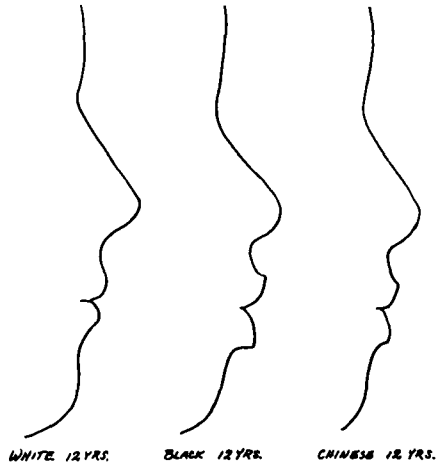


Fig. 4 Profiles taken from Sassouni's composites in his book "Face in Five Dimensions".

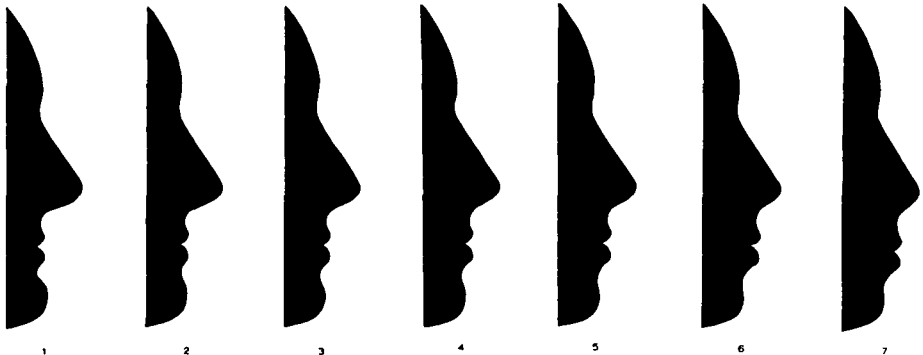


Fig. 2 Profiles presented in questionnaire. Number seven profile to the far right is 12 mm fuller in lips than number one to the far left.

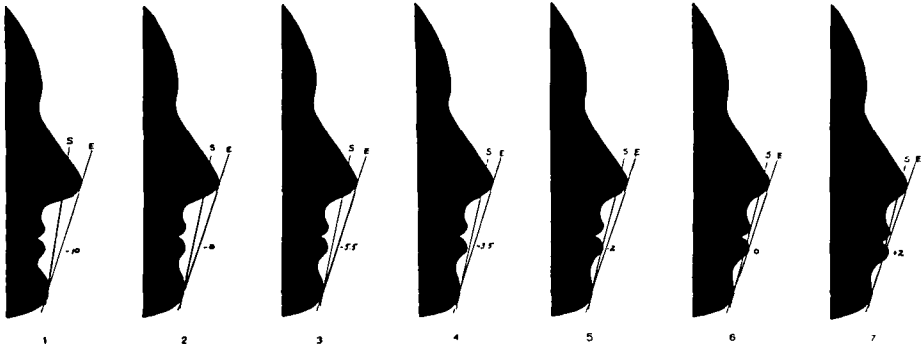


Fig. 5 S and E planes drawn on the seven profiles. Numbers represent distance of lower lip from E plane.

fortunate since the lower lip may have been distracting, but it also may have been negligible since all the lower lips are prominent in this series.

Although recipients of the questionnaire were specifically asked not to use any norms or ideals from other sources, those of us who are line-oriented may wish to see how the various soft tissue analyses would judge the profiles. Steiner's S line and Rickett's E line were used (Figs. 5 and 6). The S line is drawn from the chin through a point midway through the lower border of the nose. The lips should fall on the S line at an average orthodontic age. Profile number 5 probably comes the closest to this ideal for the S line. The E line is drawn from the chin to the nose. The lower lip of the mean adult profile should lie 4 mm back of this line \pm 3 mm. Profile number 4 comes the closest here. At ages 12 to 14, profile number 5 would come the closest since the mean at this age is 2 mm back of the E line. Using Holdaway's H line (Fig. 7), profile number 4 or 5 would come the closest but the lower lip probably falls too far outside the line. To my knowledge no separate values have been given for male or female by these authors. It should be noted that the error in drawing these lines is about .5 mm.

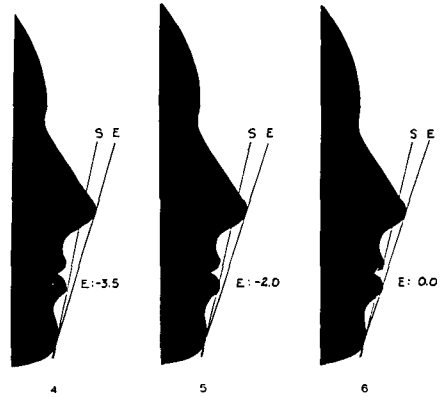


Fig. 6 Profile number 4 appears to come the nearest to the ideal for the E line. Profile number 5 appears to come the nearest to the ideal for the S line.

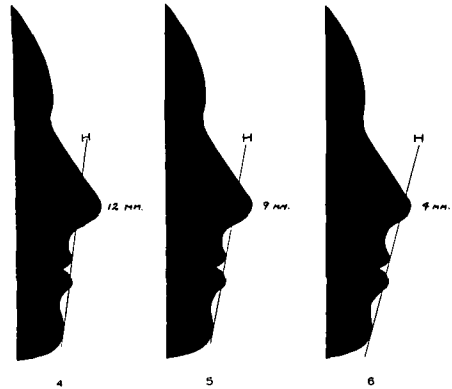
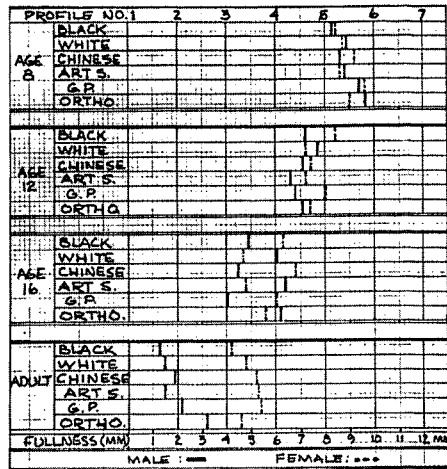


Fig. 7 H line drawn on profiles. Profile number 4 or 5 would come the closest to the ideal. The lower lip probably falls too far outside the line.

FINDINGS

Means and standard deviations for each age and sex were computed and the means charted as shown in Figure 8. The range of preference was wide covering six profiles for most ages. The standard deviations are lower (1.0 to 1.8) in the adults and higher in the 8-16 ages. (1.3 to 2.2). It appears that judging of sexes was difficult in the younger ages. The means show definite trends. The dotted lines represent females and the solid lines represent males. The general trend of the chart indicates that all groups preferred fuller profiles for younger ages and straighter profiles for the adults. At age 8 (Fig. 9) the choices of all groups indicated a profile between number 5 and number 6, at age 12 between 4.3 and 5.2, at age 16 (Fig. 10) between 3 and 4.2, and adults between 1.7 and 3.7.

As for sex differences, black, Chinese and general dentists were consistent in liking females fuller than males at all ages. Whites, art students, and orthodontists were mixed, sometimes liking males fuller than females at ages 8-16. The inconsistency in assigning fullness as to sex in the younger ages was probably a matter of indecision of the judges. In contrast, there seems to be a definite pattern in the adult category. As shown in Figure 10, all groups except orthodontists gave the women a 3.0 to 3.7 mm of fullness compared with men. The orthodontists gave only a 1.4 mm fullness. The orthodontists liked the male fuller than the male preferred by all other groups by 1.2 mm. The important finding here is that the orthodontists, although recognizing a statistically significant difference between males and females, were not half as emphatic in their separation of sexes as any of the other groups. All other groups preferred a difference in males



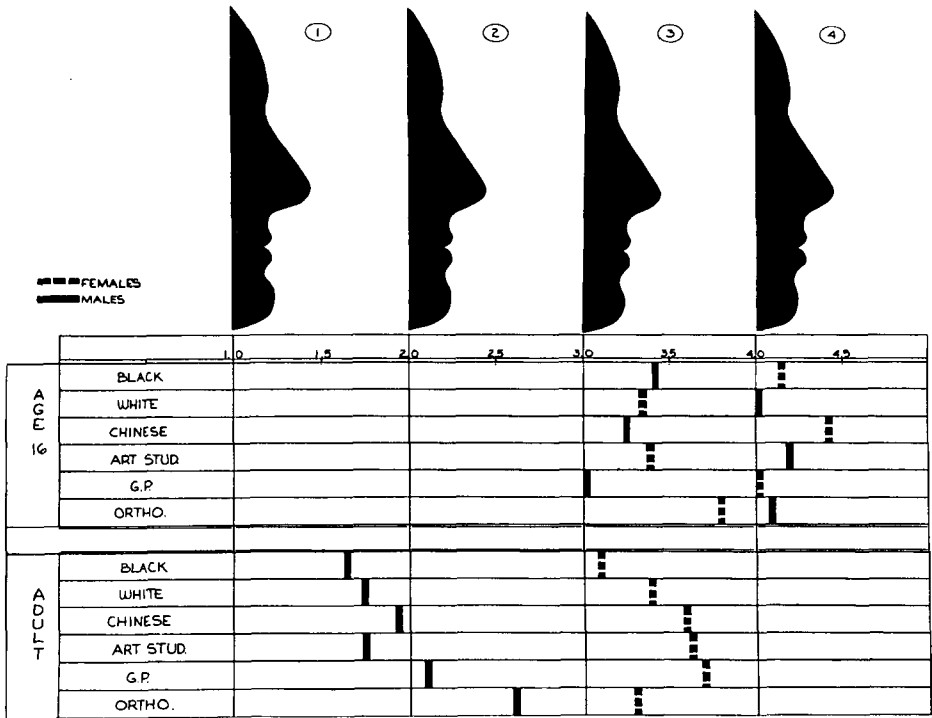


Fig. 10 Findings correlated with profiles. Separation as to sex was clearly defined only in the adults. Although recognizing a statistically significant difference between males and females, the orthodontists were not half as emphatic in their separation as any of the other groups. Note that orthodontists liked a fuller male profile by 1.2 mm.

and females of at least two times that indicated by orthodontists. The t-test for orthodontists was -2.63 and for blacks, the next closest, was -4.05 . The -2.63 figure indicates that the probability of this happening by chance would be one in a hundred, the -4.05 figure, one in a thousand.

DISCUSSION

The drawings themselves (Fig. 2) require some discussion. First, the test might have been expanded to eight or nine profiles to provide more choices, especially to the left or straight side. The adult mean for men was 1.6 to 2.6. The preference for number one was heavy: 21 out of 30 blacks liked number 1, 17 out of 30 whites liked numbers 1, and 18 out of 30 art students liked

number 1. An additional drawing to the left, or one step 2 mm flatter, would have helped. Second, a subject with a less prominent lower lip might have been chosen. Third, the drawings have provided a graphic illustration of just how much facial change can be produced with movement of lips alone. Fourth, although the movement of the lips protrusively produces a profile out of proportion when assigned to younger ages, nevertheless, all groups judging these profiles appear to recognize that fuller lips suggest youth.

The closeness of all groups in their choices of ages eight through sixteen, and the definite separation of adult males and females would indicate that the public not only shares a common esthetic standard but also has a discern-

ing eye for detail. This may indicate that the public is a more astute analyst of faces and of orthodontic results than we might expect.

As noted in the bottom scale in Figure 10, the blacks, whites, and Chinese in this study demonstrated a similarity of preference within .7 mm for men and within 1.0 mm for women. Although very close, this is not to be taken as a preference for themselves. It does say, I believe, that of the seven profiles they preferred a profile that resembled number 2 (actually 1.8) for men and number 3 (actually 3.4) for women. Iliffe² had a comment on this striking similarity of preference. In his study of feminine beauty using photographs he said, "One possible answer to this question is that human faces possess in varying degrees some intrinsic characteristic (e.g., of "harmony" or "balance") which is shared in all beautiful things. A more likely explanation is that culturally determined norms are transmitted through education . . ." With the prevalence of television and other mass media, the public is presently highly "educated".

Although the means were close, the range was wide. For example, in the adult female category there were three art students who preferred number seven, five blacks who preferred number six, and two general dentists who preferred number six. All of these are off the chart in Figure 10. Since the mean preference was somewhere between number three and number four there is a highly significant difference in opinion. As Wylie⁷ noted thirteen years ago, "Orthodontists have tried for 20 years to make a scientific proposition out of what can only be a matter of personal taste. Esthetic preferences should be frankly presented as such and not put on a par with physiologic considerations which the parent cannot

adequately judge." This study is one of general opinion. Although a mean can be plotted on a graph, in this author's view the opinions of the parents and patients should temper the opinion of the orthodontist. Furthermore, this study, as with cephalometric studies, considers the patient in a static position. The animated patient should require as much or more analysis at the time of treatment planning. Quite often a patient with a mouth which appears too full in repose will have a stunning smile.

SUMMARY

Six diversified groups of thirty people each were asked to judge seven silhouette facial profiles. Each silhouette drawing was unchanged with the exception of the lips which were advanced in 2 mm stages so that the "full" face had lips 12 mm protrusive to the "straight" face. Each judge was asked to choose the profile most pleasing for males and females at ages eight, twelve, sixteen and adult. Results were tabulated and means were charted.

1. Results indicated that the diversified groups in this study *do* seem to share a common esthetic standard for posture of the lips within 1 to 2 mm in most cases.
2. All groups were consistent in assigning fuller lips for younger ages although sex differences were clearly defined only in the adults, as shown in Figure 10. All groups preferred at least 3 mm fuller lips for adult females compared to adult males except for the orthodontists who indicated fuller lips by only 1.4 mm.
3. For adult males all groups but orthodontists preferred lips located back of the stated mean values for the E and H lines, close to number 2 profile (Fig. 11). Adult females were much closer to, but also back of, the E and H lines,

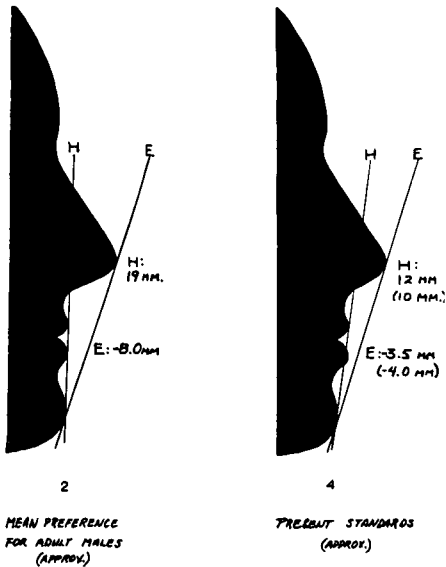


Fig. 11 Comparison of mean preferences in this study (excluding orthodontists) and present standards for adult males.

about profile number 3 or number 3.5.

4. A straighter adult male preference over female by 3 mm was indicated by most groups which may indicate that, in the future, orthodontists might accept a straighter adult male face and perhaps establish a straighter value for the adult male soft tissue profile.
5. If and when a straighter adult male profile standard is established, I hope that this would be used solely for the mature face. I feel that *one* of the reasons ortho-

dentists preferred a fuller face than the other groups in this study is that we seldom see most of our patients in full maturity. We know that a male finished case at age 16 will never get fuller, but we know too well that it may get flatter so we tend to finish toward a fuller profile than we might expect at maturity.

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