

The Definition of Facial Beauty

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11.1 Introduction

As a scientist, I am quite surprised by the mathematics of facial beauty. As a plastic surgeon, I am delighted. My research has shown that the fundamental difference between an unattractive, average, attractive, and remarkably beautiful face lies within a few millimeters and a few angular degrees. With this in mind, I have developed the formula of “AH,” a simple mathematical formula that allows for the first time a mathematical definition of facial beauty based on seven facial angles (A) and seven facial highlights (H).

Research in the study of a normal or average face has opened up a new world in the ability to analyze, classify, and identify faces. Normal or average faces have been studied extensively; a beautiful face has yet to be successfully analyzed mathematically and defined. Agreeably or disagreeably, the attractiveness of the male and female figure is often described in measured numbers. Why not the face? As we live in a measured world of mathematics and computers, a

mathematical definition of facial beauty’s time has come.

It is important to reemphasize that for well over a century, the attractiveness of a woman’s figure (chest, waist, and hips) has been based on numerical measurements (e.g., 36–24–35). The hip–waist ratio has also been studied as a symbol of fertility and fecundity, important in mate selection. Female facial beauty is also numerically related to the volumetric curves and proportioned shapes of several locations on the face. Male handsomeness (to be presented in a future publication) is related to the positional angularity of the face and its volumetric proportions.

The human face can be thought of itself as an “oil painting,” a true work of art. Like a beautiful portrait, a face is complimented by the skin (canvas), hair (frame), and teeth (matte). In my opinion, a beautiful face combines facial features that are (1) harmonious, (2) shapely, (3) balanced, (4) elevated, (5) symmetrical, (6) highlighted, and (7) in volumetric proportion and relationship.

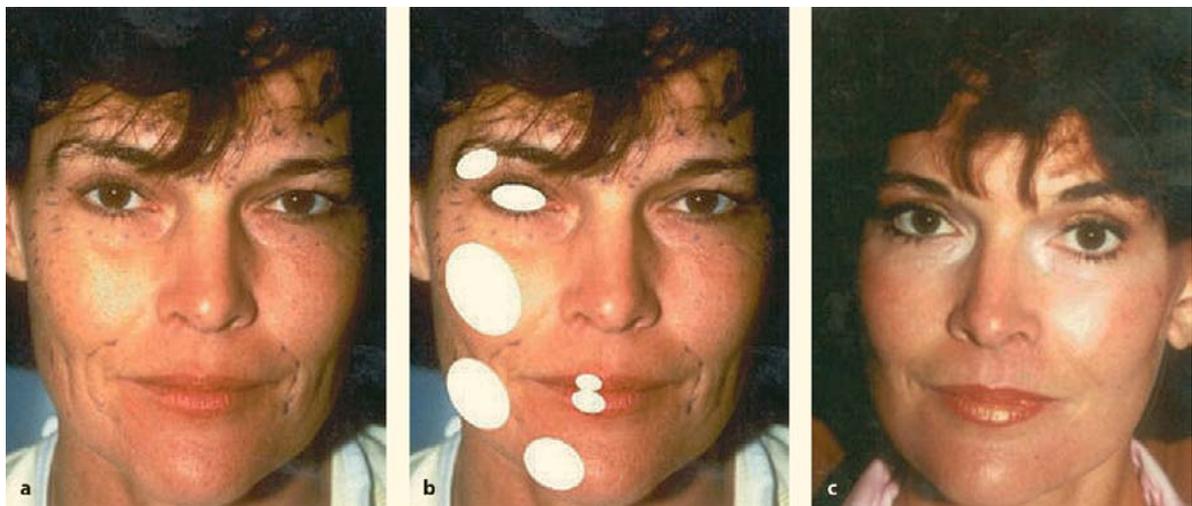


Fig. 11.1. Seven youthful fat pads. **a** A 54-year-old patient, with a tired, aging appearance. **b** Note the proper positioning of the youthful egg-shaped highlights. **c** One-year postoperative

extended supraplatysmal plane, endocoronal lift, and fibrofatty grafting to seven the youthful facial fat pads (or “eggs”)

Many believe that the true purpose of beauty has escaped those other than philosophers and artists. This is not true considering that beauty has a definite purpose in nature. Insect pollinators are attracted to the most beautiful or fragrant flowers, which ultimately ensures genetic survival for both parties in a symbiotic relationship. In the animal kingdom, beauty can be correlated with health, strength, and youthfulness. These qualities ensure genetic survival through preferential mate selection.

Unlike poets and artists of the past and present, my goal is to provide a mathematical definition of a beautiful face, a very important step in understanding facial beauty. Until now, a numerical classification has not been successful in assessing facial beauty. Defining a face as beautiful in an artistic context is quite simple; the difficulty lies in being able to provide a precise, objective, and mathematical definition without being surpassed by a subjective interpretation.

Whatever its reason, the quest for beauty is here to stay. A beautiful face will never be denied or ignored. Facial beauty offers its own rewards to be shared, enjoyed, studied, and remembered.

11.2

The Language of Beauty

For centuries, poets and artists have been unsuccessful in creating a uniform definition of “beauty.” Early attempts to do so have left behind a montage of words and images for the rest of us to ponder and appreciate. Today, more than any other era in history, there is an intense interest in beauty. The pursuit of beauty has only been outweighed by the attempts to acquire it.

Defining beauty, like defining love, has left poets with centuries of work and authors with pages and volumes of phrases. Defining words pour forth, such as aesthetic, aphrodite, art’s architecture, attractive, balanced, belle, blended, breathtaking, charming, contoured, detailed, defined, delicate, enhanced, elegant, elevated, exquisite, fabulous, featured, flawless, glamorous, goddess, great, gorgeous, grand, harmonious, healthy, ideal, intense, intoxicating, luxurious, majestic, natural, sensual, pleasing, pretty, pristine, queen of form, radiant, smooth, sparkling, stunning, sweet, and vibrant.

The artistic or poetic description of beauty is universal with terms such as *beauté* (French), *Schönheit* (German), *bellezza* (Italian), *beleza* (Portuguese), and *skjønhet* (Norwegian). It is clear that if something is beautiful, the subject will be evaluated and admired by many. There must be a common denominator, a consistency of qualities or features that our aesthetic sensitivities automatically perceive as beautiful.

In my opinion and studies, a beautiful face, like a beautiful oil painting, combines impressive and unified expressions of ideal features, rhythm, balance, and symmetry of proportion, harmony, style, and artistic value. There are pleasant, graceful lines, angles, and arches. There are uplifted and balanced forms and contours. There may be complementary coloring and shading with stunning harmony, and a symphony of anatomical rhythm. The result is a beautiful portrait.

In short, I would define beauty itself as “a highlighted and extraordinarily high-quality elevated image which catches and holds one’s emotional attention, pleases and enhances one’s perception, prolongs the eager evaluation, and creates lasting and positive appreciation. It certainly can be a somewhat rare, but splendid experience, to be shared by all.”

Alas, no wonder the positives of beauty and its worldwide appreciation have been the subject of many poems, songs, novels, movies, and other attempts to capture its permanent artistic image. The mystery and enjoyment of true beauty and its capture remains remarkably elusive. Before attempting to rejuvenate any patient’s face, a definitive “architectural topographical plan” is an absolute necessity. In order to produce the best possible work, the top architects and artists must painstakingly plan each step of their work in a calculated, methodical manner. A plastic surgeon dealing with a patient’s face should do no less.

I have found it very useful to view a patient’s face as if it were a portrait complemented by “the canvas” (the skin and teeth), “the oil painting” (the contours and features of the face), and “the frame” (the hair).

11.3

Looking at a Face Using a Scientific Approach

Technological advances in the military have given pilots the ability to look at an imaginary computerized “windshield” and to know the exact location and position of their targets. Special helmets and eyeglasses can measure exactly where a pilot looks. Similar technology can be used in determining where we look when looking at a beautiful face.

Visually, we perceive light highlights and dark shadows as shapes. This perception allows us to assess the position, volume, and shape of objects. We are able to visualize distance and depth perception through binocular vision. Owing to the number and the physical structure of the optic muscles that move the eyeball, the cerebral cortex evaluates an image more easily when the eyes move from side to side on a horizontal plane rather than up and down on a vertical plane. Graceful flowing curves are more satisfying to the eye

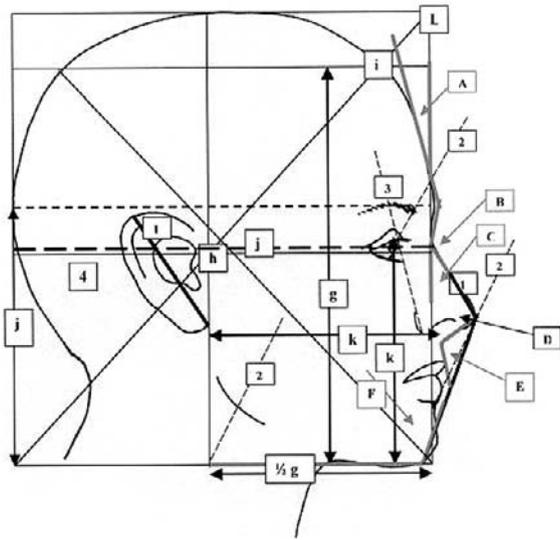


Fig. 11.2. A normal face. *A* Forehead angle: the slope of forehead off the vertical is approximately 10° . *B* Nasofrontal angle: ranges from 115 to 130° . *C* Nasofacial angle: ranges from 30 to 40° . *D* Nasomental angle: ranges from 120 to 132° . *E* Nasolabial angle: ranges from 95 to 100° . *F* Mentocervical angle: ranges from 80 to 95° . *g* The distance from the mandibular angle to the chin is half the distance from the chin to the hairline. *h* The half point, where the upper-ear helix connects to the sideburn. *i* Anterior hairline. *j* The distance from the occipital to the chin is twice the distance from the glabella to the chin horizontal. *k* The distance from central nasal base to the ear is equal to the distance from the pupil to the chin horizontal. *L* An anterior vertical line, from the glabella to the chin, defines a normal. *l* Ear and nasal bridge are positioned at parallel angles. *2* The angle of the line from the pupil to the glabella is parallel to the line from lower lip to the nasal tip, which is parallel to the angle of the neck. *3* A line from the base of the ala to the pupil will pass through the brow arch peak

and cause less muscle movement than straight or irregular lines. Following an irregular, jumpy line or viewing vast changes in contrast may result in excessive eye muscle movement and unnecessary cerebral activity and fatigue.

Anatomically and physiologically, the eye, like a camera, is stimulated by the quantity and quality of light that is reflected off the face. In viewing an image, the eye focuses on areas that are highlighted with pleasing shapes. As light stimulates the eye, these highlights are perceived as gentle, rhythmic, and flowing curves. This pleasing visual stimulus may be genetically wired into our brain. In viewing a beautiful face, the eye will be drawn to the smooth “egg”-shaped volumetric soft tissue areas (fat pads) with uniformly bright highlights and pleasing, rhythmic flowing curves.

11.4 Defining the Beautiful Face

Historically, noted contributions have been made to describe a beautiful sunset, bird, flower, opera, ballet, or masterpiece. These contributions have somewhat answered a bold challenge that pales in one’s attempts to define a beautiful face. Although Hungerford stated that “Beauty is in the eye of the beholder,” I must correct this and say that “attraction” is in the eye of the beholder, while beauty is shared by all.

How do we define beauty in human faces? The areas of the face that add the most to facial beauty (the eyes, cheeks, nose, and lips) also command the most scrutiny. One must attempt to combine art with science in answering this question.

In evaluating a beautiful face, the features which command the most attention, in order of appearance are the eyes, brow, cheeks, lips, nose, chin and jaw line, and neck. Features which rarely attract scrutiny (unless an abnormality is noted) are the forehead and ears.

As stated, in my artistic opinion, a beautiful face combines facial features that are harmonious, shapely, balanced, elevated, symmetrical, highlighted, in volumetric proportion and relationship.

Ideally, the width of the “Fabergé egg” highlights should be 50–60% of their length. The sum total of the seven egg volumes and their respective height and angles off the horizontal can be compared with the total egg volume of the face. The proportions are determined and analyzed. Although a very difficult and sophisticated mathematical analysis can be performed with digital imaging and computerized calculations, a more simplified approach has been developed to help the average person. Although the three-dimensional shape of the facial soft tissue features should be accurately calculated as such, two-dimensional calculations are easier.

It appears that measuring the actual volume of the “Fabergé egg” highlight may be difficult. A good correlation exists when comparing the width of the egg to its length. Although these features are truly three-dimensional values, using length and width measurements and proportion alone should suffice. The higher the value of the width compared with the length (up until 50–60%) reached, the more beautiful and youthful the features. These proportions can certainly be too great, leading to an abnormal or possibly deformed facial feature.

In its simplest form, the beauty of a face can be visualized merely by placing and judging the position, volume, and angle of the seven eggs on one side of the face:

1. Subbrow egg and its position, volume, and angle
2. Eye egg and its position, volume, and angle

3. Cheekbone egg and its position, volume, and angle
4. Upper-lip egg and its position, volume, and angle
5. Lower-lip egg and its position, volume, and angle
6. Mandibular angle egg and its position, volume, and angle
7. Chin eggs and their position, volume, and angle

Although the words describing a beautiful face may be quite descriptive and artistically satisfying, one has not been able to analytically create a reliable, mathematical definition. In an era where beautiful architecture can be defined numerically, it is easiest to define an architect's creative and artistic work as a marriage between art and science.

In a computer age where communicating is becoming increasingly numeric and digitized, a more scientific description is all the more important. Art without science, and science without art, is not optimal. Combining both science and art is the best communicative approach. A significant limitation to both the artist and the plastic surgeon is the ability to intelligently communicate one's desired goal. The desire to exchange information is strong, but the language is in its early developmental stages. Descriptive words alone do not suffice in a detailed, measured, and calculated discipline.

Appreciating the artistic description of beauty, combined with descriptive scientific numerology, will advance the disciplinary linguistics and the more successful capturing and creation of a stunningly beautiful face. This is certainly an artistic and scientific dream well worth all of the work to obtain the final product.

In analyzing a beautiful face, one must appreciate the existence of a normal skeletal and structural foundation. There has been an extensive amount of work performed by many medical disciplines in establishing facial norms. The muscular-skeletal dimensions must be within the normal position and range. Basic skeletal landmarks and overlying muscle positioning may vary in the volume of bony prominence in the normal or average face. As an example, an attractive or beautiful face may have a larger or more voluminous malar (cheek bone) prominence. Correcting the overprominence or deficiencies of bony structures can be modified where necessary. Normal mathematical ranges have been well established and publicized. The establishment of normal, facial bony values has been of substantial assistance to the craniofacial surgeon, orthodontist/oral surgeon, and the reconstructive plastic surgeon. However, it is not the average or normal face where we direct our interests, but the stunningly beautiful face. How does this entity differ? It is not only the extraordinary bony landmark prominence or volume, but also the soft tissue features

(skin, fat, and their landmarks such as position, volume, angles, and shape) that truly creates the beautiful face. It is this soft tissue layer, above the muscular-skeletal framework, when given the proper analytical values, that sets the strikingly beautiful face apart from the normal-average face. This realization will then allow the assessment, planning, and subsequent soft tissue modifications to incorporate beauty into a face. Using mathematical standards of beauty in cosmetic surgery would result in a more predictable and successful outcome.

As noted earlier, there is a triad of features that contribute to one's facial beauty:

1. The facial framing: This involves the hair's characteristics and styling.
2. The canvas: This involves the skin, its treatment, makeup, and other adornments.
3. The portrait/oil painting: This involves bony and soft tissue features and their volume, positioning, proportions, and harmonious relations.

Both the facial framing and the canvas can be modified and beautified through hair styling, skin care, and makeup. A few extra brush-lightened highlights and elevations can create artistic beauty. The "portrait" itself can be improved using soft tissue repositioning, a discipline in the hands of plastic surgeons, who now possess a method of assessment, planning, and the creating of facial beauty.

To artistically determine if one is beautiful takes no more than the ability to form an opinion. It is far more difficult to give a precise, objective, and mathematical definition without a nonscientific or subjective interpretation.

The true difference between individual faces is the position, volume, shape, and angles of skeletal landmarks, facial fat, skin, and external features such as eyebrows, eyes, cheeks, nose, lips, and chin. To answer the question of what defines facial beauty, we analyzed and classified over 100 examples each of beautiful, attractive, average, and unattractive faces, both artistically and mathematically. Each classification was based on the reviews of several interpreters. From the beautiful to the unattractive face, the most common characteristics were determined, and computer-assisted measurements were assigned. Using a simple formula, a uniform and replicable range for each category of beauty was then noted and classified.

After analyzing a series of beautiful faces, we found that we could simplify a complicated analysis into two categories: the angles (A) of the features and the volumetric highlights (H) of the facial soft tissue. These can be used to differentiate the beautiful face from the average face.

A beautiful face has the following features based on scientific–artistic interpretation: a Beautiful face is basically a normal face with augmented and elevated angles and highlights.

11.4.1

The Beautiful Brow

Artistically, the beautiful brow should be of medium width, height, and arched at the junction of the medial two thirds and the lateral third. It should lie just above the bony rim. The lateral tip should be higher than the medial. The brows should be uniformly shaped, medium to thin, with medial thickness tapering to lateral thinness. The eyebrows should follow a smooth curving line, extending from the lateral to the medial brow around the nasion, and down the lateral nasal wall. In men, this curve is more angulated at the medial brow. The beauty of the brow lies not only in the angle from the inner to the outer brow, but also in the “Fabergé egg” located as a definite soft tissue fullness below the brow. This is the attractive highlight located on the lateral soft tissue between the brow and upper eyelid. Highlights are very well expressed in photographs where bright light illuminates the egg-shaped highlight, which is evident beneath the eyebrows.

Scientifically, the beautiful brow should have a smooth, harmonious 10–20° climb from the medial to the lateral apex without creating a surprised appearance. The lateral brow complex in more attractive faces has a gentle, upward tilt above the medial brow. The height of the brow, from the glabella to the trichion, is one third of the facial height. The medial brow should begin on a vertical line with the medial canthus. The distance from the eyebrow to the eyelid crease is 1.6 cm, from the eyebrow to the midpupil is 2.5 cm, from the eyebrow to the supraorbital rim is 1 cm, and from the eyebrow to the hairline is 5–6 cm. The brow peak is optimal when a line is drawn from the most lateral point of the ala through the lateral limbus to the brow. The end of the brow should fall at a point on a line drawn from the most lateral point of the ala to the lateral canthus.

11.4.2

The Beautiful Eye

Beautiful eyes are thought to be large and somewhat almond-shaped. The lower eyelid should be shaped like a tapered scroll, much like the subtle edge of an English rosebud. Its positioning should be at the level of the iris or slightly below. It should have a slight concavity, but blend smoothly with the cheekbone. The lid margin curves are slightly asymmetric with slight medial elevation on the upper lid and light depression

on the lower lid. The eyelashes should be arched and somewhat full. They should be longer and thicker on the upper lid, and begin more medially than on the lower lid. A white sclera with a distinctive color to the iris is most attractive; hence, the popularity of colored contact lenses. The vertical height of the lower to the upper lid at the medial limbus creates this entity. On the horizontal, this width should be at least one third of the medial-lateral canthal width. The beautiful eyes have a subtle, but distinctive upper-lid crease. There should be a distinctive “Fabergé egg,” dividing the lateral half of the upper eyelid from the lateral half of the eyebrow. The subbrow “egg” should be full and create a distinctive highlight.

Scientifically, beautiful eyes have definite mathematical values. The average eye width is 30.7 mm. The distance from the medial to the lateral canthus should be equal to one fifth of the facial width. One eye width lies within the medial to medial canthus. There should be zero to minimal sclera showing below the iris. The intercanthal distance should equal to the width of the eye, ranging from 25.5 to 37.5 mm. The sclera should be white and highlighted. The distance between the upper-lid margin and the lowest part of the eyebrow is a minimum of 12–15 mm. The primary lid fold is 7–12 mm above the lid margin. The upper lid should cover approximately 1 mm of the iris. On the horizontal, the upper-lid margin should cross the iris just at or above the pupil at 9–12 mm above the lower-lid margin. On the profile, the upper, lateral lid soft tissue is situated 30° more anteriorly than the lower lid. This represents the full superior orbital rim area. The distance from the lower-lid lashes to the cheek apex should be 27 mm or less. There should be a relatively smooth transition between the lid and cheek. The entire eyebrow, eye, and eyelid should have at least a 5–7° lateral tilt upward. The lateral canthus should be at least 5–10° higher than the medial canthus. The lateral half of the lower lid should have an additional upward projection of 5–10 toward the lateral canthus. The medial canthus is one of the few landmarks that does not change position with age.

11.4.3

The Beautiful Cheek

Artistically, the beautiful cheek is one of the most important and attractive facial features. For centuries, this beautiful eminence has been highlighted with makeup and festive painting. The beautiful cheek should be well defined, full, and ovoid like a definite highlighted “egg.” The peak of the highlighted cheekbone or malar eminence should be high and full. The full egg volume should be sitting at an angled position, marked from the upper lip to the upper ear with

its pointed end toward the ear. The egg apex should lie on the vertical line splitting the lateral canthus and brow, and the horizontal line, from the division of the middle and lower thirds of the nose to the superior auricular tragus or cartilage bump in front of the ear. The fullest portion of the cheek should be centered high over the cheekbone and not down toward the nasolabial fold, as occurs with aging. The appearance of the nasolabial fold should be minimal, and the jowl area should be flat or slightly concave. A prominent nasolabial fold occurs owing to genetics or aging, loss of fat and bone volume, and the slipping of the fat pad and skin down against the contracted nasolabial fold and mandibular or “jowl” ligaments. This creates the aged and unattractive cheek folds and jowls.

Scientifically, the measured peak height of the cheek eminence should be 25–27 mm from the lateral canthus. The optimum angle is 40°. This area comprises bone, muscle, soft tissue, and cheek fat pad. If the Frankfurt horizontal is drawn, the high point of the cheek is approximately 1 cm above that line and 1 cm posterior to the lateral orbital rim. The width of the cheek egg should be at least as wide as the distance from the lower lid to the brow peak horizontal. The width of the cheeks or malar bone should be equal to the width of the mandibular. This width is at least 15% less than the width between the zygomatic arches. The hollow of the beautiful cheek or “thumbprint of beauty” is located on the occlusal plane or above a line drawn between the ear lobule and the ala.

11.4.4

The Beautiful Nose

An attractive nasal contour is represented by a slightly sloped dorsum, which blends into a moderate nasal frontal angle located at the suprapupillary line or radix. Straight lines are not as pleasing to the eye as are gracefully curved and flowing lines. The dorsum should flow, but not dip. The bridge is moderately narrow, as in the tip with subtle definition, and should be on a parallel axis with the ear. A prominent nasal spine may give an overly obtuse presentation, and this should be carefully assessed. The tip should be the most prominent point on the nasal dorsum. It should have a definite highlighted nasal projection or two tip defining points. The degree of tilt should be such that one can only slightly see the open nostrils on frontal view, and the profile has a slightly pleasant uplifted angle. The nostrils should be within a vertical line drawn down from the medial canthi, lie in a vertical-oblique position, and be moderate in size and ratio.

Scientifically, the following measurements are for a beautiful nose. The beautiful nose represents the central third of the distance from the trichion at the mid-

sagittal point to the gnathion. The most attractive nasal height from the nasion to the columella is about 48–50 mm. The female dorsum should lie 2 mm under a line drawn from the radix to the tip. The nasal profile will fall between the top and the bottom of the ear. The ideal length of the nasal bridge is 45 mm, the nasal width is 18 mm, and the alar width is 30 mm (or equal to the intercanthal distance) or 70% of the nasal length. The distance from the columellar base to the tip is 19 mm. The nasofrontal angle measures between 115 and 130°, and the angle of the nasal bridge from the vertical line to the Frankfurt horizontal ranges from 30 to 40°. The distance from the base of the nose to the upper lip should be the same distance as the width of the combined central upper and lower lip, or the distance from the lower-lid lashes to the upper-lid supratarsal crease. This “labial ledge” is unattractive or aged if longer. The nasofacial angle ideally should be 36° with a range of 30–40°. The nose should be tilted up slightly with an open nasolabial angle of 95–110°. The nasal projection should be 50–60% beyond the vertical drawn from the nasal base to the upper-lip vertical projection. As describe by Goode, the distance of the horizontal line from the alar groove to the nasal tip should be 0.55–0.60 times the nasal length.

11.4.5

The Beautiful Lips

Artistically, in the beautiful lips, the upper lip should protrude out further than the lower lip, but the lower lip should be fuller in volume than the upper lip. There should be a slight, but distinctive upper lip “white roll.” The lateral commissure should be at a vertical line drawn down from the medial iris-pupil. If a line is drawn from one commissure of the lip to the other, this horizontal line would sit on the lower-third point at the center of the upper lip. The upper and lower lips should have a central fullness shaped like two pairs of twin eggs lying against one another. The lower-lip twin “Fabergé eggs” should be larger and slightly more protuberant than those of the upper lip. Within limits, society has readily correlated fullness or labial plumpness with beauty. A slight pouting of the upper lip has been identified with youthfulness or sensuality.

Scientifically, the beautiful lips are approximately 57–62 mm in width. The upper lip should have a distinctive Cupid’s bow with a slight pout or upward tilt from the commissure to the Cupid’s peak of 10–20°. The upper lip precedes or protrudes more than the lower lip. The upper-lip vertical height is 8.5–9 mm, and the lower-lip height is 9.5–10 mm. The width of the philtrum, at the junction with the vermillion, is 10–11 mm and distinctive. From a central open point,

located between the upper and lower lips, the horizontal angle to the commissures should be at least 5–10°. The upper-lip and lower-lip angles of the Cupid's bow, off the horizontal, should be 10–20° positive and negative, respectively. The distance from the base of the columella to the Cupid's bow horizontal or "labial ledge" should be equal to or shorter than the distance from the lower-lid lash line to the supratarsal crease. The gingiva exposed in a smile should be 0–2 mm maximum. The horizontal lip position should fall behind the nasomental angle line at a distance of 4 mm for the upper lip and 2 mm for the lower lip.

11.4.6

The Beautiful Chin and Mandible

Artistically, the beautiful chin and mandible should be soft, slightly curved, and well defined. A delicate menton is associated with more feminine beauty. The chin should have adequate projection. The tip of the chin should just touch a vertical line, dropped from the nasion through the nasal spine and perpendicular to the Frankfurt plane. On frontal view, two attractive mental "Fabergé eggs," lying against one another should be seen centrally. The "Fabergé eggs" at the angle of the jaw are subtle, but distinct highlighted sites. These represent fat and muscle soft tissue over the masseter muscle. This Fabergé area, by calculation, is usually more attractive in the masculine face. This pair of eggs should have an angle parallel to the mandible.

Scientifically, the jaw line should be clean, smooth, and relatively free of ptotic fat. The soft tissue of the chin ranges in thickness from 10 to 14 mm. The chin should be positioned on the vertical line drawn from the nasion to the subnasale to the labrale inferius. The mentolabial sulcus should lie approximately 4 mm behind this line, or slightly anterior to a line drawn down from the upper to the lower lips. The mandibular angle should be tilted from the chin up along the jaw or mandibular border at least 10–25° from the horizontal. The jaw angle should have a definite soft tissue egg, lying over the masseter muscle. A distinctive hollow should fall below the entire mandibular border.

11.4.7

The Beautiful Neck

Artistically, the beautiful neck should be smooth and long. The platysmal muscle bands should not be apparent or be minimally visible. The submaxillary glands should be supported and hidden. The Adam's apple or laryngeal cartilage should be minimally defined.

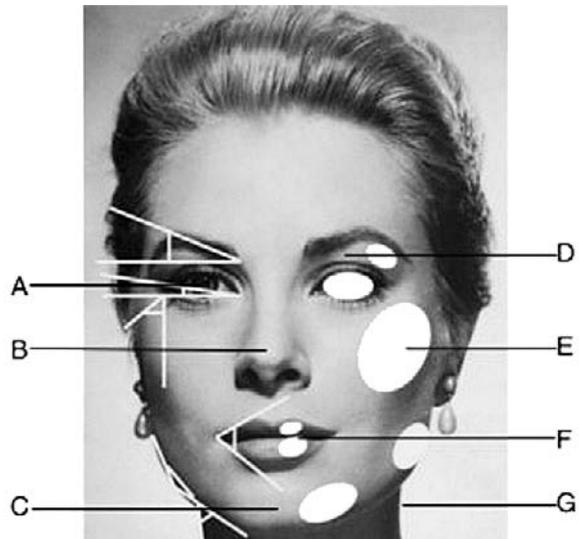


Fig. 11.3. A beautiful face. A summary of the measured parameters of a beautiful face. A beautiful face differs from a normal face in that it possesses uplifted angles and full, volumetric highlights. *A* The average width of the eye is 30.7 mm. The intercanthal distance should equal the width of the eye, ranging from 25.5 to 37.5 mm. The entire eyebrow, eye, and eyelid should have at least a 5–7° lateral tilt upward. *B* The most attractive nasal height, from the nasion to the columella, is 48–50 mm. The ideal length of the nasal bridge is 45 mm, the nasal width is 18 mm, and the alar width is 30 mm, or 70% of the nasal length. The nasofrontal angle measures between 115 and 130°, and the angle of the nasal bridge from the vertical line to the Frankfurt horizontal ranges from 30 to 40°. *C* The chin should be positioned on the vertical line drawn from the nasion to the subnasale to the labrale inferius. The mentolabial sulcus should lie approximately 4 mm behind this line, or slightly anterior to a line drawn down from the upper to the lower lips. The mandibular angle should be tilted from the chin up along the jaw or mandibular border at least 10–25° from the horizontal. *D* Ideally, there should be a smooth 10–20° climb from the medial to the lateral apex. The distance from the eyebrow to the eyelid crease is 1.6 cm, from the eyebrow to the midpupil is 2.5 cm, from the eyebrow to the supraorbital rim is 1 cm, and from the eyebrow to the hairline is 5–6 cm. *E* The measured peak height of the cheek eminence should be 25–27 mm from the lateral canthus. The optimum angle is 40°. The width of the cheeks or malar bone should be equal to the width of the mandibular. This width is at least 15% less than the width between the zygomatic arches. *F* The beautiful lips are approximately 57–62 mm in width. The upper lip should have a Cupid's bow with an upward tilt from the commissure to the Cupid's peak of 10–20°. *G* The beautiful neck has a 60–75° angulation with the horizontal line. The mento-cervical angle should be 80–95°. The neck should have a width approximately equal to the spacing of the vertical lines dropped from the lateral canthi

Scientifically, the beautiful neck has a width approximately equal to separation of the vertical lines dropped from the lateral canthi. The neck has a definite 60–75° angulation with the horizontal line. The mentocervical angle should be 80–95°. The submental fat pads and digastric muscles should not be prominent.

11.4.8

Ears

The ears should not be excessively prominent or protruding, with average-sized lobes.

The rim should be smooth. The height of the ear should be equivalent to the distance from the glabella to the nasal base. The antihelix should create a linear highlight. The tragus should be curved, smooth, defined, but not prominent. The long axis of the ear should be parallel to the long axis of the nasal dorsum. The ears protrude from the skull at an angle of 20–30°. The lateral edge of the helix to the mastoid skin is 15–25 mm.

11.4.9

The Beautiful Face

In my opinion, a beautiful face is oval or egg-shaped. The fuller base is superior in position (like an egg turned upside down).

11.5

The Standard of Beauty

Grace Kelly is a standard of beauty. Her facial features all have positive, beautiful angles (A) and highlights (H). The exquisite angles of her brow, eye, cheek, lips, and neck all fall into the range of “beautiful.” Her full, shapely, and well-positioned “Fabergé egg” fat pad highlights are correctly positioned and score high on the beauty index.

Both her angles and highlights (AH) are one of the highest recorded on the beauty index scale (9.6/10), confirming objectively her very subjective beauty.

11.6

The Facial Aging Mnemonic: SAG

Geographically, the face ages owing to displaced “hills and valleys” and the formation of “ungroovy grooves”! As an example, the fully hilly cheeks become valleys of fat on the elderly. The normal fat or slightly concave areas around the jowl areas become hilly jowls.

To simplify the basis of facial aging, I have come up with the mnemonic SAG.

“S” for skin changes: Sun exposure, heredity, and environmental toxins (smoking, drugs, alcohol, poor diet, etc.) prematurely age the skin. This results in a change in the health of the collagen and the loss of the elastic properties of the skin. The skin loosens, wrinkles, and turns into a brownish-gray tone.

“A” for avoluptosis: This is the progressive loss of facial fat and facial *deflation*. The deflated facial skin falls against contracted facial ligaments, much like snow falling in an avalanche against a fence. Owing to this loss of facial fat, our face is like a deflating balloon. As our face “deflates,” our grooves tighten and the residual fat and skin falls against the “ungroovy” grooves. This deflation results in the arc of aging as fat is lost in the forehead, temples, brows, eyelids, and cheeks. Fat gathers and fatty pads accumulate on the lower cheeks, jowls, and under the chin.

“G” for groove formation: As one ages, the face loses fat and *ligaments* contract, forming grooves. Much like in an elderly person who has stiffness and contracture of the shoulder, hip, and knee joints, our facial ligaments also contract.

11.7

A Few Parallels in Life to Understand Facial Aging

The face truly ages like a collapsing balloon. There is true bone and fat pad volume loss. This is like the deflation of the balloon. The loose skin and residual fat then falls down against age-tightening ligaments (avoluptosis). The two balloons are the same initially and have the same surface area, elasticity, and potential volume. The “fuller” one represents a youthful face and the deflated balloon represents the aged face, having lost 40% of its volume. While both balloons have the same physical properties, other than the volume of water inside them, they appear very different. The “younger” balloon seems to have more “skin”, but it does not.

Our goal in beautifying a face is to work from a very natural structural foundation. We turn back the clock 10–15 years and add natural beauty and youthfulness to the most important features. This triad of naturalness, youthfulness, and beautification should not be violated.

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