MAGNUM WORKSHOP

FACIAL REPORT

PREMIUM EDITION

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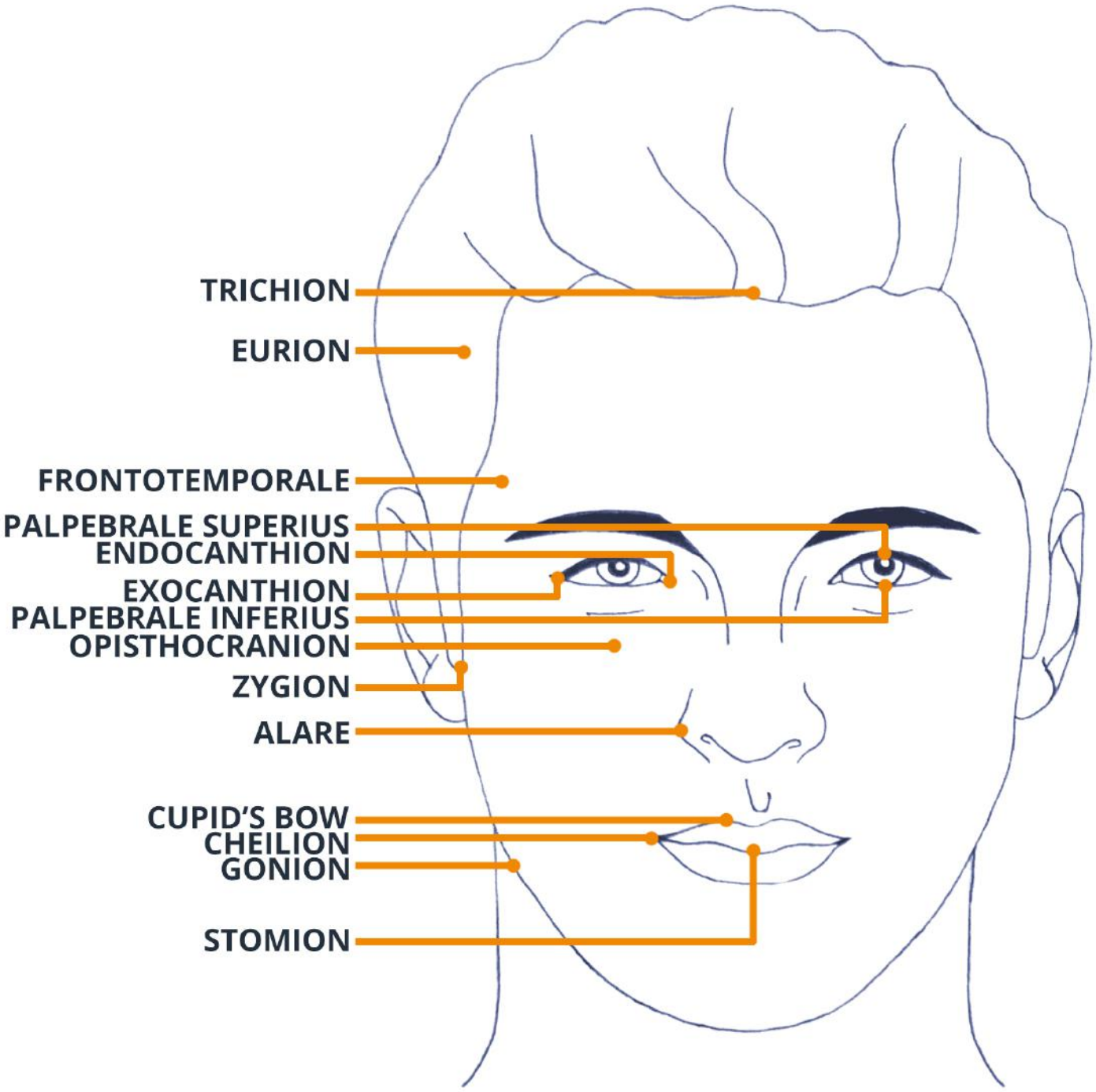
Intro

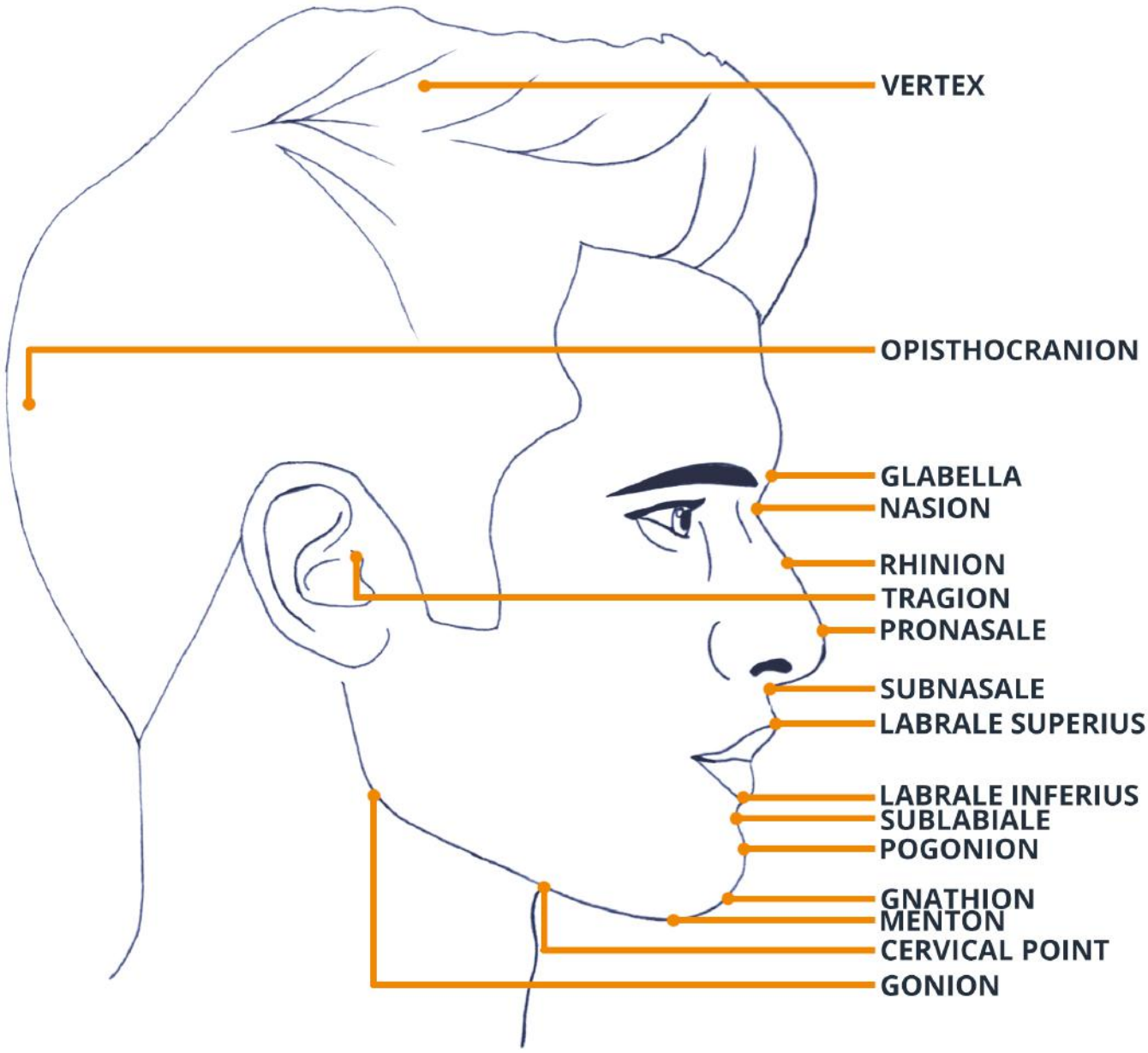
This report is meant to help increase your understanding of the respective strengths and weaknesses of your face. Most of the analysis is done via direct measurements of a photograph (photogrammetry) where possible and visual assessment where not. Keep in mind that this comes with inherent weaknesses that an in-person examination won't have, and that a consulation with a professional is necessary to confirm any findings.

Your facial measurements are compared to standardized norms for your sex and race that have been taken from cephalometric research data. Much of this data has been analyzed to fit what the researchers think the true average of the population is. If you don't fall into the 'normal' range, take it with a grain of salt, as these numbers don't necessarily represent what is normal or even attractive. You should expect many measurements to be out of the normal range, as even models don't fit every measurement perfectly. The report needs to be taken in as a whole instead of honing in on a specific measurement.

Attractiveness studies from the literature form the core basis of this report. However, many of the conclusions are based on our own internal research. Sources have been provided for further reading.

To best understand the report, use the following cephalometric landmarks on the next page as a reference:


TRICHION
EURION
FRONTOTEMPORALE
PALPEBRALE SUPERIUS
ENDOCANTHION
EXOCANTHION
PALPEBRALE INFERIUS
OPISTHOCRANION
ZYGION
ALARE
CUPID'S BOW
CHEILION
GONION
STOMION


VERTEX
OPISTHOCRANION
GLABELLA
NASION
RHINION
TRAGION
PRONASALE
SUBNASALE
LABRALE SUPERIUS
LABRALE INFERIUS
SUBLABIALE
POGONION
GNATHION
MENTON
CERVICAL POINT
GONION

Glossary:

Medial: Toward the middle or center.

Lateral: Toward the sides.

Bilateral: On both sides.

Standard Deviation: A measure of variability. One standard deviation encompasses 68% of the data, two standard deviations is 95% and three is 99.7%. A data set with a low standard deviation is one where the values are close together and don't vary by much.

Z-Score: How far from the average a data point is in standard deviations. A positive z-score means a measurement is above average, and a negative z-score tells you how far below average the data point is. Keep in mind that the z-scores calculated in this report are a rough guess.

Weighted Score: A weighted score gives more points to more important features such as the jaw, eyes, and overall facial characteristics.

Cephalometry: The measurement of the human head via medical modalities such as x-rays.

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Demographics

Sex: Male

Race: African

Bilateral Symmetry

Symmetry is a cornerstone of facial aesthetics since it indicates developmental stability. But humans aren't perfectly symmetrical. A perfectly symmetrical face would result in an uncanny & unnatural appearance. However, high degrees of symmetry are the most attractive, and obvious asymmetries can have a huge impact on facial aesthetics. Many models have asymmetries. However, there is less leeway for certain asymmetries such as those around the eye area. On the other hand, the eyebrows (which are difficult to measure accurately) and lower regions of the face such as the jaw are known to be more asymmetrical.

In this report, we will measure the distance between symmetrical points in comparison to the facial midline. Horizontal and vertical symmetry will be assessed separately, with the degree of difference between the two points being expressed in millimeters. This report will not be able to detect subtle variations in asymmetries such as on smaller regions like the columella and philtrum. This report also doesn't take into account sagittal/transverse measurements. However, frontal measurements are an adequate indicator of asymmetry.

Zygion Symmetry	2.2 mm.
Exocanthion Symmetry	1.5 mm.
Endocanthion Symmetry	0.6 mm.
Palpebrale Superius Symmetry	1.4 mm.
Palpebrale Inferius Symmetry	0.6 mm.
Alar Symmetry	0.8 mm.
Cheilion Symmetry	1.9 mm.
Gonion Symmetry	2 mm.
Inner Eyebrow Symmetry	0.7 mm.
Eyebrow Tip Symmetry	1 mm.
Cupid's Bow Symmetry	0 mm.
Pupil Symmetry	0.9 mm.
Average Asymmetry	1.1 mm.
Average Weighted Asymmetry	1.2 mm.

The subject has no noticeable asymmetries.

The jaw appears symmetrical with no evidence of mandibular/maxillary canting.

Cephalometric Averageness

Multiple studies show that average faces are perceived as more attractive, to the point that even babies respond the same way to average faces as they do to attractive faces e.g. by holding their gaze longer. This is presumably because average faces are the least likely to carry harmful mutations and are genetically diverse.

Measurement	Value	z-score
Nasofrontal Angle	130°	0
Nasal Tip Angle	67°	-3
Nasolabial Angle	64°	-4
Nasofacial Angle	39°	0
Nasomental Angle	129°	2
Labiomental Angle	131°	0
Angle of Facial Convexity	171°	1
Angle of Total Facial Convexity	147°	1
Mentocervical Angle	92°	1
Bizygomatic Width	13.4 cm.	0
Bigonial Width	11.7 cm.	2
Nasal Width	4.3 cm.	2
Mouth Width	5.6 cm.	0
Philtrum Length	1.1 cm.	-3
Forehead Height 1	5.7 cm.	0
Forehead Height 2	7.1 cm.	3

Measurement	Value	z-score
Physiognomical Face Height	17 cm.	-1
Upper Face Height	5.7 cm.	-4
Lower Face Height	5.9 cm.	-3
Midface Height	6.9 cm.	1
Nose Height	4.4 cm.	-1
Nasal Bridge Length	4 cm.	2
Nasal Tip Protrusion	1.5 cm.	0
Upper Lip Height	2.2 cm.	-3
Lower Lip Height	1.8 cm.	-2
Vermillion Upper Lip Height	13.2 mm.	0
Vermillion Lower Lip Height	15.4 mm.	2
Mandible Height	3.9 cm.	-2
Intercanthal Width	3.1 cm.	-1
Interpupillary Width	60.8 mm.	-2
Outercanthal Width	86.6 mm.	-3
Eye Fissure Width	27.9 mm.	-2

Total Averageness Score: 1.5

An averageness score of zero represents the most average face possible.

The subject is relatively average looking.

Total Weighted Averageness Score: 2.3

The subject has a relatively average face and should be considered attractive or at least have a good base for improving their facial aesthetics.

Overall Skull & Face Characteristics

Cephalic Index

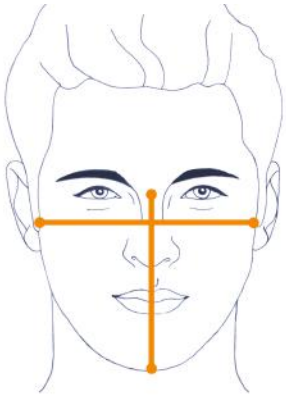
The cephalic index is a measure of the ratio between the head width and length when viewed from above (Naini, 2011)[1] Human skulls can be subdivided into three basic categories based on the cephalic index:

1) Dolichocephalic (long head)
2) Mesocephalic (average head)
3) Brachycephalic (short-wide head)

According to the subject's estimated cephalic index of 154.4, the subject's overall anatomical head type is ultra-brachycephalic. This is an extremely short wide head. Brachycephalic skulls are long from side-to-side, and narrow from front to back.

It's important to note however that the cepahlic index is difficult to measure via photographs and is inaccurate without a top-down perspective picture. The measurement provided here is at best, a rough guess.

Facial Index



The facial index is the ratio between the height of the face and the width of the face when viewed from the front (Naini, 2011)[1]. Human face types can be subdivided into three basic categories based on the facial index:

1) Euryprosopic (broad face)
2) Mesoprosopic (average face)
3) Leptoprosopic (tall, narrow face)

According to the subject's estimated facial index of 92.1, the subject's overall anatomical face type is leptoprosopic. This is a tall and narrow face. Leptoprosopic faces are vertically wide and horizontally short when viewed from the front.

Mesoprosopic faces are considered the most attractive, likely because they are the most average (Verma & Chitra, 2019)[2].

Craniofacial Height to Width Ratio

The craniofacial height to width ratio compares the width of the face at the cheekbone level to the height of the entire skull, and it should be around 60%(Naini, 2011)[1].

The subject's craniofacial height to facial width ratio was measured to be 70%.

Physiognomical Height to Width Ratio

The physiognomical height to width ratio compares the bizygomatic width to the physiognomical height of the face (trichion to menton). Normally, this value is in the range of 70-75%(Naini, 2011)[1]

The subject's bizygomatic width to physiognomical face height ratio is 70%, which means the face shape is relatively normal.

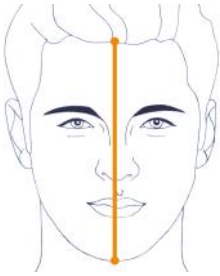
Forehead Width

The forehead width is normally 80-85% of bizygomatic width(Naini, 2011)[1]. The subject's bitemporal to bizygomatic width ratio is 91%.

Physiognomical Face Height

Physiognomical face height refers to the part of the face that goes from the hairline to the chin, or from tricheon to menton.

Physiognomical Facial Height
Value: 170.3 mm.
Normal Range: 160.1 - 198.1 mm. (Adelaja et al., 2016)[3]
Z-Score: -0.9

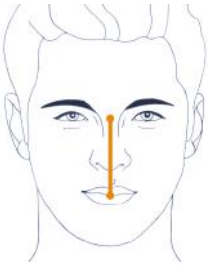


The estimated physiognomical face height is average.

Upper Face Height

Upper face height refers to the part of the face that goes from the eye to the lip, or from nasion to stomion.

Upper Facial Height
Value: 57.3 mm.
Normal Range: 66.8 - 86 mm. (Ernest et al., 2018)[4]
Z-Score: -4

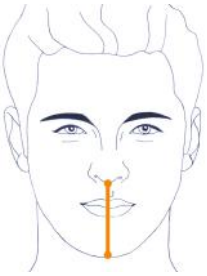


The estimated upper face height is below average.

Lower Face Height

Lower face height refers to the part of the face that goes from under the nose to the bottom of the chin, or from subnasale to gnathion.

Lower Facial Height
Value: 59.4 mm.
Normal Range: 64.4 - 80 mm. (Wen et al., 2016)[5]
Z-Score: -3.3

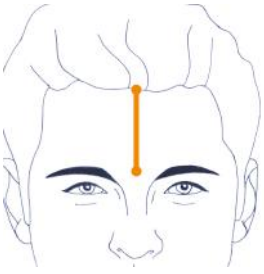


The estimated lower face height is below average.

Forehead Height 1

Forehead height 1 measures the forehead from the trichion to glabella.

Forehead Height 1
Value: 57.3 mm.
Normal Range: 45.1 - 71.8 mm. (Wen et al., 2016)[5]
Z-Score: -0.2

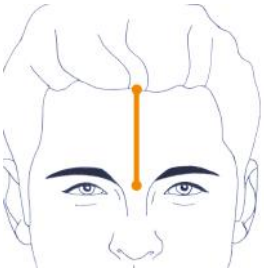


The estimated forehead height is average.

Forehead Height 2

Forehead height 2 measures the forehead from the trichion to nasion.

Forehead Height 2
Value: 71 mm.
Normal Range: 56.1 - 69.3 mm. (Farkas et al., 2005)[6]
Z-Score: 2.5



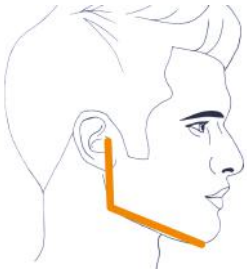
The estimated forehead height is above average.

The Lower Third

The lower third of the face consists of the mandible (lower jaw) and part of the maxilla (upper jaw). Its appearance is largely dictated by the mandible, which has the biggest impact on the appearance of the facial profile and silhouette. This makes it one of the most important markers of facial aesthetics. Correcting a deficient chin or mandible is relatively easy and provides one of the largest improvements in appearance.

Gonial Angle

Gonial Angle
Value: 115.4°
Normal Range: 114 - 138°(Bhatia & Leighton., 2010)[7]
Z-Score: -1.8



The gonial angle, also known as the angle of the jaw, is created by the mandible's ramus and mandibular body.

The subject has an acute gonial angle, which will be seen as more masculine but not necessarily appeal to the maximum number of people. A decreased gonial angle is associated with anterior mandibular growth rotation (a jaw that has tilted upwards too much). However, the gonial angle is difficult to visualize via a photograph has a high measurement error.

Facial Angle

The facial angle is the angle created by the Frankfort horizontal plane and a line drawn from nasion to pogonion. It provides a rough estimate of the prominence of the chin, but cannot differentiate whether abnormalities stem from mandible size, mandible position, or size of the chin’s soft tissues. The facial angle is generally between 90 and 92 degrees. Higher facial angles were common in models and Greek statues. Lower values are very common among modern humans. This measurement also has a high measurement error and individual variability in the Frankfort horizontal plane can also throw off the measurement.

The subject’s facial angle is estimated at 88.8, which might indicate a retrusive chin. However, this is potentially normal, given the subject's African ethnicity.

Facial Convexity Angle

The facial convexity angle describes how convex or concave the face appears from a side profile, and is another method of assessing the prominence of the lower third. It is the angle created by lines drawn from the glabella to subnasale, and subnasale to pogonion.

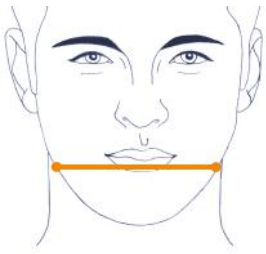
Facial Convexity Angle
Value: 170.8°
Normal Range: 161.9 - 175.3°(Wen et al., 2016)[5], 158.3 - 178.1°(Fernández-Riveiro et al., 2003)[8]
Z-Score: 0.7

The estimated facial convexity angle indicates average jaw skeletal class and alignment. The chin is relatively in line with the midface and not of aesthetic concern.

Bigonial Width

The bigonial width, also known as jaw width, is the size of the jaw from one gonion to the other, or, in other words, the width of the jaw from a frontal profile. Having a large bigonial width is what we normally think of as 'having a large jaw' and contributes to a masculine appearance.

Bigonial Width
Value: 117 mm.
Normal Range: 94.8 - 118.4 mm. (Virdi et al., 2019)[9]
Z-Score: 1.8



The estimated bigonial width is average.

Bigonial Width to Bizygomatic Width Ratio

A more useful metric for jaw size is the ratio of the bigonial width to bizygomatic width, as this determines whether your jaw is in harmony with the rest of your face. The normal ratio is 70-75% (Naini, 2011)[1].

However, according to Mommaerts (2016)[10], a larger bigonial to bizygomatic width of about 95% (closer to 100%) is preferred in men as it creates a more masculine look and square face shape.

The subject's bigonial to bizygomatic width ratio is 87%, which is normal.

Gonion Analysis

The gonion is where the body and ramus of the jaw meet, which creates the angle of the jaw. For an attractive jawline, the gonion needs to both be prominent and have the appropriate curvature. Prominence is determined by body fat composition and jaw size. Curvature depends largely on the gonial angle but also the strength of the masseter muscles.

The subject has a normal gonion curvature which is neither too obtuse or acute, but is the ideal gonion curvature for men (Mommaerts, 2016)[10].

The subject's gonion is barely visible in the provided image and difficult to discern. Factors such as lighting, body fat and mandibular recession can all contribute to gonion prominence. Since the subject's gonion is barely visible in the provided photo, assessment of the gonion curvature is subject to a high degree of error. This is relatively common as the gonial angle is difficult to visualize on photographs unless under ideal lighting conditions.

Chin Width

The width and prominence of the chin is a highly dimorphic trait. Men are expected to have large, wide chins whereas women are expected to have soft, small chins.

The subject has an average chin which should appear attractive to most people.

Mandible Height

Mandible height measures the height of the lower jaw.

Mandible Height
Value: 38.9 mm.
Normal Range: 37.8 - 55.8 mm. (Ernest et al., 2018)[4]
Z-Score: -1.8

The estimated mandible height is average.

Frankfort-Mandibular Plane Angle

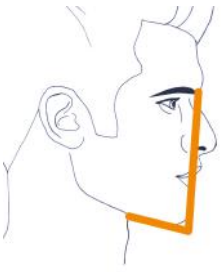
The mandibular plane angle is the angle created by the mandible and the Frankfort horizontal plane. For an accurate assessment, hard tissue cephalometric measurements are ideal (x-rays). However, the mandibular plane angle can also be roughly estimated with soft tissue measurements, though good visualization of the gonion and orbitale are required.

The subject's estimated mandibular plane angle is 21.4°, which is normal.

Mentocervical (Cervicomental) Angle

The mentocervical angle has been used to describe completely different parameters. Most commonly, and in this report, it refers to the angle created by the submental region and the facial plane. Excessive neck fat and a low-set hyoid will create a high mentocervical angle. In general, the lower this angle is, the better.

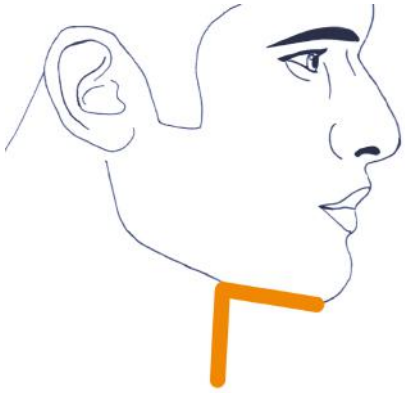
Mentocervical Angle
Value: 92.3°
Normal Range: 84.1 - 94.6°(Wen et al., 2016)[5]
Z-Score: 1.1



The estimated mentocervical angle is average.

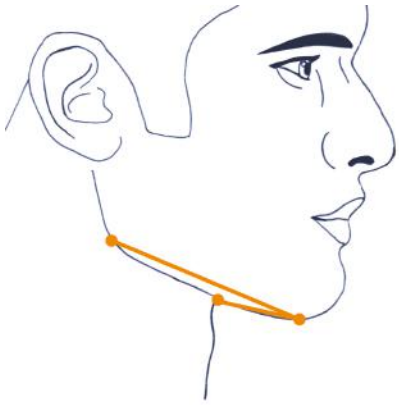
Submental-Cervical Angle

The submental-cervical angle is the angle where the jawline meets the neck. It's a great indicator of how defined your jawline is, and also a good marker of forward growth of the jaw. However, this angle has a high degree of measurement error.



The subject's submental-cervical angle is 116.1°, which is normal and appears youthful according to Ellenbogen & Karlin (1980)[11].

Submental Jaw Angle



The amount of fat and tissue under the jaw determines how sharp the jaw appears. It is determined largely by forward growth of the jaw, good oral posture during development, and most importantly the amount of fat present in the submental region. The submental-jaw angle directly measures the submental region.

The subject's submental-jaw angle is 22.4°, which is relatively average, but could be improved by weight loss and proper oral posture.

The Eye Area

The eye area is one of the most important and expressive parts of the face. Research shows that during interactions, people spend the most time looking at the eyes. The eyes are frequently hidden/blurred to anonymize photos and provide cues to general health.

Undereye Hollowing

The maxilla and facial soft tissues support the eyes in the area called the tear trough. A lack of adequate eye support creates sunken eyes and a hollow look in the undereye region. However, if the hollowing has persisted since childhood then it is most likely genetic. But the subject has no obvious undereye hollowing.

Lower Eyelid Margin Health

The subject appears to have healthy eyelids with no evidence of entropion or ectropion.

Canthal Tilt

Canthal tilt is a sign of good facial development. As the maxilla and cheekbones push upwards on the orbits due to proper tongue posture and occlusal force, the lateral orbital rim rises as well, creating an alert cat-eye appearance. On the other hand, a negative canthal tilt appears tired and droopy. According to a study performed by Bashour & Geist (2007)[12], 93% of people preferred faces with a positive canthal tilt. Though the study was performed on women, it can be extrapolated to men as well because it's a sign of overall good facial development. The vast majority of male models have a positive canthal tilt.

Total Canthal Tilt
Value: 2°
Normal Range: -2° - 6° (Farkas, 1994)[13]
Z-Score: 0

Right Canthal Tilt: +4.4°

Left Canthal Tilt: -0.3°

The subject has a positive canthal tilt of the right eye, which is considered conventionally attractive. The subject has a neutral canthal tilt of the left eye. However, the canthal tilt is overall positive and the discrepancy appears to be from the subject tilting their head and/or the misaligned photo.

Eyebrow Ptosis

The subject doesn't appear to have ptotic (drooping) upper eyelids.

Upper Eyelid Exposure

People with alert, attentive faces appear more attractive than people who look tired (Sundelin et al., 2017).[14] A huge contributor to the tired appearance is upper eyelid exposure, which creates a sleepy effect (Knoll et al., 2008).[15]

The pretarsal region is the area between the upper eyelid crease and lash line, which determines the amount of upper eyelid exposure. According to Vaca et al. (2019)[16], the ideal amount of pretarsal show is around 3-6 mm.

The subject has 4.6 mm. of pre-tarsal show on the left and 4.4 mm. of pre-tarsal show on the right.

The subject doesn't have any significant degree of asymmetry between the upper eyelids. Also, his upper eyelid show is within the ideal 3-6 mm. range

Medial/Lateral Eyebrow Droop

With normal aging, the medial and lateral aspects of the eyebrow tend to descend, contributing to a tired or angry look. The subject does not appear to have age-related drooping of the medial or lateral aspects of the eyebrows.

Medial Canthus Angle

An attractive eye area has a medial canthus that points down instead of to the side. This is an indicator of deep-set eyes that are pushed back into the skull. A high medial canthus angle generally means that the eyes are more hooded and properly developed, though East Asians naturally have more hooded eyes and a larger medial canthus angle.

The subject's average medial canthus angle between both eyes is 75.3°.

The subject's medial canthus angle is greater than 35 degrees, which can be an indicator of an attractive eye area

Scleral Show

An ideal eye area has a minimum amount of the sclera (white) showing. A lot of scleral show is a sign of lower eyelid retraction.

There is no evidence of scleral show based on the provided frontal photograph.

Intercanthal Width

Intercanthal width measures the width between the medial eye canthi.

Intercanthal Width
Value: 30.9 mm.
Normal Range: 28.3 - 43.1 mm. (Murphy et al., 1990)[17]
Z-Score: -1.3

The estimated intercanthal width is average.

Interpupillary Width

Interpupillary width measures the distance between the two pupils.

Interpupillary Width
Value: 60.8 mm.
Normal Range: 59.1 - 73.5 mm. (Murphy et al., 1990)[17]
Z-Score: -1.5

The estimated interpupillary width is average.

Outercanthal Width

Outercanthal width measures the width between the lateral eye canthi.

Outercanthal Width
Value: 86.6 mm.
Normal Range: 91.2 - 105.2 mm. (Virdi et al., 2019)[9]
Z-Score: -3.3

The estimated outercanthal width is below average.

Eye Fissure Width

Eye fissure width measures the width of the eye.

Eye Fissure Width
Value: 27.9 mm.
Normal Range: 27.2 - 40.8 mm. (Virdi et al., 2019)[9]
Z-Score: -1.8

The estimated eye fissure width is average.

Eye Fissure Height

Eye fissure height measures the height of the eye.

Eye Fissure Height
Value: 7.3 mm.
Normal Range: 8.2 - 13 mm. (Eze et al., 2013)[18]
Z-Score: -2.8

The estimated eye fissure height is below average.

Eyebrow Height

The brow ridge to IPD ratio is a great benchmark for determining how low or high set the eyebrows are and is calculated by dividing the IPD (interpupillary distance) with the distance from the eyebrow to pupil.

The subject has an IPD ratio of 2.4, which indicates high set eyebrows. High-set eyebrows are generally unattractive on men.

The Midface and Cheekbones

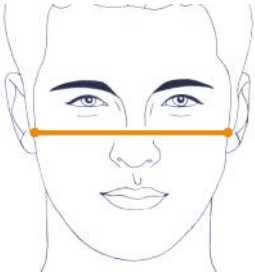
Cheekbone Height

The subject appears to have average height cheekbones based on the provided frontal photograph. Most people have average height cheekbones.

Face (Bizygomatic) Width

The width of the face, also known as bizygomatic width, measures the width of your face at your cheekbones at their widest point.

Width of the Face
Value: 134.4 mm.
Normal Range: 113 - 162.2 mm. (Wen et al., 2016)[5]
Z-Score: -0.3



The estimated face width is average. The subject also has visible cheek hollows, which is considered attractive.

FWHR

FWHR is the facial width to height ratio. It essentially determines how wide the face is perceived. FWHR also carries with it several other assumptions that humans make about behavior, whether they are accurate or not.

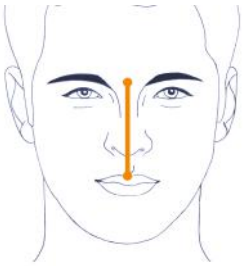
The FWHR is determined by dividing the facial width (bizygomatic width) by the facial height. The bizygomatic width is the distance between the right and left zygion. The facial height isn't measured consistently among researchers but most often it refers to the distance from the upper lip to the eyelids (nasion). The link between FWHR and attractiveness is not well established.

The subject has a facial width to height ratio of: 1.9, which is an average FWHR. The subject is within one standard deviation of the average FWHR (Kosinski, 2017)[19].

Midface Height

Midface height refers to the middle part of the face. It is measured from the glabella to the labrale superius.

Midface Height
Value: 69 mm.
Normal Range: 51.9 - 73.7 mm. (Wen et al., 2016)[5]
Z-Score: 1.1

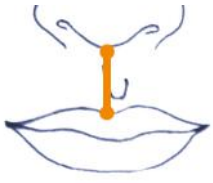


The estimated midface height is average.

Philtrum Length

The philtrum length is the distance from the top of the upper lip to the bottom of the nose. Its length plays an important role in how long your midface appears. Since the maxilla sinks with age, a long philtrum can contribute to the appearance of an old long-looking face, whereas a short philtrum is a youthful baby-faced feature.

Philtrum Length
Value: 11.3 mm.
Normal Range: 12.9 - 18.1 mm. (Virdi et al., 2019)[9]
Z-Score: -3.2



The estimated philtrum length is below average.

Cheek Hollows and Fullness

After puberty, the baby cheek fat normally disappears to show any underlying cheek hollows. Hollow cheeks signify sexual maturity whereas full cheeks signify youth. Men are generally expected to fall into the former category but obvious cheek hollows aren't a requirement for an attractive midface.

The subject has full cheek hollows but not too full, which appears aesthetic and youthful.

The Nose

Nasal Index

The nasal index is simply the relationship between the width and height of the nose. It varies greatly between ethnicities. The subject's nasal index is 99.2, which is classified as platyrrhine. These types of noses are wide and flat.

Columellar-Alar Relationship

The relationship between the columella and ala determines the aesthetics of the lower third of the nose. The columella-alar relationship can be divided into 6 different types (Gunter et al., 1996)[20].

The amount of columellar show was measured at 0.5 mm, which is normal. In addition, the columellar-alar relationship appears normal based off a quick visual assessment.

Nasofrontal Angle

The nasofrontal angle measures the angle created by the nose and brow ridge when viewed from a side profile.

Nasofrontal Angle
Value: 130.3°
Normal Range: 126.5 - 133.1° (Farkas, 1994)[13]
Z-Score: 0.3

The estimated nasofrontal angle is average.

According to Naini et al. (2016)[21], a nasofrontal angle of 130 degrees is ideal. Though Naini et al. only researched Caucasian men, it can still be useful to compare the subject to eurocentric standards. The subject matches this very closely and essentially has an ideal nasofrontal angle.

Nasal Tip Angle

The nasal tip angle is the angle created by the bridge of the nose and the columella. Essentially, it's measuring how pointy your nose is overall.

Nasal Tip Angle
Value: 67.4°
Normal Range: 70.6 - 87.3° (Wen et al., 2016)[5]
Z-Score: -2.8

The estimated nasal tip angle is below average.

Nasolabial Angle

The nasolabial angle is the angle created by the philtrum and the columella.

Nasolabial Angle
Value: 64.5°
Normal Range: 76.6 - 98.5°(Wen et al., 2016)[5]
Z-Score: -4.2

The estimated nasolabial angle is below average. However, the nasolabial angle is also difficult to measure and has a high measurement error.

Nasofacial Angle

The nasofacial angle is the angle of the nasal structure as it pertains to the perpendicular line of a person's facial plane.

Nasofacial Angle
Value: 39.2°
Normal Range: 36.8 - 41.4°(Wen et al., 2016)[5]
Z-Score: 0.1

The estimated nasofacial angle is average.

Nasomental Angle

The nasomental angle is the angle created by the line from the nasion to the tip of the nose and the line from the tip of the nose to the chin.

Nasomental Angle
Value: 129.3°
Normal Range: 119.9 - 128.6°(Wen et al., 2016)[5]
Z-Score: 2.3

The estimated nasomental angle is above average.

Labiomental Angle

The labiomental angle is the angle created by the lower lip and chin.

Labiomental Angle
Value: 131.4°
Normal Range: 122 - 138.5°(Wen et al., 2016)[5]
Z-Score: 0.3

The estimated labiomental angle is average.

Total Facial Convexity Angle

Like the facial convexity angle, the total facial convexity angle also describes how convex the face appears from a side profile, but it incorporates the protrusion of the nose. It is the angle created by lines drawn from the glabella to pronasale, and pronasale to pogonion.

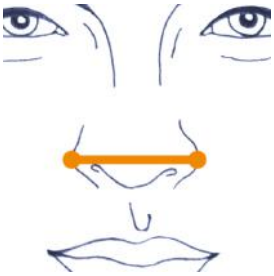
Total Facial Convexity Angle
Value: 146.5°
Normal Range: 139.6 - 150.3°(Wen et al., 2016)[5]
Z-Score: 0.6

The estimated total facial convexity angle indicates normal jaw skeletal class and alignment.

Nasal Width

Nasal width measures the width of the nose from the side of each ala from a frontal view.

Nasal Width
Value: 43.4 mm.
Normal Range: 35.6 - 43.2 mm. (Virdi et al., 2019)[9]
Z-Score: 2.1

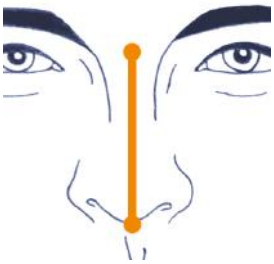


The estimated nasal width is above average.

Nose Height

Nose height measures the height of the nose. It is measured from the nasion to the subnasale.

Nose Height
Value: 43.8 mm.
Normal Range: 39 - 57.1 mm. (Wen et al., 2016)[5]
Z-Score: -0.9



The estimated nose height is average.

Nasal Bridge Length

Nasal bridge length measures the height of the nose bridge. It is measured from the nasion to the pronasale.

Nasal Bridge Length
Value: 40.4 mm.
Normal Range: 22 - 42.4 mm. (Farkas, 1994)[13]
Z-Score: 1.6

The estimated nasal bridge length is average.

Nasal Tip Protrusion

Nasal tip protrusion measures the nose's distance from the face and can be a good indicator of maxillary forward growth. It is measured from the subnasale to the pronasale.

Nasal Tip Protrusion
Value: 14.9 mm.
Normal Range: 7.7 - 20.7 mm. (Wen et al., 2016)[5]
Z-Score: 0.2

The estimated nasal tip protrusion is average.

Nasal Height to Projection Ratio

A better indicator of nasal projection is the nasal height to projection ratio, which analyzes the harmony of the nasal projection vs. the nasal height from a side profile. This ratio is determined by dividing the length of a line from the nasion to subnasale and a line that is perpendicular which runs to the pronasale. Normally, the nasal height to projection ratio should be around 3. The lower the ratio, the more projected the nose is, and vice-versa.

The subject's nasal height to projection ratio is 3.2, which is normal.

Dorsum Evaluation

An aesthetic nose has a nasal dorsum that is relatively straight. However, men usually have a dorsal hump.

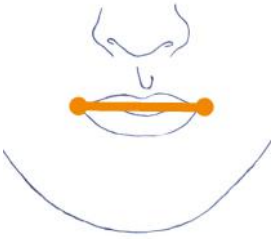
The subject has a straight dorsum, which is normal.

The Mouth Area

Mouth Width

Mouth width measures the width of the mouth from a frontal view.

Mouth Width
Value: 56 mm.
Normal Range: 49.3 - 62.9 mm. (Virdi et al., 2019)[9]
Z-Score: 0



The estimated mouth width is average.

Upper Lip Height

Upper lip height in cephalometry measures not just the upper lip, but the upper lip and the philtrum. A large upper lip contributes to the appearance of a long midface.

Upper Lip Height
Value: 22.1 mm.
Normal Range: 22.9 - 28.1 mm. (Virdi et al., 2019)[9]
Z-Score: -2.6

The estimated upper lip height is below average. This can create an increased interlabial gap and incisor exposure at rest.

Lower Lip Height

Lower lip height in cephalometry measures not just the lower lip, but the lower lip and the chin (measured to the sublabiale). A large lower lip height will look masculine, but a low lower lip height will create the appearance of a weak or small chin.

Lower Lip Height
Value: 18.2 mm.
Normal Range: 18.7 - 26.3 mm. (Virdi et al., 2019)[9]
Z-Score: -2.3

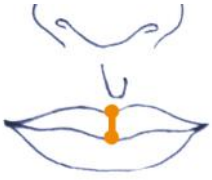
The estimated lower lip height is below average.

Vermillion Upper Lip Height

Full, pouty lips are sexually attractive on both males and females, but it is an especially underrated feature in men. Hier et al. (1999)[22] have shown that women prefer full lips on men even more than men prefer full lips on women. Full lips can contribute to a 'macho' aesthetic for men.

Vermillion upper lip height measures the height of the upper lip from a frontal view.

Vermillion Upper Lip Height
Value: 13.2 mm.
Normal Range: 11.1 - 16.3 mm. (Virdi et al., 2019)[9]
Z-Score: -0.4

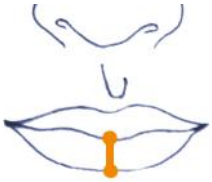


The estimated vermillion upper lip height is average.

Vermillion Lower Lip Height

Vermillion lower lip height in cephalometry measures the height of the lower lip down to the sublabiale.

Vermillion Lower Lip Height
Value: 15.4 mm.
Normal Range: 12 - 15.6 mm. (Virdi et al., 2019)[9]
Z-Score: 1.8



The estimated vermillion lower lip height is average.

Lip Line at Rest

The subject appears to have incomplete lip seal and open-mouth posture. However, this is common in certain African and Asian ethnicities. The decreased upper and lower lip heights prevents full coaptation of the lips. The decreased upper lip height prevents full coaptation of the lips. The large, flaccid lower lip tends to hang open much easier than if the lips were thin.

Upper Lip Analysis

The upper lip sulcus depth is essentially how deep the curve is that's created by the upper lip and the base of the nose. The subject's upper lip sulcus is not visible, which is a normal finding but might also stem from genetically small lips, retrusion, or retroclination of the upper incisors and/or maxillary retrognathism. The upper lip curl appears normal.

Lower Lip Analysis

The lower lip sulcus depth is essentially how deep the curve is that's created by the lower lip and the chin. The subject's lower lip sulcus depth is 4.7 mm, which is normal. The lower lip curl appears normal.

Rickett's Esthetic Line

The esthetic plane created by Dr. Robert Ricketts analyzes the relationship between the lips, nose, and chin. It's an excellent tool for analyzing lip protrusion. A line is drawn from pronasale to pogonion and the protrusion of the lips is then compared. African ethnicities tend to have larger lips, bimaxillary dentoalveolar protrusion, as well as reduced chin and nose protrusion. As a result, the lips will be at or well in front of the esthetic line.

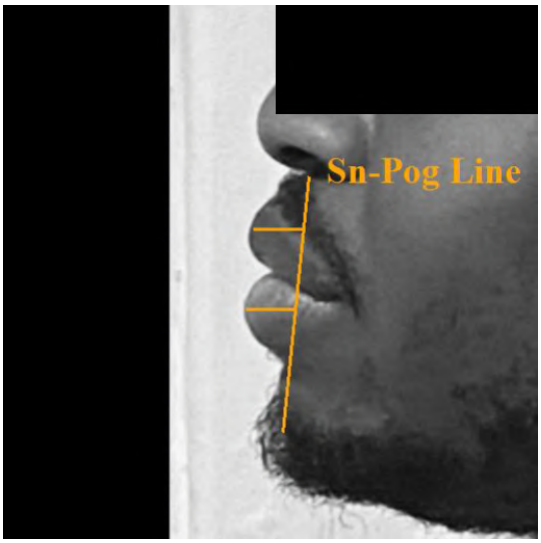
The upper lip is 2.6 mm. in front of the E-line.

The lower lip is 5.4 mm. in front of the E-line.

The subject's E-line doesn't show any obvious abnormalities.

Subnasale/Pogonion Line

The subnasale/pogonion line also analyzes lip protrusion, but it takes the nose out of the equation by comparing the lips to a line drawn from the subnasale to the pogonion. As is the case with Rickett's esthetic line, African ethnicities tend to have larger lips, bimaxillary dentoalveolar protrusion, as well as reduced chin protrusion. As a result, the lips can be at an even further distance in front of the Sn/Pog line.



The subject's upper lip is 10.1 mm. from the Sn-Pog line.

The subject's lower lip is 9.9 mm. from the Sn-Pog line.

Philtral Columns

The subject appears to have normal and prominent philtral columns, which appear attractive.

Facial Harmony

Harmony is difficult to define. Most people agree that a harmonious face is one in which all the features relate well to each other. Therefore, we believe the best way to measure harmony is with ratios. This section will take a look at some overarching ratios of the face and determine how well they fit what humans subjectively consider to be 'harmonious'.

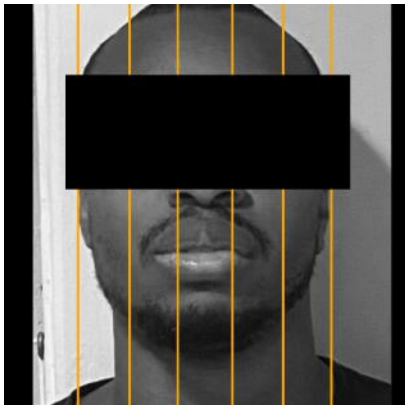
The artists of the Renaissance period developed aesthetic ideals known as neoclassical canons. Chief among them was the idea that the face could be divided into equal horizontal facial thirds and vertical facial fifths. These canons were used in art for centuries and are still used in textbooks and by plastic surgeons and orthodontists to inform treatment planning today. However, current anthropometric research shows that humans don't fit into these proportions perfectly. While these neoclassical canons represent an aesthetic ideal, they don't necessarily represent real or even attractive humans. Even elite models rarely fit these proportions.

Facial Fifths

A harmonious face is generally considered to be divided into equal vertical facial fifths. Normal deviations in ear protrusion, combined with lens distortion, can throw off the lateral facial fifths. However, large deviations can still present an aesthetic concern.

This table shows the facial fifths starting from left to right. The ratio shows the measurement in relation to the smallest eye width fifth.

Measurement	Value	Ratio
Right Ear to Right Lateral Canthus	29.1 mm.	107
Right Lateral Canthus to Right Medial Canthus	27.1 mm.	100
Right Medial Canthus to Left Medial Canthus	30.8 mm.	114
Left Medial Canthus to Left Lateral Canthus	28.6 mm.	106
Left Lateral Canthus to Left Ear	27.1 mm.	100



Facial Thirds

A harmonious face is also considered to be able to be divided into equal horizontal facial thirds. Small deviations can generally be ignored. The upper and lower facial thirds can also be difficult to measure correctly in photographs.

This table shows the facial thirds starting from top to bottom. The ratio shows the measurement in relation to the middle third.

Measurement	Value	Ratio
Upper Third (Tr to G)	46.9 mm.	74
Middle Third (G to Sn)	63.4 mm.	100
Lower Third (Sn to Me)	80.4 mm.	127

The subject's upper third appears too small for their midface. However, smaller foreheads don't present a serious aesthetic concern.

The subject's lower third appears too large for their midface. However, a larger lower third isn't a serious aesthetic concern for men.

Almost all attractive male celebrities and models have the lower third as their longest third. The lower third should be about 35-40% of the face. A value of 38% would fit the golden ratio.

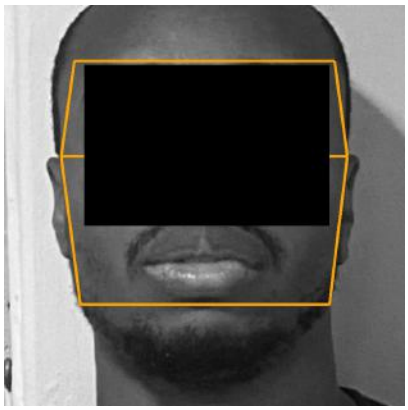
At 42.1%, the subject's lower third is far above the 35-40% range, implying excessive downward mandibular growth.

Facial Taper

Facial taper determines the overall shape of the face from a front view. It is determined by analyzing the three main widths of the face: bitemporal (forehead) width, bizygomatic (cheek) width, and bigonial (jaw) width. Decisions on hairstyle, makeup, and grooming revolve around your face shape and facial taper. The normal ratios for facial taper are around 83/100/76. Ideal facial taper ratios are a topic of debate, and most likely vary with sex and individual facial features.

The table below shows the three facial measurements starting from the forehead. The ratio column shows the measurement in relation to the bizygomatic width.

Measurement	Value	Ratio
Bitemporal Width	122.3 mm.	91
Bizygomatic Width	134.4 mm.	100
Bigonial Width	117 mm.	87



Mouth to Nose Ratio

The mouth-to-nose ratio is useful for determining if the nose is too big for the mouth or vice versa. A good mouth-to-nose ratio is 1.4-1.6. Sometimes, the mouth-to-nose ratio can match the golden ratio in certain people (1.61), but this is uncommon even in models and represents a relatively high ratio. Men should not be expected to hit this golden ratio because of their wider and more masculine noses. Smiling brings the mouth and nose more in line with the golden ratio.

The subject's mouth-to-nose ratio is 1.3, which is normal.

Chin to Philtrum Ratio

The chin to philtrum ratio is a good benchmark for how big the chin looks. If this ratio is too big, the chin looks oversized, and if it's too small the chin looks small and weak.

The subject has a high chin to philtrum ratio of 3.44, which creates the appearance of an overly large chin. It creates a masculine look but is not aesthetic.

Nose to Philtrum Ratio

The nose to philtrum ratio measures the height of the nose by the height of the philtrum. It helps determine how elongated your philtrum and face looks. If this ratio is too high or low, the face appears longer due to either the nose or philtrum. A ratio of around 2.5 is just right but is normally slightly smaller in men.

The subject's nose to philtrum ratio is 3.87, which is normal.

Midface Ratio

The midface ratio is a better way of analyzing the midface than just looking at the length of the middle third. The midface ratio incorporates the philtrum which, if too long, also contributes to the appearance of a long midface. The midface ratio is determined by taking the interpupillary distance and dividing it by the midface from the nasion to the labrale superius. The ideal midface ratio is around 1.0 to 1.1.

The subject's midface ratio is 1.17, which is high. The midface is too short and can create an uncanny look.

Upper Lip to Lower Lip Ratio

The upper lip to lower lip percentage is normally around 30% vs. 70%. However, larger values are sometimes acceptable and create a macho lip effect.

The subject's upper lip to lower lip ratio is 49.5% vs. 50.5%.

The subject's upper lip appears larger than normal.

Medial Limbal Width vs. Mouth Width

The width of the mouth and the medial limbal width should be roughly the same. The medial limbal width is the distance between the sides of the iris that are closest to the nose.

The mouth width is 56 mm, and the medial limbal width is 49.8 mm.

Leonardo's Commissure-Limbus-Eyebrow Peak Line

To determine the ideal location of the peak of the eyebrow arch, a line is drawn from the oral commissure to the peak of the eyebrow. This line should also intersect the lateral limbus. This is a difficult standard to match as the interpupillary width, maxilla height, and mouth width can all easily throw this off. Usually, people might match this line on one side, but not both. In this report, we will determine the angle between the subject's commissure-eyebrow peak line, and the commissure-eyebrow peak line if it was in line with the lateral limbus. An angle of 0° is perfect.

The deviation from the ideal commissure-limbus-eyebrow peak on the right is 5.4°, and on the left is 4.1°. The subject does not match Leonardo's commissure-limbus-eyebrow peak line on the right side but closely matches Leonardo's commissure-limbus-eyebrow peak line on the left side. The subject's right and left eyebrow peaks also start between the lateral limbus and left exocanthus, which is considered attractive.

Mouth Width vs. Bigonial Width

The normal ratio for the mouth width vs. the bigonial width is around 55%.

The subject's mouth to bigonial width ratio is 47.9%, which appears relatively normal.

Mouth Width vs. Lower Face Height

The mouth should be around 40% of the lower face height (glabella to menton). The subject's mouth width vs. lower face height ratio is 38.9%, which is relatively harmonious.

LAFH/TAFH Ratio

The lower anterior facial height vs. total anterior facial height ratio is a good indicator of lower facial proportions. A value of around 55% is ideal, with a lower ratio being preferable to a higher ratio (Johnston et al., 2005)[23].

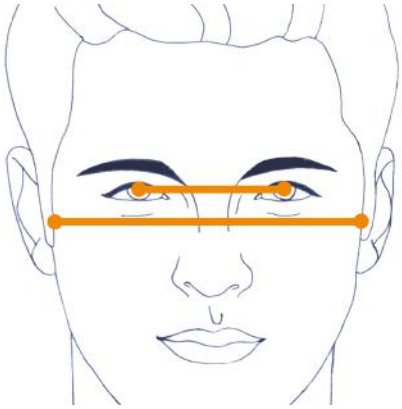
The subject's LAFH/TAFH ratio is 51.2%. This is within two standard deviations of the normal population. The subject's LAFH/TAFH ratio is essentially ideal.

Outercanthal Width vs. Head Width

A normal outercanthal width vs. head width ratio should be around 60%. The subject's ratio is 62.4%. This ratio is normal in the subject.

ES Ratio

The eye separation ratio (ES ratio) is used to determine how close or far-set the eyes are. The traditional rule of fifths (eyeball's width) cannot be used as a benchmark because it can be thrown off by the facial width. The ES ratio takes the facial width into account. A normal ratio is around 0.45 - 0.47, but can be slightly higher in men.



The subject's ES ratio is 0.453, which is optimal and creates the appearance of ideal eye spacing.

Outercanthal Width vs. Bizygomatic Width

This ratio is similar to the ES ratio except that the outercanthal width takes the overall width of the eyes into account.

The subject has an outercanthal vs. bizygomatic width ratio of 0.644, which is ideal.

Intercanthal Width vs. Bizygomatic Width

A normal intercanthal width vs. bizygomatic width should be around 25%. The subject's ratio is 23%. This is relatively low and implies either a small intercanthal width or large bizygomatic width.

Interpupillary Distance vs. Outercanthal Width

A normal interpupillary distance vs. outercanthal width should be around 70%. The subject's ratio is 70.3%. This ratio is normal in the subject.

The Ears

Ear aesthetics are not as important for facial attractiveness. Nonetheless, serious ear cosmetic issues can still impact harmony.

Width and Height Dimensions

The average ear height is around 65 mm (55-75). The subject's ear height is 48 mm.

The average ear width is around 35 mm (30-45). The subject's ear width is 30 mm.

Width to Height Ratio

The normal width to height ratio of the ear is 0.50–0.65 to 1.The subject's ear width to height ratio is 0.63, which is normal.

Frontal Ear Protrusion

Perhaps the most significant aspect of ear aesthetics, is how far the ear protrudes from the head when viewed from the front. Normally, the auricocephalic angle determines the degree of ear protrusion, but it requires a top-down view of the subject with no hair in the way. Instead, we will directly measure the distance from the head from a frontal photograph. However, lens distortion is notorious for altering the visibility of the ears and is a significant factor in the accuracy of this measurement.

The subject's ears protrude 4.2 mm. from the head. The ears appear to be pinned back much more than normal based on the provided frontal photograph.

Relative Harmony

The ear should be about 1 ear length's distance from the lateral eyebrow. The subject's ear length is 48.2 mm, and the subject's distance from the ear to the lateral brow is 64.8 mm.

The subject's ear height and distance from the ear to lateral brow are relatively harmonious.

The ear height should also match the height of the middle third of the face, from the nasion to the subnasale. The subject's middle third height is 63.4 mm.

The subject's ear height and distance from the ear to lateral brow are relatively harmonious.

Skin and Soft Tissues

The soft tissues sit on top of your bone structure and ultimately determine whether your bone structure has made you attractive or not. Optimizing fat and skin should take priority before more invasive procedures.

Contrast

Contrast and coloring is an underrated aspect of facial aesthetics. In the ideal face, the hair and eyebrows should be on the darker side, while the teeth and eyeballs should be white. The subject has ideal coloring for his ethnicity, though the eyebrows could be darker which would help frame the face.

Hair

Hair is very important for men. Decreased cranial hair is associated with increased perceptions of social maturity, but decreased perceptions of attractiveness, aggressiveness, and youthfulness (Muscarella & Cunningham, 1996).[24] Men with a Norwood 6 hairline recession are rated half as attractive than if they had a full head of hair (Kranz et al., 2019).[25]

The subject's hairline is a 3 on the Norwood scale. The classic M-shape of male pattern baldness is beginning to appear, and most men begin to seek treatment at this point if hair loss runs in the family.

Facial Adiposity (Fat)

According to Coetzee et al. (2009)[26], facial adiposity is a cue to health and closely correlates with attractiveness. In addition, people with intermediate facial fat are judged more favorably than people with higher facial fat or people whose facial fat is far too low. Overall, optimizing body fat percentage is one of the easiest ways to improve facial aesthetics. Attractive features can be easily hidden by facial fat. Men should avoid excessive facial fat since it is a feminine feature. Low body fat with sharp contours and edges are perceived as masculine, whereas high levels of body fat are perceived as unattractive and/or unhealthy. The ideal range will differ for the individual, but men should aim for a body fat percentage around 10-14% for optimal facial aesthetics.

Upon visual inspection, the subject appears to be in an ideal or nearly ideal range for facial adiposity.

Skin Quality & Sun Damage

Flawless skin is one of the most sought-after beauty traits. Beautiful skin signals youth and health, which is perceived as attractive. Preventing photoaging is extremely important for the integrity of the soft tissues and the maintenance of youthful, attractive skin. Based off the provided photograph, the subject's skin appears youthful and attractive. The skin color distribution is relatively homogenous and there are no obvious blemishes. There are no visible signs of photoaging. However, the effects of UV exposure are cumulative and will surface later in life. Sunscreen should be used every day to prevent continuing UV damage.

Nasolabial Folds

The subject has no visible nasolabial folds based on the provided photograph.

Jowling

Jowling is when the lower part of the cheek sags with age. The subject doesn't appear to have any obvious jowling based on the provided photograph.

Midface Contour

The subject does not have any obvious tear trough hollows and midface contour defects, which is perceived as youthful.

Wrinkle Assessment

Wrinkles usually occur by the age of 40 but it's also common for them to occur in the 20s or 30s. They can detract from a youthful appearance, but having some degree of wrinkles is normal. Eliminating wrinkles entirely when they're normal would lead to an uncanny and unnatural appearance. Eliminating wrinkles in the 20s and 30s is relatively safe, however.

The subject has no obvious marionette lines, forehead rhytids, or crow's feet based on the provided images.

Neck Size

Neck size is a vital indicator of strength and masculinity. It's essentially a cue to lower body strength.

The subject appears to have a normal neck size based on visual inspection. A neck as wide as the jaw, or close to it, is usually ideal.

Smile Analysis

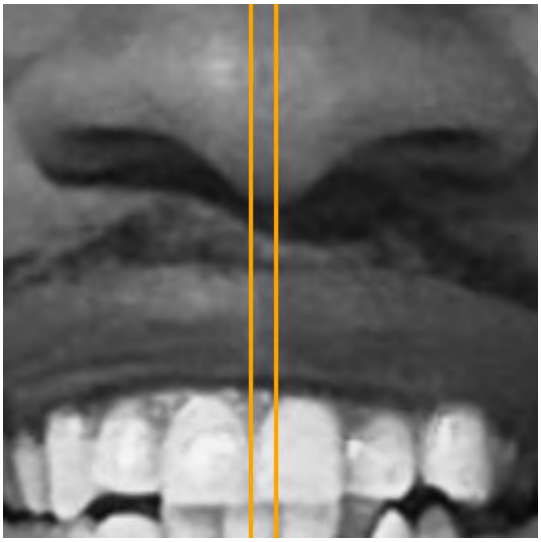
There are essentially two types of smiles: posed (or social) and natural (or spontaneous). In this report, the posed smile will be analyzed. The posed smile has the most relevance as it is easily reproducible, consistent, and sees the most use in photographs and social media.

Smile Symmetry

A hallmark of an attractive smile is overall symmetry. The left upper lip appears to be slightly hypomobile and reveals less of the gum line. The smile symmetry is negatively impacted by the crowding of the teeth.

Canting and Midline Deviation

In a normal symmetrical jaw, with the jaw closed, the upper and lower teeth should form a plane that's parallel to a line drawn from pupil to pupil. The facial midline and the dental midline should be parallel, which it is in the subject. The occlusal plane appears normal based on the provided photo.



The dental and facial midline differs by approximately 2.3 mm. according to our measurements. However, this level of midline deviation is minor and unnoticed by both dentists and the general population (Kokich et al., 1999)[27].

There appears to be a discrepancy between the upper and lower sets of teeth, whose midlines don't match.

Morley Ratio and Gingival Display

Arguably one of the most important aspects of a smile is the level of the lip line and how much of the central maxillary incisors (two front upper teeth) are shown during a smile. A smile that shows too much of the gums is termed a gummy smile and looks unattractive, whereas a smile that doesn't show enough of the central incisors is a sign of aging and appears unattractive. The Morley ratio determines what percent of the central incisors are shown during a smile (Morley & Eubank, 2001)[28]. However, it's important to note that the posed smile reveals less of the gumline than the natural smile.

The smile appears very youthful since the central incisors are fully visible, which also means the Morley ratio isn't applicable.

The subject has a high smile, meaning that the lip line exposes the gingiva.

The subject has 1.8 mm. of gingival display.

This is an acceptable level of gingival display. While some gingival display is considered youthful, men generally want to avoid having excessive gum show because it is a feminine feature. Female lip lines are on average 1.5 mm. higher than male lip lines (Tjan et al., 1984)[29].

Smile Arc

Smiles are divided into three types based on the arc of the occlusal line: straight, consonant and nonconsonant. Consonant smile arcs are considered normal and the most attractive. The above image shows the natural upwards curve of a consonant smile arc. Based on visual inspection, the subject has a straight smile arc.

This type of smile arc requires an in-person consultation with an orthodontist to determine the cause and treatment options. A non-aesthetic smile arc can often be fixed with braces and dental intrusion/extrusion, but sometimes surgery might be required to correct underlying skeletal issues.

Buccal Corridors and Smile Fullness

A hallmark of an attractive smile is a large palatal width with a full smile that exposes as many teeth as possible. However, a narrow palate, caused by improper oral development, contributes to a non-aesthetic and 'narrow' smile which hides more of the back teeth. Such smiles have large buccal corridors - the spaces between the teeth and the corners of the mouth that appear as a gap on a smile. However, smiles that are too full where the buccal corridors are completely obliterated are not ideal either as they lack warmth and appear less genuine (Helwig et al., 2017)[30].

Smile fullness is essentially how much of your smile is made up by your teeth. People judge full smiles to be more attractive than less full smiles (Moore et al., 2005)[31].

Moore's research also showed that while both men and women judge attractiveness by smile fullness, women are slightly more sensitive to judging smile fullness because they could tell the difference between broad and medium-broad smiles, whereas men couldn't. A wide smile can be assumed to be more important to women than it is to men.

The subject's smile fullness percentage as given by Moore et al (2005) is 90.1%.

The subject's buccal corridor width percentage as given by Moore et al (2005) is 9.9%.

The subject appears to have a medium/broad smile and palate based on the provided frontal smiling photogrpah. The subject appears to have an attractive smile.

Upon visual inspection, the fifth tooth is visible. For optimal smile aesthetics, you should be able to see the fifth tooth (second premolar) given optimal lighting.

Smile Index

The smile index is the ratio between the width and height of the smile. It's determined by measuring the intercommisural width and interlabial gap. Research done by Janu et al. (2020)[32] shows that the smile index decreases as the smile attractiveness increases. Attractive smiles had a modified smile index of 42.15 ±4.71.

The subject's modified smile index as described by Janu et al. is 28.5.

The subject's smile index isn't ideal but still looks normal.

Teeth Analysis

The average maxillary central incisor height is 10.6 mm. for males (Gillen et al., 1994)[33]. The subject's central incisor tooth height is 10 mm.

The ideal width should be 80% of the height, but normal can be anywhere from 66 to 80% (Gillen et al., 1994)[33]. The subject's incisor width is 77.9% of the incisor height.

Gingival Components

An underrated component of a healthy smile is healthy-looking gums and an even gum line, which is an indicator of health. Based on visual inspection of the provided photo, the gum line appears slightly uneven due to the dental crowding, but the gums themselves appear normal and healthy, though an in-person visit to a dentist or orthodontist is required for an accurate diagnosis.

Malocclusion Assessment

There appears to be at least Class 1 malocclusion (dental crowding) with bimaxillary protrusion. For optimal smile aesthetics, braces can help straighten the teeth are create a more consonant (upward curved) smile arc. The sixth tooth is visible when smiliing, but the subject still has obvious buccal corridors (gaps by the cheeks when smiling), so an in person visit to an orthodontist is needed to confirm whether the palatal width is normal.

Forward Growth Suite

Forward growth is an important component of attractiveness. A face that is forward-grown functions well and tends to be aesthetically pleasing. Forward growth isn't a guarantee of attractiveness, but it's still highly correlated. A person with a fully forward-grown face has reached their genetic potential.

Forward growth has two components: the forward growth of the maxilla (upper jaw) and mandible (lower jaw). In normal growth, the maxilla and the mandible will follow each other and grow together, but in some circumstances, one jaw can be behind or ahead of the other e.g. class 2 or 3 malocclusion.

Forward growth is best assessed on a lateral cephalogram (x-ray). With photogrammetric analysis, it's a bit more difficult because the soft tissues vary in size by individual and tend to obscure the underlying skeletal structure. In addition lens distortion and inability to replicate camera and head position can skew results. As a result, we will look at multiple measurements to most accurately assess forward-growth of both jaws separately.

This section will include forward growth scores for both jaws which work as a simple percentile. A score of 100 implies optimal forward growth, whereas a score of zero implies severe recession. Keep in mind that because of differing photo angles and possible lens distortion, the following measurements will not have ideal reproducibility.

Maxillary Point Assessment

The nasal base contour can help determine the anteroposterior (forward) position of the maxilla and mandible. The cheekbone contour line starts by the zygion, comes across the cheeks, and ends at the nasal base at the maxillary point. The contour of the maxillary point can be a direct indicator of maxillary retrusion.

Upon visual assessment, the subject appears to have a normal maxillary point, which is consistent with maxillary forward growth.

Exocanthion-Subnasale-Tragus Angle

This angle directly measures the degree of maxillary forward growth. A smaller angle implies less vertical growth and a more projected maxilla. The average angle is 39°.

The exocanthion-subnasale-tragus angle is 40.2°, which indicates a normal amount of forward growth.

The subject's maxillary forward growth score for the exocanthion-subnasale-tragus angle is 82.

Nasolabial Angle

With mandibular recession, the lips will lose their support and the nasolabial angle will increase.

The subject appears to have a relatively normal nasolabial angle.

The subject's mandibular forward growth score for the nasolabial angle is 100.

Esthetic Line

Rickett's esthetic line shows the relationship between the nose, mouth, and jaw. See the mouth area section of this report for the full E-plane measurement. In a recessed mandible, the bottom lip will be way in front of the esthetic line drawn from pronasale to pogonion. However, there is a degree of error because the size of the nose affects the results.

The subject's lower lip is in front of the Ricket's esthetic line, which could indicate mandibular recession. However, this is very common for African ethnicities and could potentially be normal for the subject's demographic.

The subject's mandibular forward growth score for the esthetic line is 40.

Labiomental Angle

The labiomental (aka. mentolabial) angle is the angle from labrale inferius, to sublabial, to pogonion. With mandibular recession, the mentolabial angle will increase because the lower teeth are not pushing on the bottom lip and the mandible has grown downwards. However, there is a degree of error due to individual variability in chin tissue padding and lip size.

The subject appears to have a relatively normal mentolabial angle.

The subject's mandibular forward growth score for the labiomental angle is 32.

Gonial Angle

With mandibular recession, the mandible will straighten out, which decreases the angle of the jaw (gonial angle).

The subject appears to have a relatively normal gonial angle. However, the gonial angle was difficult to visualize in the provided photographs.

The subject's mandibular forward growth score for the gonial angle is 94.

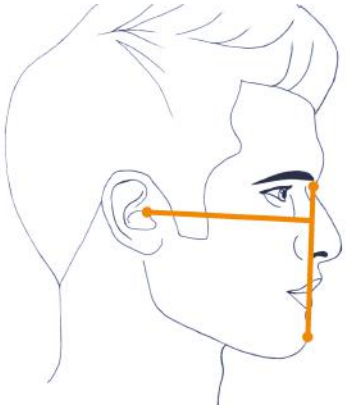
Facial Convexity Angle

The facial convexity angle is useful for determining the relationship of both jaws' forward growth relative to each other. With mandibular recession, the mandible will fall behind the maxilla and the angle of the face from a side profile will decrease as the face shape becomes more convex. With maxillary recession, the angle of the face will increase as the maxilla moves backward. The ideal angle is around 175°. However, the limitation of the facial convexity angle is that it can appear normal if both jaws are recessed.

The subject's facial convexity angle indicates a normal maxillary to mandibular relationship.

Facial Depth to Height Ratio

The facial depth to height ratio attempts to measure how wide the face is in relation to its height. A forward-grown face is wider when viewed from a side profile as well as vertically compact. This ratio attempts to measure the forward growth of the maxilla by drawing a line from nasion to pogonion and comparing it to a perpendicular line drawn to the tragion. An ideal facial depth to height ratio is 1.06-1.07. However, the limitation is that a forward-grown face with a genetically longer midface or lower jaw will throw the ratio off. On top of that, the facial depth normally has a high measurement error.



The subject's facial depth to height ratio is 0.75, which indicates possible maxillary recession.

The subject's maxillary forward growth score for the facial depth to height ratio is 1.

Submental Distance

An indirect marker for a forward-grown mandible is the presence of ample space under the jaw (submental region), which directly measures the distance from the chin to the neck. An ideal measurement is around 40-75 mm(Naini et al., 2020)[34]. The higher the submental distance, the higher the perceived forward growth. However, this measurement has several limitations due to variations in neck fat and hyoid muscle tone, which can significantly throw the measurement off. Therefore, this isn't a true direct measurement of forward growth. Luckily, these issues can be fixed without surgery, which can contribute to a greater perceived forward growth of the mandible.

The subject's submental distance is 47.8, which indicates average (attractive) forward growth.

The subject's mandibular forward growth score for the submental distance is 46.

Facial Depth to Midface Height Ratio

The facial depth to midface height ratio is similar to the facial depth to height ratio, except this time we compare the depth of the face to the midface height instead of facial height. Forward grown faces tend to have shorter midfaces due to proper tongue posture preventing the development of vertical maxillary excess, making this measurement more accurate in theory. As before, the main limitation of this measurement is that having both forward growth and a genetically longer midface will throw the ratio off, as well as having a high measurement measurement error.

The facial depth to midface height ratio is 1.73, which indicates average forward growth of the maxilla.

The maxillary forward growth score for the facial depth to midface height ratio is 61

Total Forward Growth Score

The total maxillary forward growth score is 65.

The total mandibular forward growth score is 70.

The total forward growth score is 68.

The subject overall has good facial forward growth.

Sexual Dimorphism Suite

Sexual dimorphism is the exhibition of different sizes and appearance of characteristics between sexes in species, apart from the sexual organs themselves. For example, men have more body hair and muscle than women. In humans, dimorphism a cornerstone of attractiveness. This section of the report will analyze whether the subject exhibits adequate masculine features.

While having many masculine features can be attractive, being too masculine can have downsides because masculine features are not always correlated with attractiveness and can imply instability and untrustworthiness. No research has yet shown that fully masculinized faces are ideal for men. A balance of more feminine features to achieve a pretty-boy look might benefit attractiveness more than just maxing out masculine traits.

This section will include masculinity scores which work as a simple percentile. The masculinity index below describes how masculine the feature appears in the subject compared to cephalometric norms for people of the same ethnicity as the subject. A score of 100 is the most masculine face possible. Again, there is no evidence as of yet that any of these scores is objectively better than the other. It's only known that women prefer faces that veer on the masculine side. This section should be used as a guide for any cosmetic surgery planning. A score of 75 for men is a good goal but not an end-all-be-all.

Overall Size

In general, men are bigger than women. Across the board, men have larger facial features according to anthropometric research. In this section, we'll display the most dimorphic overarching features. Facial index (face length vs. width) is also included since men generally have longer faces than women.

Measurement	Masculinity Index
Bitemporal (Forehead) Width	29
Bigonial (Jaw) Width	94
Bizygomatic (Cheekbone) Width	43
Physiognomical Face Height	27
Nasal Bridge Length	90
Nasal Width	100
Intercanthal Width	17
Outercanthal Width	1
Palpebral Fissure Width	5
Facial Index	94

Nasal Angles & Brow Ridge

There is a noticeable degree of variability between men and women in the nasal area, especially at the nasolabial angle. Women's noses are generally more upturned than men and many women seek surgery to change this if it's not the case. This section will analyze where the subject lies on the spectrum of nasal angles. All of the following angles should be larger in women than in men, who have sharper features and more acute nasal angles. The nasofrontal angle is especially important as it indicates a prominent brow ridge.

Measurement	Masculinity Index
Nasofrontal Angle	42
Nasal Tip Angle	100
Nasolabial Angle	100
Nasomental Angle	1

The most important of these angles is the nasofrontal angle, as it's related to the brow ridge. A prominent brow ridge is a highly masculine feature and is correlated with testosterone. Upon visual inspection, the subject has a slight brow ridge, which will look normal but will not be highly masculine.

Chin Width

The chin is one of the most dimorphic traits on the face. A chin needs to be wide to appear dominant. Women almost never have large masculine chins.

The subject has an average chin width, which should appear attractive to most people.

Lip Protrusion

Vertical lip sizes between men and women are largely the same. However, prenatal testosterone is responsible for increasing lip protrusion in men, leading to a more masculine appearance (Weinberg et al., 2015)[35]. The Sn-Pog line can directly measure the lip protrusion.

The subject's upper lip is 10.1 mm. from the Sn-Pog line, with a masculinity score of 1.

The subject's lower lip is 9.9 mm. from the Sn-Pog line, with a masculinity score of 1.

Mandibular Plane Angle

The mandibular plane angle is higher in men than in women. Essentially, this just means that men have longer faces than women.

The subject has a smaller mandibular plane angle than average, which might be perceived as feminine.

The subject's masculinity index for the mandibular plane angle is 20.

Gonial Angle

According to existing anthropometric research, the gonial angle is higher in women than it is in men.

The subject's gonial angle is low for their demographic, which contributes to a masculine face.

The subject's masculinity score for the gonial angle is 94.

Canthal Angle

According to existing anthropometric research, the canthal tilt is higher in women than it is in men.

The subject's canthal angle is average for their demographic, and not necessarily masculine nor feminine.

The subject's masculinity score for the canthal angle is 49.

Total Facial Convexity Angle

According to Fortes et al. (2014)[36] the total facial convexity angle is higher in women than it is in men, especially in attractive faces. This is backed up by existing anthropometric research.

The subject's total facial convexity angle is 147°.

The subject's total facial convexity angle is average for their demographic, and not necessarily masculine nor feminine.

The subject's masculinity score for the total facial convexity angle is 35.

Gingival Display

Excessive gingival display is classically a feminine feature. Female lip lines are on average 1.5 mm. higher than male lip lines (Tjan et al., 1984)[29].

However, there is a great degree of variation in gingival display even within sexes, which could be anywhere from 2 to 12 mm (Zachrisson, 1998)[37].

The subject has 1.8 mm. of gingival display.

The subject's masculinity score for their gingival display is 40.

Chin to Philtrum Ratio

A taller chin is much more masculine than a shorter chin, and vice-versa.

The subject's chin to philtrum ratio is 3.

The subject has a high chin to philtrum ratio, which appears masculine.

The subject's masculinity score for their chin to philtrum ratio is 100.

Eye Width to Height Ratio

Men are more likely to have 'hunter' eyes, which are horizontally wide and vertically narrow. Hunter eyes appear more masculine than bigger 'doe' eyes. Eye width to height ratio is a good measure of how horizontally wide the eyes appear.

Men have a bigger eye width to height ratio than women (Penton-Voak et al., 2010)[38].

The subject's eye width to height ratio is 3.8.

The subject has a relatively high eye width/height ratio, which can be perceived as masculine.

The subject's masculinity score for the eye width to height ratio is 1.

Scleral Size Index

Scleral size index was another parameter determined by Danel et al. (2020)[39] to be dimorphic. It is calculated by dividing the width of the eyeball by the iris length.

The subject's scleral size index is 2.4.

The subject has a relatively average scleral size index, which is neither masculine nor feminine.

The subject's masculinity score for the scleral size index is 68.

Lower Face Height / Face Height

The ratio of the lower face height to the total face height was found by Penton-Voak et al. (2010)[38] to be sexually dimorphic. Men have a greater lower face to face height ratio.

The subject's lower face height to total face height ratio is 0.62.

The subject has a relatively high lower face height to total face height ratio, which can be perceived as masculine.

The subject's masculinity score for the lower face height to total face height ratio index is 61.

Cheekbone Prominence

Cheekbone prominence, according to Penton-Voak et al. (2010)[38] is sexually dimorphic. It's calculated by dividing the bizygomatic width by the bigonial width. Essentially, this just shows how far the cheekbones stick out from the jaw and determines overall face shape.

The subject's cheekbone prominence ratio is 1.1.

The subject has a lower than average cheekbone prominence ratio, which can be perceived as feminine.

The subject's masculinity score for cheekbone prominence is 50.

Face Width vs. Lower Face Height

Women have a higher face width in relation to their lower face height (Penton-Voak et al., 2010)[38].

The subject's face width vs. lower face height is 1.1.

The subject has a lower than average face width vs. lower face height, which can be perceived as masculine.

The subject's masculinity score for face width vs. lower face height is 34.

Eye Mouth Eye Angle

The eye mouth angle is a useful metric for sexual dimorphism (Danel & Pawloski, 2007)[40].

It's calculated by finding the angle from the left eye, to the mouth, to the right eye. The average value for men is 47.68° ±2.42. A higher value represents a more feminine face.

The subject's eye-mouth-eye angle is 50.3°.

The subject has a relatively feminine eye-mouth-eye angle.

When considering the subject's eye-mouth-eye angle in relation to the average between both sexes, the subject's face veers more on the feminine side.

The subject's masculinity score for the eye-mouth-eye angle is 38.

Forehead Inclination

The subject has a vertically inclined forehead, which is feminine.

Eyebrow Size

According to Glassenberg et al. (2010)[41] eyebrow size is a dimorphic trait. Upon visual inspection, the subject appears to have medium size eyebrows, which we give a masculinity score of 50.

Nasal Bridge Concavity

Men have evolved larger lungs due to a need for a higher exercise capacity and the ability to oxygenate larger bodies. As a result, men have evolved larger airways and more protrusive noses. A ski-slope nasal bridge is traditionally considered a feminine nose shape, whereas straight noses and even noses with a prominent nasal dorsum are considered more masculine. The subject has a straight nasal bridge, which is relatively masculine.

Total Masculinity Score

The subject's total facial masculinity score is 41.7%.

The subject overall has a non-dimorphic face. From here, we suggest maximizing any other masculine features in order to make the face more masculine overall e.g. gym, beard, tattoos.

Physiognomy Suite

Physiognomy was once the study of judging peoples' character from facial characteristics. Many of its claims have been debunked as pseudoscience. However, that does not change the fact that people will still, consciously or subconsciously, judge others based on their looks. This is simply a part of being human. Some perceived traits even correlate with actual traits according to studies, such as interpupillary width and intelligence, making the stereotype/assumption potentially justified from an evolutionary standpoint.

Studying physiognomy can be useful because by knowing how people perceive you in the split second before talking to you, you can be prepared to disarm their stereotypes and assumptions about you in advance. Alternatively, people can seek correction for traits they find undesirable. Ultimately, being aware of your own physiognomy will help you nail first impressions. That being said, take the following sections with a grain of salt. The research behind physiognomy isn't close to being conclusive and is likely to suffer from the file drawer effect, whereby results that don't support the researchers' hypotheses don't make it any further than the file drawer.

Halo Effect

The halo effect is one of the primary determinants for how people treat you in life. Essentially, the more attractive you are, the more people assume you are intelligent, virtuous, and trustworthy. However, providing an overall gauge of attractiveness is beyond the scope of this report due to variations in individual preferences and beauty standards. There is no such thing as a perfect or ideal face.

But in general, losing weight and fixing major cosmetic flaws is the most surefire way to take advantage of the halo effect.

Tiredness

Tiredness is largely conveyed by the two most expressive parts of our face: the eyes and mouth. Our resting expression dictates how people perceive our alertness and energy levels, which is an important element of attractiveness. A tired expression usually goes hand in hand with a sad expression as well. It's an especially important indicator for men since women tend to prefer men that convey vigor and vitality.

People with a decreased canthal tilt are perceived as more tired and sad. The subject has a total canthal tilt angle of 2, which is relatively high and will cause others to view them as upbeat and energetic.

People with droopy (ptotic) upper eyelids will appear more tired even when they feel perfectly fine. The subject doesn't appear to have any obvious upper eyelid droop from the provided photos however.

The subject has a positive mouth curvature, which might cause others to view them as more energetic.

Mouth Width and Leadership

Mouth width has been shown to correlate with perceived and actual leadership ability for men (Re & Rule, 2016)[42].

The subject has an average mouth width for their demographic, and would not necessarily be included or excluded from leadership roles based solely on their mouth width.

Based on the mouth measurements taken by Re & Rule (2016)[42], the subject's mouth appears to be even wider than the mouth width used in the study that was associated with positive leadership qualities. The subject would be extremely likely to be considered for leadership positions based solely on their mouth width.

FWHR and Leadership

FWHR is correlated with leadership ability. CEOs in leadership positions have an above-average FWHR, implying that they are subconsciously selected for these roles based on their FWHR. Previous research has also shown superior financial performance for companies with CEOs with a high FWHR (Alrajih & Ward, 2014)[43].

People with wider faces are perceived as more willing to cheat and deceive others for financial gain, and more willing to exploit the trust of others. However, this is counterbalanced by success in inter-group competition and good bargaining/negotiating skills.

The subject has an average FWHR, implying that people would neither include or preclude them for leadership roles based solely on their facial width to height ratio. However, the subject is on the higher end of average in terms of FWHR, and might have a better chance than the majority of the population.

FWHR and Trust

Given that FWHR correlates with untrustworthy qualities such as psychopathy and aggression, the inverse must also be true. As a result, a low FWHR is a great marker of trustworthiness. FWHR correlates with trust in men, which can improve cooperation and reciprocity with others (Lefevre et al., 2013)[44].

The subject has an average FWHR, implying that others would not see them as more or less trustworthy. However, the subject is on the higher end of average in terms of FWHR, and might be seen as less trustworthy than the majority of the population.

Averageness and Trust

According to Stirrat & Perrett, people are more likely to trust others with faces similar to themselves. However, they are not any less likely to selfishly betray that trust, despite any facial similarity to the subject (Stirrat & Perrett, 2010)[45].

Based on the overall facial averageness, the subject will be trusted by most people based on a first impression.

Aggressiveness

Aggressiveness can be an attractive quality as it indicates physical dominance and health. However, it can also turn away potential mates and be perceived as unattractive. In addition, humans are good at predicting who would win in fights just by subconsciously evaluating facial aggressiveness traits (Trebicky et al., 2013)[46].

Aggressiveness and Nasal Width

According to research done by Trebicky et al. (2013)[46], people with a larger nasal width are more likely to be perceived as aggressive.

The subject has a large nose width for their demographic and the nose is larger than the intercanthal width, which will cause others to view them as more aggressive.

Aggressiveness and Mouth Width

People with a wider mouth are more likely to be perceived as aggressive (Trebicky et al., 2013)[46].

The subject has a relatively average mouth width for their demographic, which will not affect others' perception of the subject as aggressive.

Aggressiveness and Eye Fissure Height

People with a decreased palpebral fissure height (eye height) are more likely to be perceived as aggressive (Trebicky et al., 2013)[46].

The subject has a decreased palpebral fissure height for their demographic, which will cause others to view them as more aggressive.

Aggressiveness and Canthal Tilt

People with an increased canthal tilt are more likely to be perceived as aggressive (Trebicky et al., 2013)[46].

The subject has a total canthal tilt angle of 2, which is relatively high and will cause others to view them as more aggressive.

Aggressiveness and Brow Ridge/IPD Ratio

People with lower set eyebrows are more likely to be perceived as aggressive (Trebicky et al., 2013)[46].

The brow ridge to IPD ratio is a great benchmark for determining how low set the eyebrows are and is calculated by dividing the IPD (interpupillary distance) with the distance from the eyebrow to pupil.

The subject has a brow ridge/IPD ratio of 2.4, which is relatively low and will not cause the subject to be perceived as aggressive.

Aggressiveness and Mouth Curvature

People with a negative (downwards) mouth curvature are assumed to be more aggressive, likely simply because a frown is perceived as hostile (Trebicky et al., 2013)[46].

The subject has a positive mouth curvature, which might cause others to view them as less aggressive.

FWHR and Dominance

FWHR correlates with both other-perceived and self-perceived dominance. Since seeing oneself as dominant will make an individual more likely to act in accordance with that belief, FWHR can generally be considered a good facial marker for dominance (Mileva et al., 2014)[47].

The subject has an average FWHR, implying average dominance. However, the subject is on the higher end of average in terms of FWHR, and might be seen as more dominant than the majority of the population.

FWHR and Aggression

FWHR correlates with aggression in men. Aggressive men are more likely to retaliate against perceived injustice (Haselhuhn et al., 2015)[48].

In addition, FWHR correlates with physical aggression in committed relationships in men (Wen et al., 2020)[49].

The subject has an average FWHR, implying average aggression. However, the subject is on the higher end of average in terms of FWHR, and might be seen as more aggressive than the majority of the population.

FWHR and Psychopathy

FWHR correlates with psychopathy in men. This includes the personality trait of fearless dominance, as well as self-centered and antisocial behavioral (Anderl et al., 2016)[50].

The subject has an average FWHR, implying that others might not see them as neither lacking or having the aforementioned psychopathic traits. However, the subject is on the higher end of average in terms of FWHR, and might be seen as more psychopathic than the majority of the population.

Intelligence

Intelligence is primarily mediated by the halo effect. More attractive people are prescribed with more positive qualities, and intelligence is one of those.

According to research done by Lee et al. (2017)[51], a taller face and a wider interpupillary width is correlated with actual IQ, making these assumptions justified from an evolutionary standpoint.

Intelligence and Interpupillary Distance

People with a wider IPD are assumed to be more intelligent. Not only that, but researchers have shown that wider IPD and IQ are correlated (Lee et al., 2017)[51].

The subject has an IPD smaller than one standard deviation from the norm based on their demographic. They would likely not be considered intelligent based on their IPD during a first impression.

Intelligence and Facial Height

People with a taller facial height are assumed to be more intelligent. Taller facial height and IQ are also correlated (Lee et al., 2017)[51].

The subject has an average physiognomical facial height, and would not necessarily be perceived as more or less intelligent during a first impression based on their facial height.

Intelligence and Nose Size

People with larger noses are assumed to be more intelligent (Lee et al., 2017)[51].

This essentially boils down to increased nose length and an increased nasal width both at the root and ala. This report will not measure the nasal width at the root due to the measurement's high measurement error.

The subject has a large nose width for their demographic, which will cause others to view them as more intelligent.

The subject has a relatively average nose height for their demographic, which will not greatly affect others' first impression of the subject's intelligence.

Intelligence and Mouth Curvature

People with a positive (upwards) mouth curvature are assumed to be more intelligent, likely because an upwards curvature is associated with alertness and the increased attractiveness that comes from smiling, thereby increasing perception of intelligence via the halo effect (Talamas et al., 2016)[52].

The subject has a positive mouth curvature, which might cause others to view them as more intelligent.

Intelligence and Eyelid Openness

Eyelid openness is an important determinant of perceptions of intelligence, likely because open eyelids are associated with alertness/attentiveness (Talamas et al., 2016)[52].

The subject does not have open and alert eyelids, which might cause others to view them as less intelligent.

Neoteny Suite

Neoteny is the retention of juvenile features into adulthood. Neoteny overall is not advantageous in men, since women tend to value maturity and strength in men as opposed to youthfulness. However, neoteny can contribute to the pretty-boy aesthetic in men, which can be advantageous, especially in western countries. The attractive male face retains at least some neotenous features.

Symmetry

As organisms age, asymmetries begin to develop from injuries, postural habits, and disease. Babies have a high degree of symmetry. Women use make-up to hide skin asymmetries and reduce the appearance of asymmetries with contour.

The subject has no noticeable asymmetries, which will aid the appearance of neoteny.

The subject's neoteny score for symmetry is 100.

There is also normal growth of the jaw, which seems to have developed relatively symmetrically.

FWHR

FWHR is the facial width to height ratio. Children tend to have wider faces that lack the normal downward and forward growth that happens in puberty. As such, FWHR is a great marker of neoteny.

The subject has a facial width to height ratio of: 1.9, which is considered a low FWHR. The subject is below one standard deviation of the average FWHR (Kosinski, 2017)[19].

Overall Size and Shape

Adult faces are larger than juvenile faces. Overall size is another great marker of neoteny. But rather than looking at the size of every facial feature, we can just analyze the main overarching facial measurements such as jaw width, cheekbone width, and face height. The facial index is also included since it's higher in neotenous faces.

Measurement	Neoteny Index
Bigonial Width	6
Bizygomatic Width	57
Physiognomical Face Height	73
Facial Index	1

Skin Quality

Babies are born with perfect skin, which only gets worse as they mature and go through life. Healthy glowing skin is a primary youthful feature.

There are virtually no wrinkles and signs of skin aging based on the provided photograph.

Forehead Height

Youthful faces tend to have larger foreheads. The upper third of the face is usually the longest third of the face in babies. But in the subject, the forehead is the smallest facial third. However, we can also look at the overall size of the forehead.

The subject's forehead height from the trichion to glabella (height of forehead 1) is average for their demographic, and not necessarily lacking or having neoteny. Also, the subject's forehead height from the trichion to nasion (height of forehead 2) is very high for their demographic, which contributes to a very neotenous face.

The subject's neoteny score for height of forehead 1 is 45.8, and the score for height of forehead 2 is 100.

Lower Third Height

Along with larger foreheads, youthful faces have smaller less developed chins and small lower thirds of the face. This is why the eyes, nose, and mouth appear to be low-set on juvenile faces. Jaw growth is seen most often in puberty. In the subject, the lower third is not the smallest facial third.

The subject's mandible height is low for their demographic, which indicates a neotenous face.

The subject's neoteny score for mandible height is 93.8.

Forehead Inclination

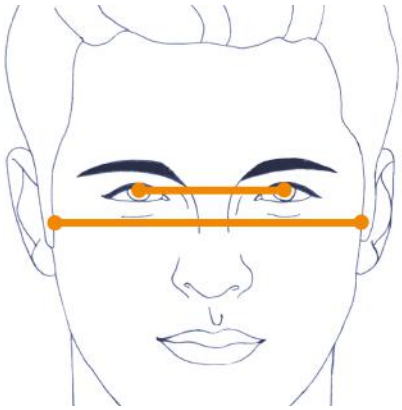
The inclination of the forehead influences neoteny, as youthful faces tend to have more vertically slanted and rounded foreheads. The subject has a vertically inclined forehead, which is neotenous.

Eye Size and Spacing

Large well-spaced-out eyes are a hallmark feature of neoteny (Swami & Harris, 2012)[53]. We can use several measurements to evaluate these features such as intercanthal width, outercanthal width, interpupillary distance, and palpebral fissure width and height. The further apart the eyes are, and the larger they are for the subject's demographic, the higher the neoteny score will be.

Measurement	Neoteny Index
Intercanthal Width	17
Outercanthal Width	1
Interpupillary Width	12
Eye Fissure Height	1
Eye Fissure Width	5

However, relative harmony is more important in this regard than anthropometric measurements. The eye-separation (ES) ratio is best at determining how far apart the eyes appear on the face overall. The ES ratio is determined simply by dividing the interpupillary distance over the bizygomatic width.



The subject's ES ratio is 0.453, which is normal and won't appear too neotenous.

The neoteny score for the ES ratio is 54.

Gonial Angle

The gonial angle decreases most before 6 years of age and then decreases slowly but steadily throughout life according to Jensen & Palling (2004)[54]. An increased gonial angle is a great parameter for neoteny as long as the increase isn't caused by craniofacial dystrophy.

The subject's gonial angle is low for their demographic, which contributes to a non-neotenous face.

The subject's neoteny score for the gonial angle is 6.

Nasal Growth

The nose starts off relatively small, even in proportion to the face, and grows larger throughout childhood and adolescence (Bolton, 1999)[55].

The nasolabial angle also decreases with age (Nanda et al., 1990)[56]. These effects on the subject's neoteny are summarized below:

Measurement	Neoteny Index
Nasal Height	74
Nasal Width	1
Nasal Tip Protrusion	77
Nasolabial Angle	1

Rickett's esthetic line can be used to determine just how neotenous the nose appears in relation to the rest of the face. See the mouth section for the full esthetic line. Youthful faces have lips that are closer to the esthetic line (Nanda et al., 1990)[56]. However, this can also be affected by the size

of the lips. The two features have to work in harmony to produce a neotenous face.

The subject's upper lip is 2.6 mm. in front of the E-line. This will appear very neotenous in comparison to the general population.

The subject's lower lip is 5.4 mm. in front of the E-line. This will appear very neotenous in comparison to the general population.

The subject's neoteny score for Rickett's analysis is 100.

Brow Ridge/IPD Ratio

People with higher set eyebrows will appear more neotenous. The brow ridge to IPD ratio is a great benchmark for determining how high set the eyebrows are and is calculated by dividing the IPD (interpupillary distance) with the distance from the eyebrow to pupil.

The subject has a brow ridge/IPD ratio of 2.4, which is relatively neotenous.

The subject's neoteny score for brow ridge/IPD ratio is 100.

Scleral Size Index

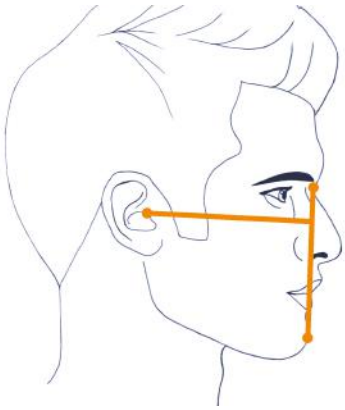
The scleral size index is calculated by dividing the width of the eyeball by the iris length. It's another great parameter for assessing the neoteny of the eyes. Since adults have wider, more-developed eyes they will have a higher scleral size index.

The subject's scleral size index is 2.4. This is a relatively average scleral size index, neither having or lacking neoteny.

The subject's neoteny score for the scleral size index is 32.

Facial Depth to Height Ratio

The facial depth to height ratio attempts to measure how wide the face is in relation to its height. A line is drawn from nasion to pogonion and compared to a perpendicular line drawn to the tragion. More neotenous faces will have a higher ratio because the maxilla hasn't had a chance to become downswung with age and/or improper posture. The more of this forward growth that's retained into adulthood, the more neotenous the face.



The subject's facial depth to height ratio is 0.75.

The subject has an average facial depth to height ratio and doesn't necessarily have or lack neoteny.

The subject's neoteny score for the facial depth to height ratio is 1.

Cheek Fullness

Full cheeks are a characteristic neotenous feature. Babies have very full cheeks. As humans develop, the cheeks begin to lean out as the skull and cheekbones grow while the facial fat decreases. Hollow cheekbones are attractive because they're a sign of sexual maturity, but full cheeks are seen as more youthful and neotenous.

Upon visual inspection, the subject's cheeks appear to be relatively normal in terms of cheek fullness, which can appear neotenous.

The subject's neoteny score for cheek fullness is 100.

Total Neoteny Score

The subject's total neoteny score is 91.5%.

The subject overall has a highly neotenous face, which isn't ideal for men.

Golden Ratio Suite

The golden ratio (1.618...), which is also related to the Fibonacci sequence, is a ratio found in math, nature and art. It is thought to play a role in the human perception of beauty. This ratio is most commonly found in the natural world such as in trees, fractals, spirals, seashells, and most importantly, human faces and bodies. Not only has evolution created our faces and bodies to fit the golden ratio, but it has also made our brains more sensitive to it. During the Renaissance, artists such as Da Vinci and Michaelangelo adapted this ratio to fit what they considered to be ideal proportions. Ultimately, the golden ratio can generally be considered relevant to aesthetics.

While all humans do in fact largely match the golden ratio to a high degree, provided the lack of any obvious deformities, it's still very rare for humans to perfectly match this ratio. Environment and habits ensure that true symmetry and perfection will be extremely uncommon. However, based on our data, there is still a loose correlation between the golden ratio and attractiveness. While it is certainly possible and even common to be beautiful and not closely match the golden ratios, this could very well be one of the missing links that has made it so hard to quantify concepts such as harmony and beauty.

Below, we have included 50 measurements of known golden ratios that exist in humans. Refer to section 1 at the beginning of the report for an explanation of each facial location. We then sort the data by the best five and worst five golden ratios of the subject's face. To get the most value from this data, it helps to identify patterns and correlate these findings with other sections of the report. However, the data below should be taken with a grain of salt given the lack of complete accuracy of photo measurements and lack of research on golden ratios' impact on attractiveness. In addition, care should be taken so that procedures do not alter the harmony of other golden ratios and measurements.

Front Measurements:

Measurement	Value	Percent Fit
Head Length / Head Width	1.517	93.7%
Upper Third / Intercanthal Distance	1.521	94%
Middle Third / Intercanthal Distance	2.056	72.9%
Lower Third / Intercanthal Distance	2.606	38.9%
Vertex To Menton / Vertex to Pupils	1.326	81.9%
Pupils to Stomion / Pupils to Subnasale	1.571	97.1%
Pupils to Menton / Pupils to Stomion	1.964	78.6%
Eyebrows to Right Palpebrale Inferius / Eyebrows to Right Palpebrale Superius	1.288	79.6%
Eyebrows to Left Palpebrale Inferius / Eyebrows to Left Palpebrale Superius	1.321	81.6%
Right Cupid's Bow Tip to Labrale Inferius / Stomion to Labrale Inferius	1.787	89.6%
Left Cupid's Bow Tip to Labrale Inferius / Stomion to Labrale Inferius	1.764	91%
Subnasale to Stomion / Subnasale to Labrale Superius	1.667	97%
Left Zygion to Right Zygion / Left Zygion to Medial Point of Left Eyebrow	1.968	78.4%
Right Zygion to Left Zygion / Right Zygion to Medial Point of Right Eyebrow	1.968	78.4%
Left Zygion to Right Zygion / Left Zygion to Right Endocanthion	1.635	98.9%
Right Zygion to Left Zygion / Right Zygion to Left Endocanthion	1.618	100%
Left Zygion to Right Zygion / Left Zygion to Left Alare	1.491	92.2%
Right Zygion to Left Zygion / Right Zygion to Right Alare	1.533	94.7%
Nasion to Left Zygion / Nasion to Left Exocanthion	1.52	94%
Nasion to Right Zygion / Nasion to Right Exocanthion	1.585	97.9%
Right Endocanthion to Right Zygion / Right Endocanthion to Right Exocanthion	1.927	80.9%
Left Endocanthion to Left Zygion / Left Endocanthion to Left Exocanthion	1.792	89.2%
Right Zygion to Left Endocanthion / Right Zygion to Right Endocanthion	1.591	98.3%
Left Zygion to Right Endocanthion / Left Zygion to Left Endocanthion	1.601	98.9%
Right Exocanthion to Nasion / Right Exocanthion to Right Endocanthion	1.585	98%

Measurement	Value	Percent Fit
Left Exocanthion to Nasion / Left Exocanthion to Left Endocanthion	1.523	94.1%
Left Cheilion to Right Cheilion / Left Cheilion to Right Cupid's Bow Tip	1.549	95.7%
Right Cheilion to Left Cheilion / Right Cheilion to Left Cupid's Bow Tip	1.558	96.3%
Right Exocanthion to Right Zygion / Right Exocanthion to Right Eyebrow Tip	1.583	97.9%
Left Exocanthion to Left Zygion / Left Exocanthion to Left Eyebrow Tip	1.515	93.6%
Top of Right Eyebrow to Right Orbitale / Top of Right Eyebrow to Right Exocanthion	1.576	97.4%
Top of Left Eyebrow to Left Orbitale / Top of Left Eyebrow to Left Exocanthion	1.58	97.7%
Right Exocanthion to Right Endocanthion / Right Exocanthion to Medial Point of Right Pupil	1.513	93.5%
Left Exocanthion to Left Endocanthion / Left Exocanthion to Medial Point of Left Pupil	1.498	92.6%
Subnasale to Right Eyebrow Tip / Subnasale to Right Palpebrale Inferius	1.635	98.9%
Subnasale to Left Eyebrow Tip / Subnasale to Left Palpebrale Inferius	1.642	98.5%
Right Exocanthion to Labrale Superius / Right Exocanthion to Right Alare	1.721	93.6%
Left Exocanthion to Labrale Superius / Left Exocanthion to Left Alare	1.725	93.4%
Center of Face to Stomion / Center of Face to Alare	3.033	12.5%
Menton to Stomion / Menton to Sublabiale	1.84	86.3%
Glabella to Menton / Glabella to Labrale Superius	1.991	77%
Smile Mouth Width / Nasal Width	1.444	89.3%
Lower Lip Vermillion Height / Upper Lip Vermillion Height	1.166	72%

Side Measurements:

Measurement	Value	Percent Fit
Pronasale to Opisthocranion / Pronasale to Tragion	1.729	93.1%
Pronasale to Tragion / Pronasale to Cervical Point	1.878	83.9%
Tragion to Exocanthion / Tragion to Cervical Point	1.273	78.7%
Cervical Point to Pronasale / Cervical Point to Front of Eyelid	1.788	89.5%
Cervical Point to Front of Eyelid / Cervical Point to Exocanthion	1.836	86.5%
Pronasale to Exocanthion / Pronasale to Front of Eyelid	1.359	84%
Pronasale to Front of Eyelid / Pronasale to Subnasale	1.458	90.1%
Cheilion to Menton / Cheilion to Pogonion	1.407	86.9%

Total Score

Golden Ratio Score: 34.5%

Golden Ratio Weighted Score: 19.4%

The subject doesn't have a high degree of facial harmony based off the golden ratios.

5 Best Golden Ratios:

1. Right Zygion to Left Zygion / Right Zygion to Left Endocanthion
2. Subnasale to Right Eyebrow Tip / Subnasale to Right Palpebrale Inferius
3. Left Zygion to Right Endocanthion / Left Zygion to Left Endocanthion
4. Left Zygion to Right Zygion / Left Zygion to Right Endocanthion
5. Subnasale to Left Eyebrow Tip / Subnasale to Left Palpebrale Inferius

The above golden ratios showcase the subject's most harmonious features that most closely match the golden ratio of 1.618. Altering these features is contraindicated as it could potentially throw off facial harmony. Consider these when planning any surgery or cosmetic procedure that alters the facial structure.

5 Worst Golden Ratios:

1. Center of Face to Stomion / Center of Face to Alare
2. Lower Third / Intercanthal Distance
3. Lower Lip Vermillion Height / Upper Lip Vermillion Height
4. Middle Third / Intercanthal Distance
5. Glabella to Menton / Glabella to Labrale Superius

The above golden ratios showcase the subject's least harmonious features that most deviate from the golden ratio of 1.618. Cosmetically altering these features might be indicated especially if supported by other sections of this report. However, caution should still be advised as the research behind golden ratios and their impact on attractiveness is not well established, and altering any one feature might throw off other, more important measurements.

Overall the subject doesn't have any obvious patterns that stand out when considering the golden ratios, apart from the intercanthal distance being relatively small when compared to the middle and lower thirds. This is a very common finding however present even in models, so we don't recommend surgical correction for this feature.

Noninvasive Advice

Haircut

The subject has a square/rectangle face shape.

The subject's bizygomatic width to physiognomical face height ratio is 70%. This is relatively normal and would allow for a more diverse range of hairstyles.

The best hair complements features, coloring, and mitigates flaws. Men have less room for error when it comes to unattractive face shapes because styling options for men are somewhat limited. For men, the goal is to create a more square face shape, which the subject already has. So essentially, the goal with hair styling is to not mess up the existing face shape.

Since the subject has a more feminine face, he should opt for a prettyboy-aesthetic.
Another possible haircut that would make the face appear more masculine would be long dreads with extra volume by the sides, which would increase the perceived width of the face and also cover the subject's larger bitemporal width. However, we suggest sticking with the existing haircut and/or shaving the head.

Facial Hair

Studies have consistently shown that light stubble is the most attractive facial hair length on men (Dixson et al., 2016)[57]. Light stubble normally equates to 4-5 mm. but should also be adjusted for how dark and dense the hair is. The ideal light stubble is noticed from relatively far away but is still as short as possible without distracting from or hiding the subject's jaw structure.

The subject has a relatively large and wide lower third so a beard isn't necessary. The current beard has too much hair on the chin, which pushes the chin back in space and makes it appear smaller and more feminine looking, albeit at the bonus of making the face appear shorter and more square. However, the mustache helps decrease the perceived size of the philtrum which makes the chin look bigger and creates a more dominant look.

We suggest either going shorter on the beard (light stubble) or trying minoxidil and/or beard transplant to create full beard coverage. If a genioplasty is performed, facial hair won't be necessary at all.

Oral Posture

The subject doesn't appear to have competent lips, which is consistent with open mouth posture. We recommend everyone adopt proper oral posture to ensure that facial bones remodel correctly in the upcoming decades of life. This consists of placing the tongue firmly on the roof of the mouth with as much surface area as possible, whilst avoiding touching any teeth. See magnumworkshop.com for a more detailed guide.

Skincare Recommendations

Yearly fraxel laser and a retinol regimen would help smooth out the skin. Sunscreen should also be worn to prevent further photoaging.

Invasive Advice

Our hierarchy of facial aesthetics consists of the following:

1. Harmony
2. Youthfulness & Dimorphism
3. Forward Growth
4. Averageness
5. Symmetry

The key to maximizing your potential is to maximize all these qualities as much as possible. As the jaw and eyes are the most important parts of the face, the most bang for your buck will consist of focusing on these areas. Keep in mind that while this report provides a starting point for any possible cosmetic intervention, an artistic eye is still necessary to determine whether any procedure will actually benefit your facial aesthetics.

It's important to note that we are not suggesting that the subject should get these procedures, that they would be worth it, or that the subject is even a candidate for these procedures. Rather, this is simply a theoretical list of the best procedures in existence that would positively impact the subject's individual facial aesthetics. The following is not medical advice and requires an in-person consultation from a medical professional.

Surgery Basics

First it's necessary to realize that surgery will always come with risks, from the simplest filler injection to double jaw surgery. Plastic surgeons require hospital privileges in case you need to be transferred due to a medical emergency during your surgery. Apart from that, a huge risk often neglected is that of scarring. While a good surgeon and after-care will minimize scarring, realize that a scar gets created every time a knife opens skin, which is especially a problem for darker-skinned ethnicities. Only certain surgeries can work around scarring by creating the scar from an area it can't be seen e.g. behind the eyelid, inside the cheek, or behind hair. In some people, cutting the skin also traumatizes and kills hair follicles.

Surgery should not be taken lightly and all other alternative options should be exhausted first. Deciding whether the risks and cost are worth the aesthetic benefit requires lots of introspection and should be made with a clear head. Eliminating body dysmorphia from your decision is paramount. If a measurement or feature is normal in this report but the need to fix the perceived flaw still exists, body dysmorphia is likely the culprit and therapy should be sought out instead. Even if body dysmorphia is not a factor, realize that it's still entirely plausible that getting the desired surgery won't drastically change your life or even your overall aesthetics. It's not uncommon for people to undergo plastic surgery and come back to work with co-workers being none the wiser.

Researching the surgery and the provider is the biggest priority when considering surgery. First, you should recognize the difference between a cosmetic surgeon and a plastic surgeon. Keep in mind that there is no official cosmetic surgery board. A doctor can take a weekend class and call himself a 'cosmetic surgeon'. Cosmetic surgeons can be anything from a dermatologist to a family doctor. Unlike plastic surgeons, cosmetic surgeons are not guaranteed to be certified in plastic surgery, reconstructive surgery, or cosmetic surgery. Other vague marketing terms create more confusion e.g. dentists can call themselves 'cosmetic doctors'. This presents problems because doctors that are trained in the fewest procedures will always try to sell you on that procedure even though it's not best for you. Stay away from medical spas and if you're looking for dermal filler injections, you should at the least find a nurse injector.

If you're new to selecting a plastic surgeon we recommend you choose only a board-certified plastic surgeon from the American Board of Plastic Surgery (ABPS). You may still pick a cosmetic surgeon if you know what you're doing and the surgeon's results, reviews and experience are exceptional. When in doubt, visit the American Society of Plastic Surgeons website (plasticsurgery.org) to help you select a surgeon and make sure they're board certified with ABPS (abplasticsurgery.org).

Look for reviews of surgeons on multiple websites and sort by the most negative reviews. You have to use your judgment to discern whether the negative reviews are superficial and irrelevant or highlight serious quality concerns. Watch out for low-priced surgeries. A surgeon that skimps on price could also be skimping on experience, anesthesiology, or having assistants do more of the work than they should. Realize that celebrity surgeons are not always the most skilled. A better marker of skill is whether the doctor participates in research rather than if they post on social media. Go to the surgeon's actual website and look at their body of work, asking whether they have an artistic eye and whether or not the worst result is one you would be fine with. Some red flags to watch out for during your consultation are a lack of before/after photos, a rushed consultation, a lack of explanation of the risks, and a lack of questions about what kind of results you expect. Ultimately, trust your gut.

Augmentation Options

Plastic surgery has several ways of augmenting your existing bone structure and adding volume e.g. fillers, fat grafting, implants, and distraction. This essentially forms the basis of improving your facial structure and so it's essential to put some thought into each option and its risks, benefits and costs.

When attempting any kind of medical intervention it's always best to start with the least invasive option first to minimize potential complications, and then go from there. For plastic surgery, this is dermal fillers, which are injected into the desired spot and last for around 6 months. They don't require going under anesthesia, they're made of a material easily recognized and absorbed by the body, they can be dissolved and reversed as soon as they're injected, and they're very easy to shape. Very little can go wrong with fillers, but they do have downsides. For one, they can migrate to other parts of the face, especially when injected around very active muscles. Two, they don't completely dissolve and can last in unwanted parts of the face for years. Finally, while they look great after injection, they don't always hold their shape well, especially since they dissolve naturally. Fillers can also have serious side effects such as blocked arteries, infection, and blindness. The risk increases when when performed by an

inexperienced or untrained practitioner.

Fat transfer seem like an ideal augmentation option at first; it uses the body's own natural fat, which develops a blood supply and lasts much longer than fillers. The problem is that fat is difficult to shape properly because a large portion of it gets absorbed. Multiple sessions will be required. On top of that, the transplanted fat often comes from the belly, which means that when you gain weight, the transplanted fat will grow at a much faster rate than surrounding fat. Fat transfer carries all the same risks as fillers, but it can't be reversed easily and it might also create bumps, cysts, and asymmetries. However, when fat transfer works and is done correctly, you're pretty much in the clear.

Implants have several advantages over other augmentation techniques, namely that they can last a lifetime and won't smush like fat or fillers will. However, the biggest misconception about implants is that they're permanent. It's impossible for implants to be permanent because the face and skull aren't static and change during the process of aging. Natural loss of volume might make the implant visible where it was once hidden. Implants may last forever, but implant removal surgery is common, and the tissue there won't be the same as before the implant was put in. If considering implants, be sure the surgeon will screw the implant into the bone, which eliminates any possible movement of the implant.

Distraction is the ideal augmentation method, as it quickly grows new bone that is 100% natural. A bone is broken and a distractor is placed that slowly moves the bone apart, letting new bone grow in. The downside is it is the most invasive, requires full surgery with anesthesia, can be painful and is only applicable for a few surgeries where the scar can be created in a place where it won't be obvious.

Suggested Procedures:

Genioplasty or Chin Implant

Though the subject has normal chin projection for their ethnicity, and a facial convexity angle of 171, augmenting the chin and bringing the facial convexity angle closer to 175 would create a stronger more masculine appearance and bring the chin forward.

Orthodontic Treatment

The subject has crowding of the teeth. For optimal smile aesthetics, a visit to the orthodontist is necessary to start treatment with braces or invisalign.

Brow Ridge Augmentation

The subject overall has a highly neotenous and non-dimorphic face. Their weakest dimorphic trait appears to be the brow ridge, which can be augmented with filler such as Radiesse or a silicone implant.

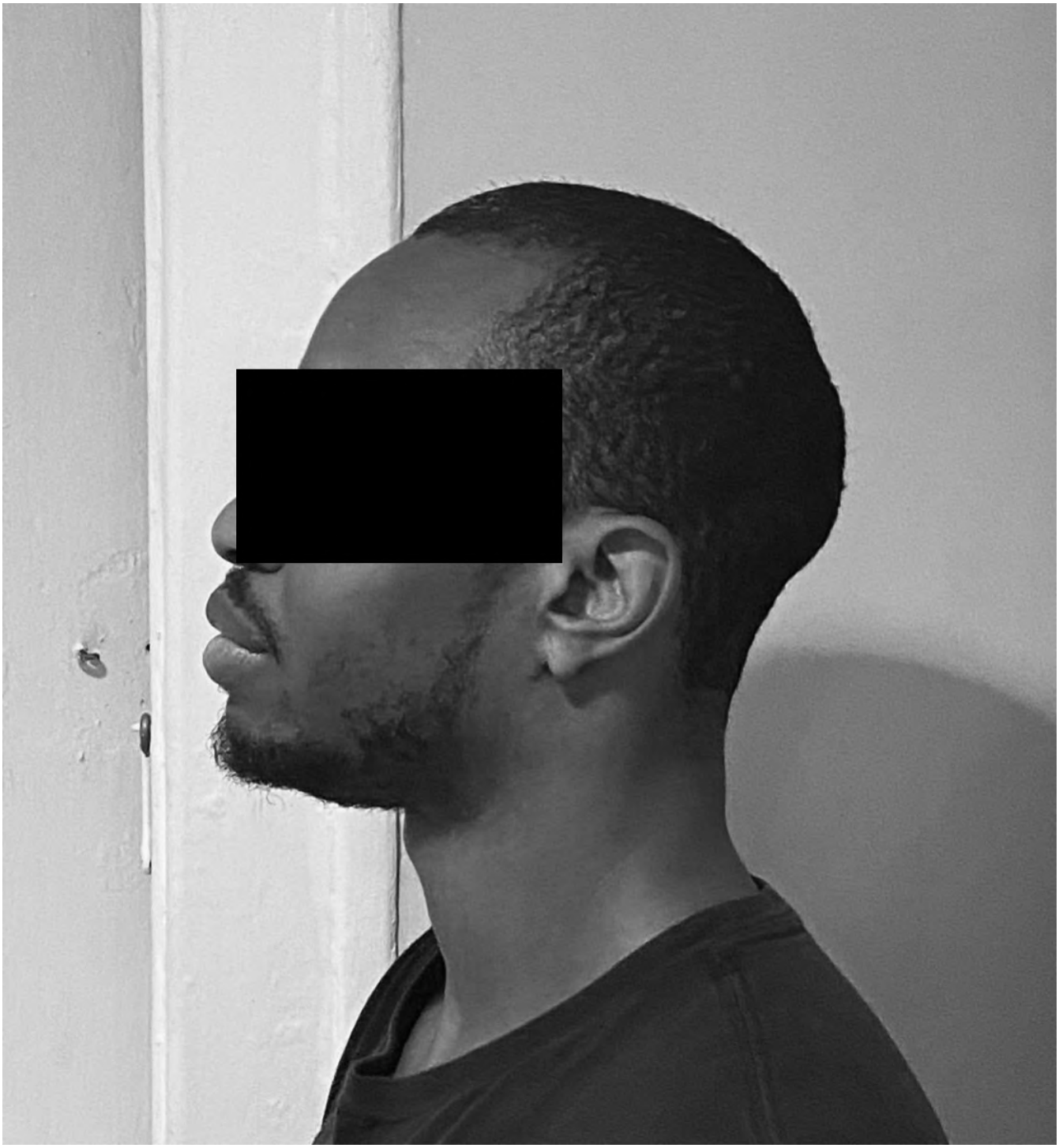
Side Profile Facial Morph

We designed the following facial morph to match our recommendations in the previous sections on invasive and non-invasive advice. The aim is for the following facial morph to be realistically achievable rather than aesthetically perfect.

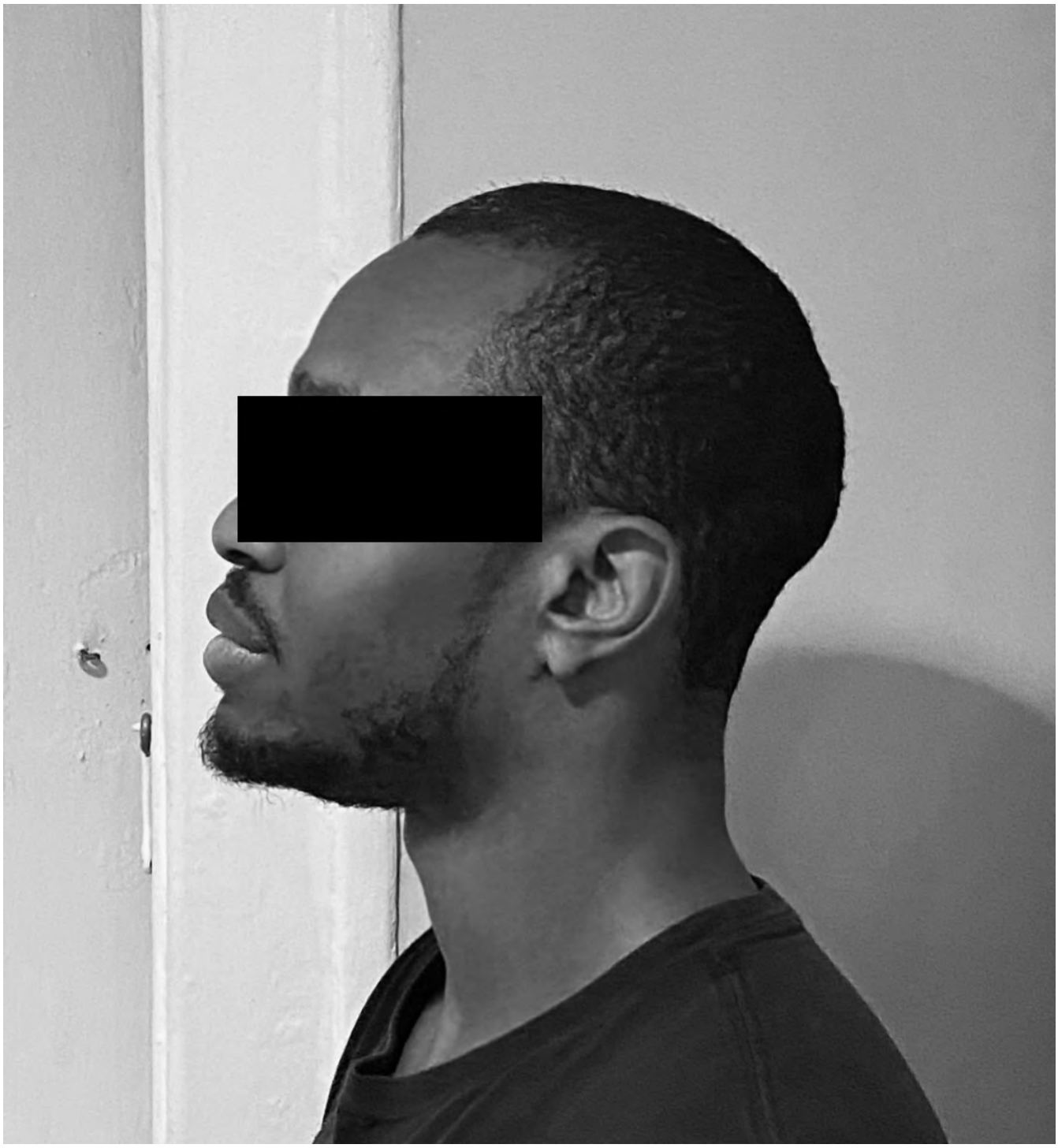
Keep in mind also that any photoshop morph will look uncanny and unnatural since we are doing little more than moving pixels around. A procedure in real life will always look different than a photoshop morph, which could be good or bad depending on the skill of the surgeon.

The following adjustments were made:
- Skin smoothed out and sunspots removed. This can be accomplished with retinol and/or yearly fraxel laser.
- Due to the subject's high neoteny score and average masculinity score, we augmented the brow ridge. This can be accomplished with silicone brow ridge implants.
- We augmented the chin slightly to create a stronger lower third. This can be accomplished by genioplasty or a chin implant.

Before:



After:



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