

Twenty Five Thousand Years of Facial Aesthetic Development

I Khodaei

Citation

I Khodaei. *Twenty Five Thousand Years of Facial Aesthetic Development*. The Internet Journal of Plastic Surgery. 2009 Volume 7 Number 1.

Abstract

The portrayal of the human form can be traced to approximately thirty thousand years. While the aesthetic criteria developed for the human face tend to emphasize secondary sexual characteristics and average ness; the depiction of the body reflects the innate need to exaggerate culturally desirable features at the expense of realism. Newer anthropometrical measurements of the human face challenge previously accepted canons of the classical period.

INTRODUCTION

With the introduction of modern anaesthetic and surgical techniques, it has become possible to achieve major changes of the human face towards an “ideal” that reflects current cultural values that emphasize the importance of symmetry, proportion, youthfulness, and a Western European ideal of beauty. Although these criteria seem arbitrary, they are founded in the innate human desire to over-emphasize features that are linked to fecundity and good health.

The increase in the proportion of people who live beyond 60 years and the availability of disposable income, has acted as a major boost for the demand in facial plastic surgery in the past 30 years. The criteria used by facial aesthetic surgeons to restructure and rejuvenate a patient’s face have been developing over the past thirty thousand years.

The depiction of the human form has followed two distinct pathways. While the portrayal of the human face has evolved around the basic criteria of secondary sexual characteristics and average ness; various ancient Greek and renaissance artists have exaggerated the male and female forms to a degree that makes them unrealistic and unreal.

The basis for this dichotomous approach stems from an excessively positive psychological response to desirable physical traits. The Noble Laureate, Nico Tinbergen, studied the feeding behaviour of herring gull chicks. While the chicks respond to the presence of their mother by pecking at the red line on her beak, and receiving food for this particular behaviour, Tinbergen was able to show that the chicks responded with increased vigour to the presence of

three red lines on an artificial beak. This instinct of an exaggerated, positive response to desirable, physical stimuli underlines much of animal and human behaviour,¹ and explains the cult of the body beautiful that has been recorded since ancient times.

PRE-HISTORY AND BEYOND

One of the earliest depictions of the human form finds expression in the Venus of Willendorf. (Fig 1.) Discovered in Austria at in 1908, this very early piece of art has no facial features, as if they were not important. However, a global inspection of the figure demonstrates exaggerated breasts, vulva and abdomen of a female figure, possibly a fertility deity. Although her face has not been carved, her female figure became the basis of human depiction for the next twenty thousand years. This practice of exaggerating culturally desirable attributes of the female form can be clearly seen in our celebrity and super-model driven culture.

Fig.1. “Venus” of Willendorf, c. 25,000 BC.

The first break with traditional depictions of the human form occurred during the Old Kingdom of ancient Egypt. All drawings based on instinctual desires were subjugated to a new order of rigid uniformity and consistency. For the next three thousand years, human facial aesthetics became subordinate to a formula that changed little with time. (Fig. 2) The face and body were depicted in anatomically impossible forms with the subjects having two left feet, and each part of the head seen from its clearest angle. This necessitated the portrayal of the face in profile only, and at an extremely unrealistic angle to the chest. This rigidity of

style stemmed from an Egyptian technique of drawing facial and body features on a pre-existing grid with highly stylised and pre-determined proportions. While the human body had to be 19 squares high and the feet 2.5 squares in breadth, the pupil was depicted 1 square off centre, thereby giving the impression that the subject was staring at the observer. Although the grid lines were wiped off before the end of the procedure, the portrayal of a human face based on an unchanging grid structure made any attempt at realism and further aesthetic development impossible.

Fig. 2. The almost unchanging grid system dictated Egyptian

Body proportions for almost three millennia.

THE AGE OF REALISM AND EXAGGERATION

Increasing trade between Greece and Egypt in the 1st millennium BC exposed the Greeks to unfamiliar art forms. Soon after commercial ties were established, they started to emulate the giant statues of the Egyptians. Examples from this early period show a rigid Egyptian feel to the statues face and body. However, Greek culture of the time demanded realism in art. This gave rise to possibly the most important step in the development of facial aesthetics. For the first time in history, faces were depicted with realistic proportions: they looked human. The Krition Boy, a key development in art history depicts a young man's face and body as an average and quite possibly a replica of a person's features. (Fig. 3)

Fig 3. The Krition boy. The first depiction of the human face in a more realistic manner. C. 700 BC.

Nevertheless, within a generation, the Greeks abandoned their quest for realism and started the next, dramatic revolution in the development of aesthetics. Around 450 BC, Polykleitos created a series of statues based on his Canon, that provided the basis of human aesthetics to this day. The average and realistic portrayal of the human face and form was no longer enough: it simply became banal and uninteresting. Like the creators of the Venus of Willendorf, he opted for exaggeration and instinct rather than a realistic account of the human form. The cult of the body-beautiful, found expression in impossible renderings of the human body that resonate to the pages of Vogue magazine.

The reason for this rapid and astonishing change in attitude was probably partly religious: temples required statues of the gods who were by nature super-human and would provide the masses with a model of physical beauty. While their

bodies had unrealistic features such as unusually long lower limbs, a deep groove over the sternum, huge and curiously relaxed pectoralis muscles, massive transverses abdominis muscles, a very deep spinal groove, over-developed latisimus dorsi, and no coccyx; the faces of these statues were a reflection of the innate desire to respond to the secondary sexual characteristics in male figures and average ness in female faces. Hellenic art had not only ushered in its Golden Age with statues such as the Riacci Bronzes, (Fig. 4), created the template for Western aesthetics, and realised the dual approach to the human form: realism for the face, and exaggeration for the body.

Fig. 4. Riacci Bronzes. Hellenic period. Their exaggerated muscular form, impossible anatomy, and realistic faces, have become the gold standard of the human depiction.

The depiction of super-human beauty by the Polykleitos in his Canon led to further Roman copies. A thousand years before the Renaissance, Vetruvius, a Roman architect, expanded on the Canon, and described the proportions of the human face with mathematical detail. Western art did not see a revival of this particular form of art until the collective efforts of Renaissance artists left a lasting impression on the public. The spread of Western art through out the age of imperial expansion brought aesthetic criteria to all parts of the World and still dominates the "ideals" of beauty.

Further development of facial aesthetic proportions occurred in the 18th and 19th Centuries. Darwin had observed that facial expressions seem to have a universal meaning in different continents.² Later in the 19th Century, Galton measured the faces of criminals and found that when he produced an average of their faces, they became more attractive. This principle of average ness making a face more attractive gained further scientific evidence towards the end of the 20th Century through analysis of photographs. While men find an average female face more attractive, the opposite does not necessarily follow.³ Interestingly, Cunningham has found that male attractiveness is based on three basic principles.⁴ Females find male faces more attractive if they exhibit three features that include neoteny; that is a childlike "cuteness," "maturity," such as a wide jaw, and thin lips, and "expressiveness," which may include high-arched eyebrows and other signs of social sensitivity.

In other species, the health of an individual is advertised through the average ness of its features and its secondary sexual characteristics. While the former is a reflection of heterozygosity, and disease resistance, the latter reflects the

organism's ability to resist higher testosterone levels that not only have an immunosuppressant effect, but also lead to the production of a more masculine-looking male. Presumably the same principles also apply in humans, though the literature has been lacking in this area until recently.^{6,7}

Farkas and Munro gathered anthropometric data on the faces of 2,500 Canadian Caucasians and found that while the great artists of ancient Greece and the renaissance had created facial aesthetic criteria that closely resembled their own measurements, there were significant differences also. For example, the renaissance face is relatively shorter, mostly due to a smaller chin.⁹ Although their landmark study was limited to a certain geographical region and white, mostly Anglo-Saxon faces, it became the basis for further studies in this field.

Anthropometric measurements in the past thirty years have started to cast doubt on many of the canons that have developed through the Graeco-Roman and Italian renaissance schools of art. In a study of 153 North American Caucasians, Farkas has found that ancient canons do not fit average facial proportions¹⁰. Therefore, their use if facial aesthetic surgery must be done with a certain degree of caution. This problem becomes even more complex when considering the facial proportions of people from different continents. Le and Farkas have studied anthropometric measurements of Thai, Vietnamese and Chinese patients and compared them to Caucasians. Perhaps it comes as no surprise that oriental subjects showed much greater variation from the "ideal" (1.7%-26.7%) when compared to Caucasians (16.7%-36.7%).¹¹ Similar studies on adult African-Americans have shown that variation from classical canons seems to be the rule rather than the exception.¹² Studies on 1,050 Turkish adults have also shown that the neoclassical canons of facial proportions cannot be applied to that particular population.¹³ It would seem logical to develop contemporary facial aesthetic criteria that are a true reflection of the a populations rather than to rely solely on artistic achievements of the ancient world and the renaissance.

CONCLUSION

The development of human facial aesthetics has evolved through thirty thousand years of artistic endeavour. Recently, more scientific methods have been applied to selected populations. These measurements have shown that the facial features around the world differ widely from classical canons and are heavily dependent on the particular geographical site. While basic anthropometric measurements of the human face are still lacking in many parts of the world, they provide the basis for facial plastic surgeons in their attempt to restructure and reshape patient's features.

References

1. Tinbergen, 1949 N. Tinbergen, De functie van de rode vlek op de snavel van de zilverbmeeuw (*Larus a. argentatus* Pontopp.), *Bijdragen tot de Dierkunde* 28 (1949), pp. 453-465.
2. Darwin, C. (1872) *The Expression of the Emotions in Man and Animals*, 3rd edn, 1998, Harper Collins, London, 7, 176-194.
3. Grammer, K. and Thornhill, R. (1994) Human (*Homo sapiens*) facial attractiveness and sexual selection: the role of symmetry and averageness, *Journal of Comparative Psychology*, 108(3), 233-242.
4. Cunningham, M. R., Barbee A.P. and Pike, C. L. (1990) What do woman want? Facialmetric assessment of multiple motives in the perception of male physical attractiveness, *Journal of Personality and Social Psychology*, 59(1), 61-72.
5. R. J. Edler, B.D.S., F.D.S., M.ORTH.R.C.S Background Considerations to Facial Aesthetics *Journal of Orthodontics*, Vol. 28, No. 2, 159-168, June 2001
6. Hausfater, G. and Thornhill, R (1990) Parasites and sexual selection (editors' introduction), *American Zoologist*, 30(2).
7. Thornhill, R. and Gangestad, S. W. (1993) Human facial beauty. Average ness, symmetry and parasite resistance, *Human Nature*, 4(3), 237-269.
8. Farkas, L. G. and Munro, I. R. (1987) *Anthropometric Facial Proportions in Medicine*, Charles C.Thomas, Illinois.
9. Farkas, L. G., Katic, M. J., Hreczko, T, A., Deutsch, C. and Munro, I. R. (1984) Anthropometric proportions in the upper lip-lower lip-chin area of the lower face in young White adults, *American Journal of Orthodontics*, 86(1), 52-60
10. Farkas LG, Hreczko TA, Kolar JC, Munro IR, Vertical and horizontal proportions of the face in young adult North American Caucasians: revision of neoclassical canons. *Plast Reconstr Surg.* 1985 Mar;75(3):328-38
11. Le TT, Farkas LG, Ngim RC, Levin LS, Forrest CR Proportionality in Asian and North American Caucasian faces using neoclassical facial canons as criteria *Aesthetic Plast Surg.* 2002 Jan-Feb;26(1):64-9
12. Farkas LG, Forrest CR, Litsas L Revision of neoclassical facial canons in young adult Afro-Americans *Aesthetic Plast Surg.* 2000 May-Jun;24(3):179-84
13. Borman H, Ozgür F, Gürsu G Evaluation of soft-tissue morphology of the face in 1,050 young adults *Ann Plast Surg.* 1999 Mar;42(3):280-8

Author Information

I. Khodaei, FRCSI, FRCS (ORL-HNS)

ENT Department, Countess of Chester Hospital