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The "Beauty" of Homo sapiens sapiens: standard canons, ethnical, geometrical and morphological facial biotypes. an explained collection of frontal north-europíde contemporary beauty facial canons - Part III -

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Abstract: Universal Beauty canons for "Europíde" faces have been collected in some books and interspersed in a very large number of international publications. I will discuss them all by realistic images of two famous supermodels of opposite sex selected according to meticulous ethnic-geometrical criteria. We will point out together the positive aspects of such canons but also their evident limits. The ratios of the visages represented here agree with those of the Beauty canons resulting from long and expensive anthropometrical investigations. Such statistical face models had been obtained by measuring the ratios of hundreds of individuals who were chosen because of their "attractiveness". Operators could take advantage of such models if they would represent appropriate guidelines for their regularly observed patients' facial types. International canons are actually a satisfactory reference for some facial types but also an approximation restricted within the limits of the Europíde ethnical-looks of the oval face. The lower third of the face is, however, transversally slenderer than the upper and middle thirds. Not having suitable images with which to describe the canons (although by using my pictures you would get the appropriate indications for their interpretations), many operators refuse to refer to such guidelines; other operators, on the other hand, use them very accurately because they are a result of very scrupulous research. I suppose that the faces selected for these studies had either been only oval-shaped or they consisted of various geometrical forms with the majority being oval. If the faces had chosen in relation to the harmony existing between the single facial components and facial geometrical peculiarities, we would have universal models for more facial types today. In future publications I will deal with this aspect finally. Consequently, I will standardize other faces of contemporary supermodels as an ideal reference for the changeable facial types of our patients. The most famous research in this field did not always use elegant and proportionate drawings to illustrate canons for Beauty. The question I asked myself is, "Why would one not describe them (and other typologies) directly on real images taken from fashion magazines? In this work, I will discover a coefficient of sexual dimorphism of 97,5% ± 1 that appears in many facial ratios.

Third part: (first part: http://www.vjo.it/044/beauty.htm second part: http://www.vjo.it/051/beauty2.htm)

3.2 FRONTAL EVALUATION OF THE MIDDLE 1/3 OF THE FACE:

let's carry on with our description of the canons of universal beauty for the ethnical europíde look mainly focusing our attention on the facial middle 1/3. In this middle third, the components eyes and nose have been deeply analyzed.

a) Horizontal balance - (25 data) - (HORIZONTAL / HORIZONTAL % ratios) Eyes - 14 data -

DENOM: Physiognomic height (Total facial face height) / Tr-Gn

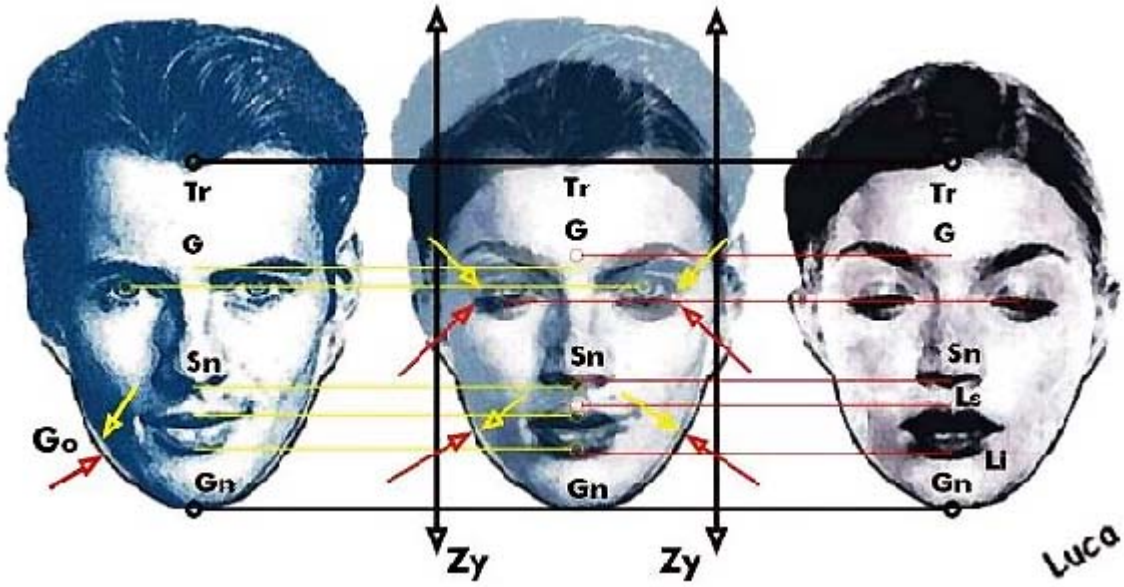
DEFINITION OF NUM/ AND / DENOM	NUM / DENOM	"Beautiful women"	"Beautiful" men
30) Biocular width / Bigonial width	Ex-Ex / Go-Go	100% ± 1 (90%)	100% ± 1 (90%)

Remarks: the information 30 tells how much the biocular width Ex-Ex is proportionate to the bigonial width in the oval face of generically europíde look. From this datum, it results clearly a transversal harmony between the biocular width and the lower width of the geometric contour. In addition, the forehead is in dimensional harmony with the lower 1/3 in both sexes (datum 29). We do not notice therefore any sexual dimorphism between forehead and biocular width in the two sexes. You must never confuse the term biocular (Ex-Ex) with the term interocular En-En. Do not forget how such an approximation like Ex-Ex / Go-Go cannot be valid for the other geometric shapes of the face, in which the lower 1/3 width is equivalent or greater than the upper 1/3. Datum 30, in geometric typologies different from oval, will probably not be 100% (see following publications). To conclude, it is clear that in the female face an increasing of the interocular distance (among the eyes) affects the diameter of the width of every eye. In the two following data, we will have a confirmation of this phenomenon.

DENOM: Biocular width / Ex-Ex

DEFINITION OF NUMERATOR	NUM / DENOM	"Beautiful women"	"Beautiful" men
31) Interocular width /	En-En / Ex-Ex	36% ± 1	32% ± 1

Remarks: in the datum of above, the distance between the eyes has been put automatically to comparison with the lower 1/3 (Ex-Ex=Go-Go). Comparing the two sexes, in absolute value, in women, the face is overall smaller and shorter. The already observed broader female face gives, however, an impression of greater shortness (what becomes broader becomes relatively, "shorter"). This is one of the various aspects that contribute to furnish her face with a childish or, however, young physiognomy. The female type begins to take a childish aspect, therefore, already starting with the facial geometry. They are certainly known the standard camera distortions in cinema images through which certain female faces appear more beautiful because they are overall "shortened".



In the

FIG. 7: top-models' double superimposition (also the man) of the two sexes with the same Tr-Gn

datum 31, we observe that the distance among the eyes in the two sexes (internal portion of the eyes-pupils-nose complex), related to Ex-Ex and therefore to the lower 1/3 of the face, is not proportionally harmonized with lower 1/3. Harmonized with it is only the external part of this complex. This greater relative meaning of the interocular zone En-En promotes messages of particular femininity of eyes and face. Comparing such distance with the lower and middle facial widths (data 31 and 36), we have confirmations of its significance in the female morphological face. Analyzing the datum 46, that tells us that the width En-En and that the nasal root in it contained are proportioned to each other without any sexual dimorphism, we can affirm that the nasal root as well appears in women relatively wider than in men. The distance En-En among the eyes, in the woman, has approximately to be large enough to contain transversally an eye. It has to be insufficient, on the other hand, in the male face. That means that in the woman's face, we have, in relationship to the rest of the face, eyes more distant from each other. In the many mongolíde and negríde ethnic looks, this largeness is particularly broad in both sexes, since the distance En-En results greater than in the europíde-looks of the canons for universal beauty. These standards, as we already now, actually correspond to the north-europíde ethnic look with a facial shape narrow down. In the europíde female model, keeping the biocular distance constant, a greater distance En-En between the eyes is the reason of a relative decrease of the female ocular fissure diameter En-Ex (data 31 and 32). Accordingly to this observations, the female's single eyes appear narrower but not necessarily smaller than in men, since to this impression of "great, middle and small" contributes also the eyes height. The eye height is, in fact, proportionally greater in the face of the women than in the face of the men (see datum 55, part II). Being the relative facial width at the zygoma level coincident in the two sexes and being En-En relatively smaller in the man, if En-En is almost 1/4 of Zy-Zy in the male face, in the woman, this value, will have to be necessarily greater of the male 23% (datum 36). This means that both cases slightly differ from the canons described by Leonardo and exposed for you later.

32) Eye fissure width / Biocular width	En-Ex / Ex-Ex	32% ± 1	34% ± 1

Remarks: basing on the just defined data, we can say that the relationship between the right eye width: interocular width: left eye width, that means En-Ex: En-En: En-Ex, is in the woman 33: 34: 33 and in the man 34: 32: 34. According to the traditional aesthetical canons, each eye should be wide around 1/3 of the biocular distance Ex-Ex = Go-Go, in particular 32% in the woman and 34% in the man. The total width of the two eyes considered together varies between the 64% and 68% of the biocular distance Ex-Ex, which means around the 2/3 of it. Therefore, the value of En-En equal to around 1/3 is confirmed. This dimension will be coincident with the nasal width only in women, but very smaller in men (see datum 47). Do not forget that the transversal distance among the inside portions of the iris (see figures 8) has been considered, from the classical artists, as an ideal for human beings, if equal to the mouth width. In the two models that we are analyzing together, such relationship with the oral width show, instead, a clear sexual dimorphism, since the distance between the irises is harmonized, like the bipupillar distance, with the lower and upper thirds of the face. The width between the irises is a value that belongs to the external contour of the complex eye-nose and interpupillar distance. Only the male model accords fully with this classical canon, while the woman

has a mouth definitely narrower than pc-pc. However, in the figure in which the face is divided by four vertical lines drawn through the points Cheilion and points Go, I have proposed you a visual description of this relationship between the mouth and the pc-pc. External contour and distance pc-pc of the complex eye-nose are in harmony referring to the forehead and jaw in both sexes. We have sexual dimorphism (data 35 and 38) when such elements are compared to the zygoma width of the face. In such a case, we have relative values bigger in women, because they are harmonized with the lower and upper 1/3s. An oral width Ch-Ch harmonized in both sexes only with 1/3 middle of the face causes dimorphism, if compared to one of the elements of the external contour eye-pupil-nose and in this case it results wider in the man (data 34 and 62, 63, 65, 66 in part II). The following datum 33 confirms that in both sexes, keeping constant the value of the denominator referred to the face, also the relative transversal distance between the pupils does not show any dimorphism, since they belong to the same group of components in mutual harmony. According to these remarks, the interpupillar distance becomes another point of reference respect to which we can calculate the proportional variations in the two sexes. Moreover, we have to expect a notable difference in the relative values of the datum 34 in both sexes (the bipupillar width compared to the width of the mouth).

33) Interpupillar distance / Biocular width	pc-pc / Ex-Ex	66% ± 1	66% ± 1
34) Interpupillar distance / Mouth width	pc-pc / Ch-Ch	130% ± 1	122% ± 1

DENOM: Zygoma width (middle third width) / Zy-Zy

DEFINITION OF NUMERATOR	NUM / DENOM	"Beautiful women"	"Beautiful" men
35) Interpupillar distance /	pc-pc / Zy-Zy	48,5% ± 1	47% ±1
36) Interocukar width /	En-En / Zy-Zy	27% ± 1	23% ± 1
37) Eye width/	Ex-En / Zy-Zy	23% ± 1	24% ± 1
38) Biocular width /	Ex-Ex / Zy-Zy	73% ± 1 (66%)	71% ± 1
39) Bimalare width /	em-em / G-Gn	73% ± 1 (66%)	71% ± 1

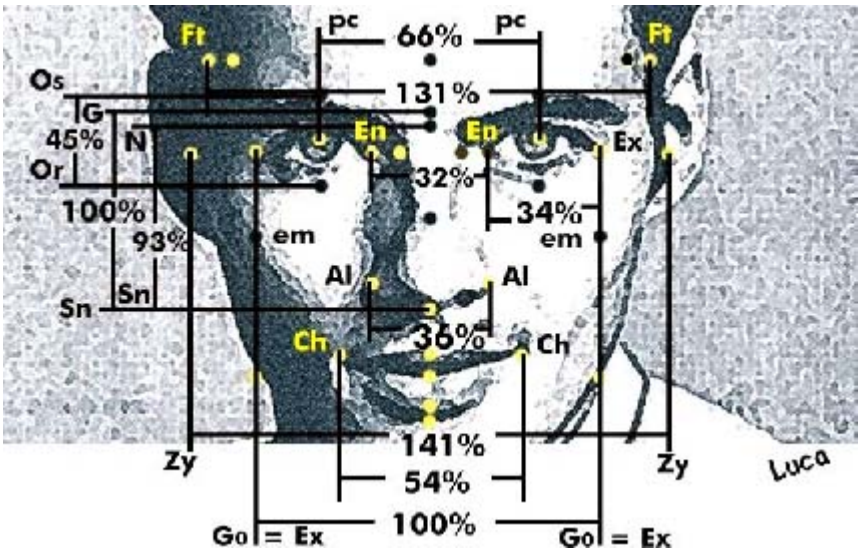


FIG. 8

Remarks: with the datum 35, we notice once more the sexual dimorphism factor. We have again a male model value smaller than the correspondent value in the female. (the coefficient is 97,5% ± 1). The Zy-Zy, here denominator, has remained constant in the two sexes; differences are therefore imputable to the numerator. According to the values of the data 45 and 47, En-En

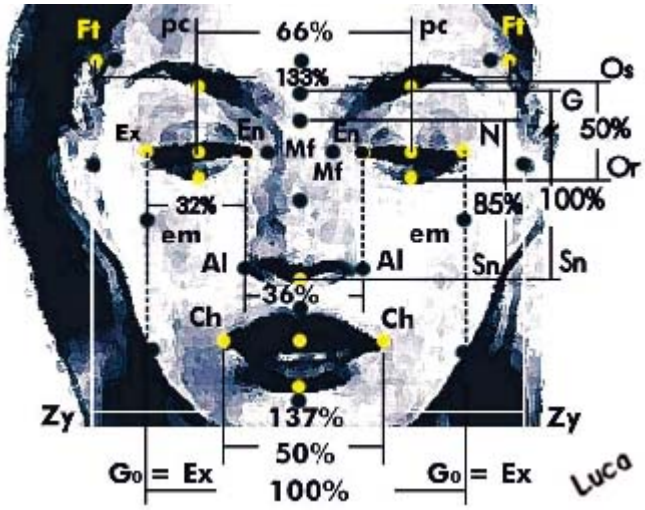


FIG.9

is wide exactly as Al-Al only in women. In men, it is slender than Al-Al. Similarly to what happens for Tr, G, N, Sn, Sto and Gn (they all lie on the same straight median vertical), also the points Ex, em and Go are along a vertical straight line. In the data 38 and 39, we have once again the biocular, bimalare and, indirectly, the bigonial width compared to each other. They have been now referred to the width of the face at the zygoma level (that is another horizontal value, particularly that of the middle 1/3). Since such widths are not dimensionally harmonized with Zy-Zy, we have still different values, between men and women, according to the usual factor of sexual dimorphism (71% is the 97,5% ± 1 of the 73% female value). The denominator (middle 1/3 width) is, in comparison to the total facial height, constant in both men and women. The reason why the proportions are bigger in women underlined that they are harmonized with upper and lower thirds of the face. The female face appears broader, round and therefore, relatively shorter. I remember you that the middle third width, anthropologically considered as the largest width of the face, is not always as such, since in the other possible facial geometrical shapes the upper and / or the lower thirds can be the broader than the middle third.

DENOM: Interocular width (distance between the eyes) / En-En

DEFINITION OF NUMERATOR	NUM / DENOM	"Beautiful women"	"Beautiful" men
40) Eye fissure width /	En-Ex / En-En	88% ± 1 (99%)	106% ± 1
41) Interpupillar width /	pc-pc / En-En	182% ± 1	206% ± 1

Remarks: the data 40 and 42 correlate the width of a single eye with the distance between the eyes themselves. The datum 42 is the mutual of the datum 40 and it corresponds to the so-called Orbital proportion canon of Leonardo da Vinci, that is the classical proportion for which En-En = Ex-En. If such a relationship were constant, however, we would not have in the female face an eye relatively narrower than the interocular distance, when compared to the overall face. As already told in the remarks of data 31 and 32 about women, an eye, ideally, could fit in the interocular distance. In men, this space is so much relatively reduced that the transversal diameter of an eye is

broader than this space itself. Practically, in the man, the distance between the eyes has to be typically smaller than in the female. We conclude that such classical canon will be true only approximately in the standard canons. The datum 41 shows that the distance between the pupils, in males, is somewhat bigger than twice than the distance between the eyes; but only 1,82 times in the ideal face of the woman. This depends on the fact that the denominator En-En in women is quite a lot bigger than in males' faces. In the datum 67 (part II), we will see that in the woman the lower 1/3 is about twice wider than the mouth, similarly to what happens in the man in the just examined datum 41 (datum between the interpupillar distance and En-En). Always in the datum 67, in the man, the lower 1/3 is only 1,85 times wider than the mouth, i.e. similarly to what happens in the woman in the datum 41 between the interpupillar distance and En-En. In a few words: that which happens transversally between the lower facial third and the mouth in men, happens typically in women between the bipupillar distance and the distance between the eyes. The contrary is true as well. It's like if to obtain a female physiognomy, referring to a hypothetical constant nasal width, it were necessary to make a widening of En-En up and a narrowing of Ch-Ch down in the face, while in the man it would be necessary a resolute widening of Ch-Ch down and a narrowing of En-En up in the face. Since also the width of the nose is not constant (in both sexes Al-Al and Go-Go are in mutual harmony - datum 51 -), the overall facial context, obviously, changes in a more complex way.

42) Distance between the eyes / Eye width	En-En / En-Ex	114% ± 1 (100%)	94% ± 1 (100%)

DEFINITION OF NUMERATOR	NUM / DENOM	"Beautiful women"	"Beautiful" men
43) Interocular width / Interpupillar width	En-En / p.c-pc	55% ± 1	49% ± 1

Nose - (11 data) - Remarks: let us give attention to the nose and consider a comparison between the width of the nose and the transversal distance between the pupils. Their relationship does not show sexual dimorphism, since either the nose or the external eyes contour are transversally harmonized with the lower 1/3 width.

DEFINITION OF NUMERATOR /	NUM / DENOM	"Beautiful women"	"Beautiful" men
44) Alare or nasal base width / Largh. interpupillare	Al-Al / pc-pc	55% ± 1	55% ± 1

DENOM: Interocular width (distance between the eyes) / En-En

DEFINITION OF NUMERATOR /	NUM / DENOM	"Beautiful women"	"Beautiful" men
45) Nasal or alare base width /	Al-Al / En-En	100% ± 1	112,5% ± 1
46) Nasal root width /	Mf-Mf / En-En	60% ± 1	60% ± 1

Remarks: through the datum 45 and its mutual datum 47, we express that, which Leonardo da Vinci called Orbitonasal proportion canon. This canon is En-En = Al-Al. In our models, this canon is fully true only in the woman. The consequent sexual dimorphism points out that the width En-En between the eyes is important so much in the female face, so that it equalizes the nasal width. This is important, since in women, the nose is proportionally broader than in the masculine face. We have already seen it describing the kind of harmony with the upper and lower thirds of the face. The contrary

of this affirmation is a narrower En-En in men. We have confirmation of the canon of Leonardo da Vinci only in women, while in men, the zone En-En, is relatively narrower than the nasal zone. En-En, also if anatomically in the complex eye-pupil-nose, belongs to its internal contour that, as we have seen, harmonizes differently than the external one and than the interpupillar distance. En-En is not clearly harmonized with the other transversal zones of the face. However, it is enough to underline again that a particularly perceivable width of it is typically feminine, as clear especially in the direct glance. The datum 46 is constant in the face of both sexes. There is, namely, a relationship between the interocular width and the nasal root width: they keep in mutual dimensional harmony. The datum 46, when compared with the 45, also has the merit to show a sort of overturn between that, which happens between nose and face, and that, which happens between the upper and lower portions of the nose. In the female sex, En-En (denominator) grows more than the nasal width Al-Al (numerator) and vice versa. Special attention has to be given to the sexual dimorphism of Mf-Mf, when related to the nose (datum 54). Since in the evaluation of the nose (as of any other single morphological component), it is always necessary to focus its proportionality referred to the total face height, let's notice the fact that, in comparison to the bizigomatica distance, the nose is more tightened in the man than in the woman (datum 50). The noses, in both sexes, are harmonized in the same way, when compared to the lower third (datum 51). Same conclusions are obvious as well for Mf-Mf, since its percentage relationship referred to En-En does not show any sexual dimorphisms. In conclusion, therefore, it is definitely not transversally that the male nose becomes a more important element in the face, since the external contour of the complex eye-pupil-nose reorganizes itself relating to increasing/decreasing transversal changing of the lower facial geometry. The masculine nose is also aesthetical when vertically dominates in the face (data 56 and 57 of part II), but also in the values for the sagittal projection. This is what happens in the canons for universal beauty.

47) Nasal root width / Nasal width	En-En / Al-Al	100% ± 1 (100%)	89% 1 (100%)
48) Mouth width / Nasal width	Ch-Ch / Al-Al	141% ± 1 (150%)	151% ± 1 (150%)
49) Nasal width / Mouth width	Al-Al / Ch-Ch	71% ± 1 (66%)	66% ± 1

Remarks: data 48 and 49 represent the Nose-oral proportion canon of Leonardo da Vinci (for which Ch-Ch = 1 ½ Al-Al), but such a relationship is true only in men and not in both sexes as classically accepted. The mouth must be considered as one of the key points in distinguishing our masculine model from the female one. I remember you that the mouth is transversally harmonized with the middle third, while the nose to the lower (and upper) thirds. In the man, practically, the masculine mouth compared to the nose predominates more than in the female face. If we compare the datum 49 with the datum 60, we will notice, indirectly, that the mouth width in the female fully coincides with the height of its nose. The datum 50 represents, instead, the Nasofacial proportion canon of Leonardo da Vinci (for which Al-Al = ¼ Zy-Zy). Such canon is fully true only in men. We know that women have to have a transversally more important nose than in men (27%), when compared to the bizigomatica distance (datum 50). The values have to correspond, instead, when compared to the lower 1/3 (datum 51). This still confirms the degree of harmony between Al-Al and Go-Go. I let you notice that the not perfect coincidence of the four facial canons described by Leonardo with our canons of today, does not exclude their validity in the field of approximation. The deviation from the canons of the Art School depends on the fact that, between the various factors, the classical canons describe a

face definitely europíde, without any proper comparing of the faces in matter of sexual dimorphism. The above-used four canons of Leonardo, taken by their selves, do not give us any information on the existing relationships between the components of the face and the geometrical context in which they fit. These and other classical canons represent a synthesis of harmony rules. Hence, in each time, we can observe the tendency of the various authors, to synthesize the reality of the face in a unique guide scheme to which each single human type should be referred, even misinterpreting the proper references. In my following publications, I will try to set solutions to such limits, finding a compromise between the necessity of extreme synthesis and the description of many reference geometric-ethnic facial types. Standardizations as such should be more proper to refer adequately to the normal variability of the every day patients. Interesting is to notice that the datum 53 confirms the lack of sexual-linked differences in the harmonization of the nose, when compared to the upper third. The width of the forehead was compared to lower 1/3, since we have already observed that the faces of the two models are geometrically analogous to each other (see also the next considerations).

50) Nasal width/ Zygoma width	Al-Al / Zy-Zy	27% ± 1 (25%)	25% ± 1 (25%)
51) Nasal width / Bigonial width	Al-Al / Go-Go	36% ± 1	36% ± 1
52) Nasal width / Classical forehead width	Al-Al / ft-ft	30% ± 1	30% ± 1
53) Nasal width / Visible forehead width	Al-Al / Ft-Ft	28% ± 1	28% ± 1

DENOM: Alare width (Nasal base width) / Al-Al

54) Nasal root width /	Mf-Mf / Al-Al	60% ± 1	53% ± 1

Remarks: the partially already discussed datum of above makes sense only if considered as a dimensional ratio of the nasal width (denominator, always in relationship with the widths of the lower geometrical 1/3 facial contour) and the interocular zone En-En (and relative nasal root Mf-Mf), that widens in women more than it does happen for the nose (denominator).

Conclusion: Only after having understood in detail all the possible mutual relationships of the puzzle model represented by the human face, a sufficient global vision can be reached to delineate a simplified analysis, which reduces to only about ten data the proportional reality of the whole face. And all this without forgetting the relationships that could be easily forgotten, as likely whether you have to do with too many ratios at the same time. This is possible and will be the theme of my future publications about aesthetics of the face.

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