The Aesthetics of the Upper Face and Brow: Male and Female Differences

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Abstract

A hallmark of the modern era of facial plastic surgery is the increasing demand for upper facial rejuvenation by both genders and the growing variety of such options, including both surgical and non-surgical modalities. Thus, now more than ever, differentiating these aesthetic ideals between the two genders and understanding their nuances has become a necessity for the facial cosmetics community. In this article, a detailed comparison of the pertinent anatomical and topographical differences is presented, followed by a review of the historical evolution of these aesthetic trends.

Keywords

► male aesthetics
► brow aesthetics
► female brow
► upper face aesthetics

The aesthetics of the upper face and brow is influenced by many factors, most importantly by gender, ethnicity, age, and also by current fashion trends. There is a significant cosmetic interplay between the brows and the surrounding peri-orbital features, rendering a great variety in the size, shape, fullness, and position of what would be pleasing on different faces. Eyebrows that may look good on one face may look abnormal on another. As such, implementation of rigid aesthetic criteria for upper face and brows is somewhat impractical.1 We set forth to review and compare the ideal aesthetics of the upper face and brow from both male and female perspectives. In doing so, we will start with the analysis of pertinent topographical and anatomical differences between the two genders, then explore a historical review of the “ideals” of the aesthetic brow and periorbital complex over the past 50 years. Through this journey, we follow these aesthetic parameters and their evolution through the trends of the past to our current concepts, with a focus on the difference of male versus female.

Anatomy and Topography

Facial Skeletons

Facial anatomy in adult men differs considerably from that of women – Table 1. The female skull is approximately four-fifths the size of the male skull and different in skeletal proportion and overall facial shape. As a whole—aside from ethnic variations—the male face is more square in shape compared with the heart-shaped face of a woman. In the upper third of the face, men have greater forehead height and width, with a prominent supraorbital ridge that slopes backward toward the hairline, giving men a more angled and sharper upper face.2 Because the medial supraorbital ridge blends into the glabella, men have a greater glabellar projection than women.3 Glabellar sex differences are among the most ancient and well-identified methods of sex determination, based on the width and projection of the glabella.4 The height of the orbit is smaller and more oval in women; however, the female orbit occupies a bigger proportion in relation to the size of the skull.5

Eye brow

McKinney et al differentiated the height of the forehead, measuring from the top of the eyebrow to hairline (trichion) as an average of 5 cm in women and 6 cm in men.6 However, considering the early receding changes in the hairline of men and the rate of manipulation of the height of the brow through manicure in women, the true value in such measurements has come into question.7

Eye brow

The male brow tends to be thicker and heavier, and lies over the superior orbital rim with little arch on a horizontal level. The female brow is club-shaped medially, starts medially at or below the rim, then ascends laterally with a pleasant arch, then peaks in its lateral third as it tapers laterally.8 The most lateral portion of the female eyebrow (the “tail”) lies on a horizontal plane that is 1 to 2 mm above the lowest portion of the medial eyebrow.9
The lateral brow segment undergoes ptosis earlier in life than the medial segment in a similar fashion in both genders. This has been attributed to either less support from deeper anatomical structures or else to the limits of the frontalis muscle fibers insertion laterally.\textsuperscript{10,11} The involutional changes of the medial brow are less well understood. Different studies have shown this segment to be descending, stable, or even ascending with age.\textsuperscript{12,13} Van Den Bosch et al's large cohort study in periorbital changes showed a raise in the lowest point of the brow and challenges the more common belief of overall involutional ptosis of brow in both genders.\textsuperscript{13} Although van den Bosch et al's study, self-admittedly, might have limitations in its methods, its findings justly calls for more diligent assessment of the topic in the facial plastic surgery literature.

**Upper Eyelids/Canthus**

On average, the male upper eyelid crease is positioned lower with a minimum of 8 mm above the lid margin versus a maximum of 12 mm for women, with the male upper lid also being “fuller” with less pretarsal show.\textsuperscript{14} Comparison of the lateral canthal region and the lower lids anatomy shows less distinctive features, with the canthal tilt being subtly more positive in females.\textsuperscript{15}

**Lower Eyelids**

There is no significant anatomical difference when comparing the lower eyelids of men and women. In the later decades of life, there is an increase in the distance between the pupil center and the lower eyelid of up to 1 mm in both genders, with men showing the relatively larger descent and thus leading to a larger horizontal eyelid fissure than women.\textsuperscript{13}

**Skin and Soft Tissue Considerations**

The overall thickness of male skin—including the epidermis and dermis—is greater at all anatomical locations including the upper face, making an average of a 1.2:1 ratio of thickness to female skin. The thicker male skin also possesses a higher density of sebaceous and sweat glands. Skin thickness decreases in both men and women with age, but the rate at which it occurs is the subject of some debates. According to some studies, skin thickness decreases in men and women at the age of 45.\textsuperscript{16} Other authors report that this decrease is linear with age and starts at the age of 20 in men. The thickness seems to remain constant in women until menopause and then it starts to decrease.\textsuperscript{17} Regardless of the rate of this change, facial aging is usually more noticeable in women than in men, likely due to overall increased thickness of the skin and also higher collagen content in men.\textsuperscript{14}

Men also have a larger lean body mass with the subcutaneous fat being less prominent than women.\textsuperscript{16} Besides the mass difference, men and women show differences in facial muscle movement, with men having larger facial expressions, even after adjusting for differences in face size.\textsuperscript{18} The greater degree of muscle movement with less composition of the adipose tissue has been postulated to contribute to the appearance of deep wrinkles in aged males versus fine lines in aged females. Crow’s feet in men usually have an inferior fanning pattern due to the relative increased size of the zygomaticus muscle.\textsuperscript{14}

**Historical Perspective on the Brow Aesthetics**

**1970s**

Modern descriptions of the ideal brow date back to the 1970s formulation by makeup artist Westmore.\textsuperscript{19} In his assessment, Westmore described the ideal brow with medial and lateral ends at approximately the same horizontal level and the apex lying on a vertical line directly above the lateral limbus. He also described the lateral end of the brow positioned at an oblique line drawn from the most lateral point of the ala through the lateral canthus (i.e., the alar-lateral canthal line).

**1980s**

Nearly a decade later, Ellenbogen asserted that the caudal margin of the medial brow should be 1 cm above the caudal extension of the supraorbital rim, and the rest of the brow position should be aesthetically correct for both men and women as described by Westmore.\textsuperscript{20} Toward the end of the
1980s, Cook et al held the classical positioning of the brow should sit at the level of the orbital rim for men, while it should arch well above the supraorbital rim in women. However, they departed from the classical description of the high point of the brow being positioned vertically at the level of lateral limbus to a more lateral position above the lateral canthus, describing the previously more medial position as giving an unnatural, surprised look to the face (Fig. 1). Cook et al’s evaluation was based on “reviewing photographs of numerous women” and did not seek to distinguish a gender difference for the aesthetics of the peak of the brow. Whitaker et al at about the same time departed from Ellenbogen’s description of the ideal medial brow position being 1 cm above the supraorbital rim. Unlike Ellenbogen, Whitaker et al believed the medial brow begins just inferior to the rim.22

1990s
Freund and Nolan in the 1990s supported Whitaker et al’s ideal position of the medial brow through a multicultural analysis of female photographs. In his study, a scoring system by plastic surgeons and cosmetologists was implemented as a Photoshop software changed the position of the medial brow. Both groups preferred the medial brow at or below the supraorbital rim and disliked the medial brow above the rim.23 Gunter and Antrobus, in 1997, performed one of the more in-depth analyses of eyebrow aesthetics.1 Admitting to challenges with the establishment of rigid criteria for all the reasons previously mentioned, they proposed some norms in their paper which have been upheld up to this date:

1. The peak of the brow should rarely be 10 mm above the horizontal of the most caudal portion of the medial brow. It should be higher in women than men, but no attempt to quantify the difference was made by Gunter and Antrobus.
2. The shape of the male eyebrow is usually less arched and usually flat or nearly horizontal.24
3. The lateral brow is usually more prominent in men.25
4. The eyelid appears more masculine if fuller and slightly more redundant than in women.

2000s and Onwards
This is the period when some of the evolving trends of the previous decades on the aesthetics of the female brow position and shape become more tangible. In one of the best studies of this era, Roth and Metzinger did a comparison of shape and dimensions of female frontal photographs portrayed in magazines in 2001, and found the brow peak to be closer to the lateral canthus than to the limbus, and a subset analysis showed the peak to be slightly more lateral in models versus random women.26 Another interesting finding of Roth and Metzinger’s work was the observation that the peak in women older than 50 fell more medial compared with the 20- to 29-year-old age group.26 This data was later supported by Biller’s larger study of 171 observers rating their preferred female lateral brow position using image processing which showed a preferred lateral position in younger models versus more medial one for the older models.27 Griffin and Kim’s retrospective study of ideal female brow aesthetics in the past 60 years illustrates the gradual lateral migration pattern of the female brow peak since the time of Westmore’s work and aesthetic ideals of his time (Fig. 2).28 Griffin and Kim’s work also showed that the lateral height at the lateral canthus and the takeoff angle (a measure of lateral arching from the horizontal level) has also decreased over time. Griffin and Kim concluded that the ideal youthful female brow is gradually becoming lower and flatter than it used to be, making it less different than the male eyebrow. This trend was regarded in part to be a response to the increasing parity between men and women in workplace (Fig. 3).28

Discussion
Facial rejuvenation is rapidly evolving into a norm in the society, traversing many of the previously imposed limitations based on age, gender, and culture. On the topic of gender, the data shows that between 1997 and 2014, there was a 273% increase in the number of cosmetic procedures performed on men.24 Such a shift toward the middle in a previously female-dominated demographics necessitates a new and perhaps more in-depth understanding of the details and nuances of the aesthetic differences in women and men. The upper face

Fig. 1 Transition of the peak of the brow ideals from Westmore’s description in 1970s to Cook in 1980s.

Fig. 2 The percentage of female eyes when the brow peak fell closer to the lateral canthus than the lateral limbus versus time. (From Griffin and Kim 2013.28)

Fig. 3
region, playing such an integral role in both beauty and sexual dimorphism, deserves particular attention with this regard. Based on our review, as the gender gap in the society is getting narrower, so is the gap in the demand for facial rejuvenation. Griffin and Kim’s work shows that the gap in some of our aesthetic ideals is also narrowing between men and women. The convergence trend in the eyebrow aesthetics as illustrated by Griffin and Kim is perhaps a representation of this bigger phenomenon. Another important point of this review is the understanding of the disproportionate effect that time plays on male versus female aesthetics. This study shows how the male aesthetics seems to remain relatively constant throughout the decades, less affected by the cultural trends and advances, a constant against which the more dynamic and complex female counterpart can be assessed. The female aesthetic ideals, however, not only present visible shifts, following cultural and fashion trends of the time; these ideals may also be preferred differently for younger and older women at any given era. Understanding such a range difference in the beauty icons of the past such as Elizabeth Taylor (A) with our current male (B) and female ideals (C). (Source: Fig. 3B reproduced from Georges Biard [CC-BY-SA 3.0]; Fig. 3C reproduced from GabboT [CC-BY-SA 2.0]).

References

Fig. 3 Comparison of the older ideal female brow aesthetics in the beauty icons of the past such as Elizabeth Taylor (A) with our current male (B) and female ideals (C). (Source: Fig. 3B reproduced from Georges Biard [CC-BY-SA 3.0]; Fig. 3C reproduced from GabboT [CC-BY-SA 2.0]).
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