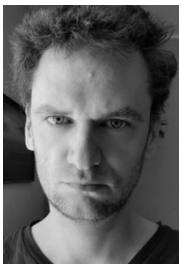

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NON-CONSENSUAL RHINOPLASTY: MISREPRESENTATION OF FEMALE AQUILINE NOSES IN AI-GENERATED IMAGERY

Michal KABÁT – Juraj KOVALČÍK

ABSTRACT:

This article explores how contemporary text-to-image (T2I) systems routinely minimise or "correct" aquiline noses in AI-generated images, a phenomenon the authors term "non-consensual rhinoplasty". Despite explicit prompts for pronounced nasal features, many models systematically smooth out dorsal humps, with 92% of generated images displaying a non-convex profile. Situating these findings in a broader cultural and historical context, the article examines how entrenched beauty standards and physiognomic biases shape both AI training data and societal perceptions. It highlights how content moderation, algorithmic "beautification," and dataset limitations further erase natural variation. To address this bias, the article proposes solutions such as community-led awareness campaigns, petitions for greater transparency in AI development, and technical refinements like prompt sliders for nasal prominence. By outlining these strategies, it advocates for AI innovation that prioritises cultural sensitivity and equitable representation.

KEY WORDS:

AI aesthetics, algorithmic bias, artificial intelligence, aquiline noses, data diversity, facial representation

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1 Introduction

In recent years, text-to-image (T2I) systems have emerged as transformative tools in digital content creation, redefining the boundaries of artistic expression and cultural storytelling. These systems enable artists, designers, and everyday users to convert textual descriptions into vivid, detailed images with unprecedented ease. More broadly, AI systems can significantly enhance inclusivity in creative industries, such as improving the accessibility of digital games for visually impaired players (Farkaš, 2024). However, as T2I systems continue to reshape visual media, they also raise ethical concerns (Engler, 2024), particularly regarding exclusion and bias in the representation of human physical features. This study focuses on the phenomenon we call "non-consensual rhinoplasty", in which AI models systematically "correct" or smooth out distinctive nasal features in female subjects – such as aquiline noses–even when prompts explicitly request their authentic depiction.

This digital alteration is not a mere cosmetic quirk; it reflects centuries of evolving beauty standards, social prejudices, and cultural narratives that have long influenced how we perceive the human face. Historically, a pronounced, "eagle-like" nose was revered as a marker of nobility, authority, and intellectual prowess, even on female faces. Ancient civilisations celebrated it as a symbol of power – an ideal captured in the busts and coins of great leaders – while also shaping narratives around femininity and divinity.

Over time, however, shifting aesthetic ideals and the mechanisation of cosmetic practices transformed this once-celebrated feature into one that is frequently modified or even erased in contemporary digital images. Our research investigates how T2I models, trained on vast and often uncurated datasets, systematically smooth or minimise these unique nasal characteristics. We show that this effect is not random but emerges from the interplay of historical biases embedded in the training data and algorithmic "beautification" processes that favour homogeneity over diversity. Scholars have noted that AI systems often replicate, and sometimes amplify, the stereotypes present in their training data (Bianchi et al., 2023; Cho et al., 2023; Jha et al., 2024). For example, Zhang et al. (2023) highlight that T2I models can perpetuate gender presentation biases, and Ungless et al. (2023) demonstrate how images of noncisgender identities become more stereotyped and sexualised.

This investigation is not only about a technical anomaly but also about how technology perpetuates cultural legacies. As Zhou et al. (2024) aptly state, "rather than reflecting, or even amplifying, the existing biases of today's world, these tools should aspire to shape a better future that reflects equality and fairness". This perspective challenges us to reimagine the role of technology in the cultural production of beauty and to question the aesthetic norms that have long dictated which features are deemed desirable. Other recent studies echo these concerns, with Luccioni et al. (2023) evaluating social representations in diffusion models under the label of "Stable Bias," Basu et al. (2023) quantifying geographical representativeness in generated images, and Qadri et al. (2023) critically examining text-to-image outputs in a South Asian context.

In this article, we guide the reader through a multifaceted exploration of non-consensual rhinoplasty in T2I models. In the second section, we delve into the historical and cultural context of the aquiline nose, tracing its evolution from classical antiquity through the Renaissance and into the modern era. We examine how artistic traditions, pseudoscientific classifications, and cultural narratives have shaped perceptions of nasal prominence, setting the stage for contemporary discussions on beauty, identity, and representation. Part three outlines our methodological framework. We detail the prompt strategies, data collection procedures, and analytical techniques employed to evaluate the extent to which T2I models alter aquiline features. Our mixed-method approach provides both quantitative evidence and qualitative insights into the systematic biases observed in these systems. For example, by using a standardised five-point rating scale, we quantitatively assess the degree of nasal curvature in hundreds of images generated across multiple T2I platforms. In line with prior work (e.g. Naik & Nushi, 2023; Wang et al., 2023), we incorporate measurements aimed at identifying how certain features (like distinctive noses) are minimised or "beautified."

Following our presentation of research results, we combine the analysis of findings with a discussion of the underlying mechanisms, exploring why non-consensual rhinoplasty occurs – examining both technical factors such as algorithmic optimisation and broader cultural forces that influence training data. Drawing on contemporary

research, including insights from Cho et al. (2023), Jha et al. (2024), and Fraser and Kiritchenko (2024), we demonstrate how these intertwined factors converge to perpetuate a narrow, homogenised standard of beauty in digital imagery.

Subsequent sections expand on the wider cultural, social, and political implications of these digital modifications. We examine how the persistence of historical biases in T2I models affects identity formation and media representation, aligning with concerns raised by Doh and Karagianni (2024) regarding gender stereotypes. The study concludes with actionable recommendations for developers, content moderators, and policymakers, aligning with broader ethical considerations (Hao et al., 2023; Garcia et al., 2023) to foster a more inclusive digital landscape where diverse human features are represented authentically.

Ultimately, this work explores how the legacies of past aesthetic norms and social prejudices have been absorbed and reproduced by modern AI systems. By understanding the historical roots of these biases and the mechanisms by which they manifest in digital outputs, we hope to inspire a rethinking of design practices in AI – one that embraces diversity and challenges long-standing conventions in visual representation. As Qadri et al. (2023) caution, the biases in T2I models can inadvertently reflect entrenched social prejudices, necessitating more inclusive data collection and training to mitigate harmful outputs.

With this in mind, our journey in the following pages is not only an academic exploration but also a call to action – a call to ensure that our digital representations honour the full spectrum of human diversity rather than perpetuating the narrow standards of the past. Through this comprehensive examination, we invite readers to reflect on how technology can both mirror and transform cultural values, ultimately shaping a future that celebrates authenticity and inclusion.

2 Historical and Cultural Perspectives

From the ancient marble busts of rulers to the polished canvases of modern portraiture, the aquiline nose – a term derived from the Latin aquilinus, meaning "eagle-like" – has long served as a mirror reflecting society's shifting ideals of beauty, authority, and identity. Far more than a mere anatomical detail, this distinctive nasal form has been celebrated, scrutinised, modified, and even weaponised throughout history. In this chapter, we will briefly glance through cultural evolution of the aquiline nose, illuminating the significance of the accompanying figures.

The concept of an "eagle-like" or aquiline nose has been historically associated with nobility, authority, and intellectual prowess. In ancient physiognomy, such facial features were believed to indicate certain character traits. The treatise *Physiognomonics*, attributed to Aristotle, discusses how physical characteristics, including facial features, are linked to personality traits. For instance, individuals with a projecting upper lip and jaws are described as quarrelsome, similar to dogs, while those with thick nostril extremities are considered lazy, akin to cattle (Aristotle, 1936). Plutarch, in his *Life of Antony*, provides a vivid description of Mark Antony's appearance, noting his broad forehead and hooked nose, which he likens to the visage of Heracles (Plutarch, 1920). This portrayal suggests a belief in the reflection of one's character through physical traits.

Yet while depictions of men with aquiline noses abounded – emphasising leadership and valour – there is also evidence that women with similarly distinctive noses were admired in certain contexts. The coin shown in Fig. 1, which portrays Cleopatra, is emblematic of this era. Her coinage and busts, with their distinctly curved nasal bridges, stand as enduring symbols of regal authority and mystique. Cleopatra's image has transcended time, becoming synonymous with both power and beauty. This classical ideal set a precedent for the valorisation of pronounced features – one that would reverberate through centuries. Transitioning into the Renaissance, these Greco-Roman standards were revived and reinterpreted. The detail from painting on Fig. 2 introduces Simonetta Vespucci, a celebrated muse of Florentine art, whose portrait features a gently arched nose. While Renaissance artists often idealised refined, delicate features, they could not entirely sideline the classical influence. As Burke (1995) notes, Renaissance portraiture reflected a dialogue with antiquity, balancing idealisation with a reverence for distinctive features, including prominent noses, which were sometimes accentuated to emphasise lineage and status.

The evolution of scarce nasal representation of females continued into modern portraiture. Fig. 3 features Auguste Rodin's *Madame X*, a sculpture capturing Countess Anna-Elizabeth de Noailles with a strikingly prominent profile. Rodin's work is notable not just for its artistic merit but also for its implicit dialogue with history – reminding us of classical traditions that celebrated distinctive features. Meanwhile, Fig. 4 presents another *Madame X* (Virginie Amélie Avegno Gautreau) by John Singer Sargent, a painting that, though subtler in its depiction of the nose, nevertheless explores the tension between individuality and convention. In addition to the prominent feature, the painting sparked discussion around the dress, the amount of bare skin uncommon for portraits of the time and heavy make-up leading some to even question the identity and gender of the model (Diliberto, 2003).

In the 19th century, the fascination with physiognomy – the belief that one's character could be discerned from facial features – led to various pseudoscientific endeavours. One notable example is "Nasology; or, Hints Towards a Classification of Noses," published in 1848 under the pseudonym Eden Warwick, later revealed to be George Jabet. This work attempted to categorise noses into distinct types, each purportedly corresponding to specific personality traits. Despite its satirical intent, the book was taken seriously by some contemporaries, reflecting the era's preoccupation with linking physical appearance to moral and intellectual qualities. Jabet's "Nasology" classified noses into six primary categories: Roman or Aquiline Nose (associated with strength and leadership), Greek or Straight Nose (linked to aesthetic harmony and refinement), Cogitative or Wide-Nostrilled Nose (thought to indicate thoughtfulness and deliberation. Jewish or Hawk Nose (often unfairly stereotyped, reflecting societal biases of the time), Snub Nose (considered indicative of playfulness or lack of seriousness) and a Celestial or Turn-Up Nose (associated with naivety or simplicity). He also dedicated a whole chapter to feminine noses, mentioning that "sex modifies the indications, some of which, though disagreeable and repulsive in a man, are rather pleasing, fascinating and bewitching in a woman, and vice versa" adding even more mystery to what the book actually says about phrenology or beauty standards of the time (Jabet, 1848).

While "Nasology" was intended as a parody, it inadvertently contributed to the era's pseudoscientific discourse, influencing public perceptions and even medical practices. The book's classifications, though lacking scientific merit, exemplify how societal biases can shape and be reinforced by seemingly objective studies. Scholars catalogued facial features, assigning moral and intellectual value to characteristics like the aquiline nose. The legacy of such works underscores the importance of critically examining the foundations of our aesthetic standards and the potential biases embedded within them. As we develop and train modern AI systems, especially those involved in image generation and recognition, it is crucial to be aware of these historical prejudices to prevent their inadvertent perpetuation in contemporary technologies.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Fig. 12

Figures 1-12: Different depictions of female nose in art and popular culture

Sources: Own processing, 2024; based on Schiff, 2010; SARTLE, n.d.; The Metropolitan Museum of Art, n.d.; Abel, n.d.; IMDb, n.d.; International Center of Photography, n.d.; Ardolino, 1987; Denník N, 2019; Alamy, n.d.; Geronimi, 2019; Papalias, 2023; Dafaure, 2022

The print advert on Fig. 9 illustrates one such measure: the Zello Nasenformer, an early 20th-century German device that promised to transform an aquiline or "hooked" nose (attributed to Jews by widespread antisemitic propaganda) into a more streamlined, socially acceptable form. Advertisements extolled its ability to correct this and any other "anomaly", effectively erasing what was once admired as a bold, even regal feature (Lübbers, 2023). This notion of alteration was not just a reflection of aesthetic judgment; it also revealed an early drive toward homogenisation that persists in our digital age. As Jha et al. (2024) note, generative models have a tendency to 'pull' the image generation towards stereotypes for certain identities.

Fig. 5 spotlights American actress and singer Barbra Streisand, who famously resisted industry pressure to alter her distinctive profile. Her refusal to conform turned her aquiline nose into a symbol of integrity and individuality, challenging a prevailing aesthetic that favoured more uniform features. By contrast, Fig. 6 captures an artistic recreation of her iconic pose by actor Jennifer Aniston best known for her appearance in the television series *Friends*. Barbra has said that "she was very flattered that Jennifer Aniston chose to interpret her style... If only she had a bump on her nose." hinting to a surgery that Aniston underwent for medical, not aesthetic reasons (Streisand, 2010). Fig. 7 depicts the nose of Jennifer Grey as seen in the movie *Dirty Dancing.* She later also underwent a procedure that changed her appearance so drastically, that it transformed her "from celebrity to anonymous person" overnight. In

her autobiography, she also mentions that she decided to alter her nose in order to be given other than "jewish roles" (Grey, 2022)

Public figures have also been targeted by external manipulation for political purposes. Fig. 8, shows a doctored image of Zuzana Čaputová, former president of Slovakia, where her nose was exaggerated to resemble an antisemitic caricature by Zem a vek magazine in 2019 and later shared online (Barca, 2022). As AlDahoul et al. (2024) warn, "biased representations of gender and race may contribute to the creation of content that not only misrepresents certain groups but also perpetuates discriminatory practices". Such alterations underscore how digital manipulation can operate as a tool of social control, transforming inherently distinctive features into vehicles of exclusion.

The latter half of the twentieth century and the dawn of the twenty-first witnessed popular culture redefining beauty standards through emerging media. Animated films played a significant role in shaping perceptions of the aquiline nose. Fig. 10 illustrates how Disney classics like *Sleeping Beauty*, *Cinderella*, and *The Little Mermaid* commonly depict protagonists with barely noticeable noses – visually aligning virtue and desirability with subtlety or near invisibility. By contrast, villains often feature exaggerated, pronounced noses, creating a visual language that equates moral corruption with a bolder profile.

A Japanese anime character, shown in comparison to a cat in Fig. 11, offers another angle. In pursuit of the "kawaii" aesthetic, many anime characters are depicted with minimal or even absent noses – an artistic approach that reinforces a cultural standard equating small proportions and cat-like faces with beauty (De Leon, 2023). As Zhang et al. (2023) note, visual stereotypes often persist in AI-generated images, even when explicit instructions attempt to counteract them, highlighting how deeply these stylistic norms influence not just cartoons but also modern generative models. In this realm, perhaps most controversially, Fig. 12 presents a female version of the infamous "Happy Merchant" meme, originally drawn by Nick Bougas in 2010 to resemble WWII era propaganda illustrations (Mercer, 2024). Its author is unknown, but it most likely depicts American-Canadian feminist and video game critic Anita Sarkeesian (Dafaure, 2022). This meme weaponizes exaggerated nasal features for antisemitic caricature, demonstrating how any physical trait, including the aquiline nose, can be appropriated to convey hatred. The image stands as a stark reminder of how digital culture can repurpose historical prejudices, perpetuating stereotypes and fuelling discrimination.

Placing these digital biases in a broader social context reveals striking parallels with real-world beauty norms and cosmetic practices. Data from the International Society of Aesthetic Plastic Surgery (ISAPS, n.d.) show that rhinoplasty remains one of the most popular cosmetic procedures worldwide, with women constituting 82% of patients. The growing demand for nasal "corrections," coupled with an annual market growth rate of approximately 7.3%, underscores how deeply the idea of an "ideal" nose is embedded in society.

Even from daily life observations it is hard to deny that people with aquiline noses indeed exist in most parts of the world, yet due to its underrepresentation in artistic and other depictions T2I models frequently "correct" or diminish this feature. This digital pattern mirrors cultural narratives that have long portrayed pronounced nasal features as anomalies requiring correction – thereby fuelling the cosmetic surgery industry and reinforcing narrow beauty standards.

The journey of the aquiline nose – from an emblem of ancient power to a digitally "corrected" feature – reflects a continuum of cultural bias. Classical art once embraced the bold curvature of the aquiline form, but pseudoscientific thinking, mechanical interventions, and modern media trends each contributed to a collective impulse toward normalisation. In the twentieth century, celebrity culture intensified the scrutiny of this feature, simultaneously celebrating individuality and promoting homogenisation. Today, cultural biases live on in the data that trains T2I models. For instance, Cho et al. (2023) find that "DALL-Eval reveals that text-to-image generation models not only exhibit artistic creativity but also replicate longstanding social biases embedded in their training data". Thus, what might appear as a minor design choice in digital imagery often channels centuries of aesthetic prejudice.

Viewed in this light, the story of the aquiline nose is much more than an exploration of a single facial feature – it offers a sweeping panorama of how societal standards evolve, intersect, and are manifested in contemporary technology. From Cleopatra's commanding visage to the sanitised images seen in AI outputs, this evolution encapsulates the changing ideals of beauty and power. Such a historical lens compels us to question the data and algorithms that shape T2I systems. In the sections that follow, we build upon these historical and cultural insights to

examine our research findings in detail and explore their broader societal implications. Ultimately, we propose practical strategies to encourage a more inclusive digital representation of human beauty – one that respects the varied contours of the human face rather than forcing them to conform to a narrow ideal.

3 Methodology

In this study, our methodological focus is narrowed to investigating how text-to-image (T2I) models render female faces with distinctively aquiline, hooked, or convex noses featuring a prominent dorsal hump. To explore this specific phenomenon, we concentrated on images generated in response to the direct prompt "female with aquiline nose from profile." Our aim was to determine whether and how these models systematically "correct" or minimise the naturally pronounced nasal profiles of women, thereby altering an important marker of identity.

Our central hypothesis posits that T2I models, when given a direct instruction to depict a female with a pronounced aquiline, hooked, or convex nose, will frequently produce outputs that smooth out or diminish the prominence of the dorsal hump. To test this hypothesis, we crafted a straightforward prompt: "Generate a picture of a female with an aquiline nose from profile."

The focus on female subjects was deliberate, as it allowed us to explore the intersection of gendered beauty standards and digital bias. By targeting female aquiline noses, we could examine whether the models' default "beautification" processes systematically de-emphasise features that are culturally and biologically significant. To ensure that the models recognise aquiline nose in males, we crafted a prompt asking to create a male face showing it from profile but replace facial features other than nose with female ones.

We selected eight leading T2I platforms for our study: DALL·E 3 (used by OpenAI ChatGPT and Microsoft Copilot), Imagen 3 (used by Gemini), Davinci2 (used by DeepDream), Midjourney, Adobe Firefly and then Stable Diffusion 3 with its native model and with JuggernautXL 10. Each of these tools represents distinct algorithmic approaches and training data profiles. The core prompt remained constant across platforms, we conducted multiple iterations per platform, varying seed values and occasionally appending descriptors like "photorealistic" to capture the full range of outputs and ensure that our analysis was robust.

For each T2I platform, we generated ten to fifteen images using the prompt, ensuring that all outputs were intended to depict female subjects with distinctly aquiline or hooked noses, characterised by a prominent dorsal hump. From this pool of images, we selected one representative image per platform that best illustrated how each model interpreted and rendered the requested feature. These images formed the primary dataset for our analysis and were compiled into a single reference figure to facilitate side-by-side comparison.

We used a standardised five-point scale where a score of 1 indicated a flat or concave profile and a score of 5 indicated a clearly defined, convex or hooked profile with a prominent dorsal hump. In addition to the numerical ratings, we recorded qualitative observations regarding the angle of the profile, clarity of the dorsal hump, and any stylistic elements (such as lighting, texture, or digital filters) that could either obscure or accentuate the natural nasal structure.

Our analysis was designed to integrate both quantitative metrics and qualitative assessments in order to provide a comprehensive picture of how female aquiline features are rendered by T2I models. First, we analysed the frequency distribution of the ratings across platforms, focusing on the proportion of images that exhibited clearly pronounced nasal features (ratings of 4 or 5) versus those that were significantly smoothed (ratings of 1 or 2). Chi-square tests were employed to determine if the differences observed among platforms were statistically significant.

Parallel to this, qualitative comparisons were made by juxtaposing images side by side, allowing us to visually inspect how various models handled the prominent dorsal hump characteristic of an aquiline nose. We further enriched our analysis by supplementing the direct prompt with context-rich variations – such as "female with a regal, aquiline nose in a Renaissance portrait style" – to evaluate whether additional descriptors influenced the degree to which the dorsal hump was maintained. This approach enabled us to identify consistent patterns of digital "correction" that may not be immediately apparent from numerical data alone.

Several factors may influence our findings. Each T2I platform utilises its own training data and algorithmic processes, which means that variations in output could be affected by stylistic preferences or inherent photorealistic biases independent of any intentional correction of nasal features. Moreover, while our standardised five-point scale provides a quantitative measure of nasal prominence, the concept of an "aquiline nose" is often subjectively interpreted. For the purpose of this research, we see it as any nose shape that is not flat or concave shaped, with visible "bump" or convex curve in the nose profile.

4 Research Results

By integrating quantitative metrics with qualitative observations, we reveal a consistent pattern across multiple platforms – namely, that these systems tend to "smooth out" or minimise distinctive nasal features, even when explicitly instructed to render a pronounced profile. The results not only validate our central hypothesis but also shed light on the interplay between data biases, algorithmic optimisation, and cultural aesthetic standards. We do not go into details on how "female" is by default rendered within these systems in terms of clothing, race or age, as this is a much wider issue that is already researched to some extent elsewhere (Birhane et al., 2021; Jha et al., 2024; Heikkilä, 2023; Park, 2024).

Our investigation began with a series of experiments in which we generated images across seven different T2I platforms. Using the direct prompt to generate a "picture of a female with an aquiline nose from profile," we observed that, despite explicit instructions, almost none of the images displayed an outward profile curvature.

To quantify these observations, we implemented a standardised five-point rating scale ranging from 1 ("concave or flat") to 5 ("clearly aquiline or hooked"). The statistical analysis revealed that approximately 92% of the images were rated in the 1-2 range, indicating a subdued or nearly non-existent dorsal hump. We selected one representative picture for each model and set them side by side: Fig. 13 – DALL-E 3, Fig. 14 – Imagen 3, Fig. 15 – Davinci2, Fig. 16 – Midjourney, Fig. 17 – Adobe Firefly, Fig. 18 – Stable Diffusion with default SDXL model, Fig. 19 – Stable Diffusion with JuggernautXL 10 model.

Few of the pictures generated by the tools were missing the nose completely (see Fig. 20 by DALL-E for example). The slightly outward curvature appeared only in specific scenarios where the start of the curved part of the nose was softened by background, hair or another part of the face when the algorithm decided not to show the face from side but from a different angle. You can see this situation in Fig. 21 (rendered by JuggernautXL 10). In rare occasions the algorithm rendered small white flakes where the nose should start to bend outwards as if it was repeatedly trying to start the curve but then became overwhelmed by the majority of pictures in the set that did not support this shape and returned to a straight line (see Fig. 22, also by DALL-E).

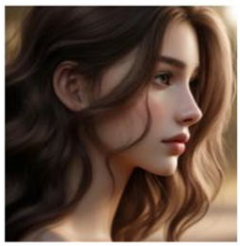
Fig. 13

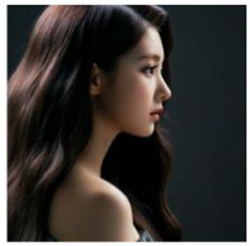
Fig. 14


Fig. 15

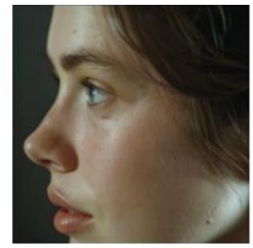
Fig. 16


Fig. 17


Fig. 18

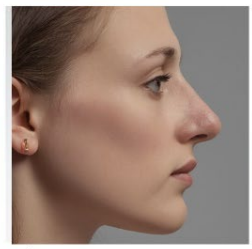
Fig. 19

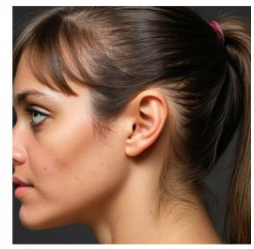
Fig. 20

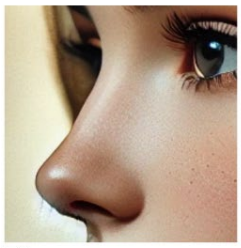
Fig. 21


Fig. 22

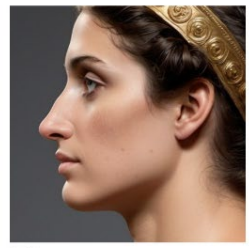
Fig. 23

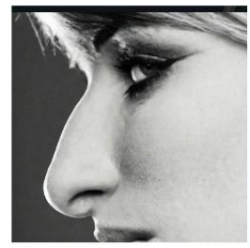
Fig. 24

Figures 13-24: Different attempts at rendering a female aquiline nose using generative T2I AI tools
Source: Own processing, 2024

Overall distribution suggests a statistically significant bias across all models: the algorithms, influenced by the prevailing aesthetics in their training data, predominantly generate images that conform to a homogenised standard, only making small exceptions where it is not directly noticeable (cutting part of the picture or obscuring the visibility of the curve). This might be caused by strategies real people often use to hide or soften the presence of their nose in photographs that were used for training the models.

Qualitative comparisons further enrich these findings. Side-by-side analyses of images generated from similar prompts show that many outputs were produced at angles or under lighting conditions that obscured the natural prominence of the nose. In several cases, we noted that the system seems to read the hump as noise to be smoothed out, rather than a defining characteristic to be highlighted. These observations underscore how, despite the explicit nature of the prompt, the models often revert to culturally dominant, "ideal" facial structures.

To probe the limits of the observed bias, we extended our experimental design by varying the prompting strategy. One innovative technique involved "tricking" the model by requesting a male nose on a female face. In some instances, this approach yielded outputs with a noticeably more prominent dorsal hump, suggesting that the bias could be at least partially circumvented with creative prompt engineering. The most successful can be seen in Fig. 23 (rendered by Stable Diffusion 3).

Additionally, we experimented with Low-Rank Adaptation (LoRA) expansions – a fine-tuning technique that adjusts the model specifically on a subset of images featuring aquiline noses. In trials using LoRA specifically trained for this type of noses called Hooked Nose (CivitAI, 2025), almost all of the outputs achieved a rating between 4 and

5, indicating that with targeted adjustments, the models are indeed capable of producing a pronounced nasal profile. You can see a nose rendered by this expansion in Fig. 24. However, the need for such specialised interventions highlights that the default settings of most T2I systems gravitate toward minimising distinctive features, making them less accessible for casual users without technical expertise. Our analysis also illuminated several underlying factors contributing to the phenomenon of non-consensual rhinoplasty in T2I models:

- **Underrepresentation in training data:** Many publicly available images, especially those shared on social media, tend to underemphasise prominent nasal features. Whether through selective posing, the use of flattering angles, or filters that soften facial contours, these images rarely capture the full diversity of human facial structures. Consequently, the training datasets for T2I models skew toward straighter, more conventional profiles.
- **Algorithmic beautification:** The process of algorithmic optimisation inherently favours features that conform to an idealised norm. Generative models strive for aesthetic regularity and symmetry, often treating pronounced features as statistical outliers. Such routines are central to this smoothing effect.
- **Overzealous content moderation:** Moderation algorithms designed to avoid offensive or controversial content can also sanitise terms like "hooked", "big" or "Jewish" nose producing outputs that lack distinctiveness. This, coupled with the broader cultural pressure for conformity – amplified by trends in cosmetic surgery and social media aesthetics – creates a feedback loop that continually marginalises natural variations in nasal shape.

The findings from our research have significant implications for both digital representation and personal identity. T2I models that systematically erase or minimise aquiline noses contribute to a homogenised visual landscape, underrepresenting a feature naturally present in a substantial segment of the population. For individuals with aquiline noses, this digital erasure not only reinforces harmful stereotypes but also can have a profound impact on self-esteem and cultural identity.

As Cho et al. (2023) caution, biases in AI-generated imagery risk perpetuating stereotypes that can manifest as tangible societal pressures. When distinctive features are continuously minimised, society may come to see them as flaws rather than as normal variations. This phenomenon resonates beyond aesthetics, influencing public perceptions of beauty and normalcy, and even contributing to the societal pressure to undergo cosmetic procedures.

The implications of these findings extend far beyond technical performance: they highlight a digital reflection of historical and cultural prejudices that have long shaped our understanding of beauty. As Bianchi et al. (2023) point out, text-to-image generation often scales demographic stereotypes to a degree that impacts how we perceive and represent specific morphological traits. In our context, these stereotypes extend to facial morphology, carrying significant personal and cultural meaning.

5 Conclusion and Takeaways

The tendency of text-to-image (T2I) models to "correct" or smooth over aquiline noses reveals a deeper nexus of cultural, social, and political forces shaping AI outputs. While this phenomenon may initially appear confined to a single facial feature, it reflects longstanding biases in beauty standards and the training datasets used to develop generative models. In what follows, we outline the far-reaching consequences of these digital erasures and propose practical strategies – both technical and community-driven – for creating a more inclusive landscape in AI-generated imagery.

By systematically minimising or "beautifying" the distinctive curvature of aquiline noses, T2I systems reaffirm norms that favour a homogenised appearance. It appears the model sees the dorsal hump as an imperfection, smoothing it away instead of emphasising it in the final image. This might mirror a broader cultural narrative, where centuries of social ideals and cosmetic interventions have cast pronounced nasal bridges as flaws.

The ripple effect of this digital smoothing extends to real-world behaviours. As we have mentioned, rhinoplasty remains among the most popular procedures worldwide, being undergone overwhelmingly by women. When T2I

models consistently generate flattened or subtly curved profiles – even when prompted to do the opposite – they feed into the perception that any variation in nasal shape must be "corrected." This is far from inconsequential: by reinforcing narrow physical ideals, AI-powered imagery can shape public attitudes and intensify social pressure on individuals whose features deviate from a commercialised concept of beauty.

Nor is this phenomenon incidental. Although T2I platforms are not explicitly programmed to erase aquiline noses, the underrepresentation of such features in their training sets, coupled with ingrained algorithmic "beautification" routines, produces outputs in line with historically dominant norms.

For many women, the nose is more than a physical trait: it is a cultural marker, a family inheritance, or a personal emblem of pride. Repeated exposure to "corrected" profiles in AI-generated portraits can weaken that sense of identity. Just as older pseudoscientific writings sought to classify noses into "desirable" or "undesirable" categories, modern generative models risk perpetuating the idea that certain morphological traits are deviant. The absence of these traits in AI output can, over time, result in subtle cultural amnesia.

At the same time, the widespread availability of generative tools makes it possible to manipulate images for political ends. As AlDahoul et al. (2024) note, biased representations can "misrepresent certain groups but also perpetuate discriminatory practices". Distorting a public figure's nose to evoke caricatures – sometimes with antisemitic or otherwise hateful undertones – can influence how audiences perceive that individual's character or competence. While such manipulations may not be inherent to T2I models, the risk of weaponizing AI outputs is evident whenever large-scale platforms produce visuals that tacitly validate a narrow aesthetic ideal.

Addressing this "non-consensual rhinoplasty" requires a multi-pronged approach that involves software developers, policymakers, scholars, and the broader community of users. As Jha et al. (2024) argue, T2I tools should "aspire to shape a better future that reflects equality and fairness" rather than simply mirroring existing biases. Below, we suggest strategies that are practically feasible, aiming to encourage immediate and concrete steps:

- **Social media campaigns:** Harnessing the power of social platforms has proven effective in challenging narrow beauty standards. Radhika Sanghani's #SideProfileSelfie (Park, 2018), for instance, helped thousands of women celebrate their aquiline noses and even avoid surgery (Boan, 2018; Sanghani, 2018). Similar campaigns that invite selfies of faces from "unflattering" angles can generate a robust pool of images that reflect natural facial diversity. Over time, these shared photos – if openly licensed – could feed into training datasets, ensuring that AI models are less likely to default to smoothing away pronounced nasal features.
- **Open petitions to major AI providers:** Formal letters or petitions directed at top AI companies can spur public dialogue about representational biases. Demands can include: *Transparent reporting of dataset composition (*giving external researchers a chance to identify omissions and biases), *Bias audits and corrections* (at key stages of the model's life cycle, ensuring that the emphasis on aquiline noses or other underrepresented features does not recede with each software update), *Built-in user feedback loops* (that allow non-experts to flag when a T2I system is failing to respect explicit prompts to depict specific physical traits).
- **Photo submissions from underrepresented angles:** Women with aquiline noses can, if they choose, contribute profile shots that highlight their nasal contours. These images – uploaded to open, ethically sourced repositories – help fill the training gap. Currently, many existing photo collections feature forward-facing angles or utilise filters that minimise or obscure the nose, thus depriving T2I systems of accurate representations.
- **Creative prompt engineering:** Although prompt engineering remains a specialised technique, simpler interfaces could be developed to let users specify the degree of nasal prominence they want. For instance, a slider labelled "Nose Profile" could shift generated images from subtly curved to distinctly aquiline. Early tests with Low-Rank Adaptation (LoRA) expansions show promise, nearly doubling the frequency of outputs rated "convex" (scores of 4 or 5 on our rating scale). Implementing these tools in user-friendly form would democratise the ability to counteract AI's smoothing tendencies.
- **Balanced training data and transparency:** Developers must go beyond general "diversity goals" and actively seek data that underscores underrepresented traits. Collaboration with photographers or cultural archives can yield meticulously labelled images that capture aquiline noses from multiple perspectives. Incorporating real-world feedback – via user ratings or community-driven audits – helps models retain these distinctive features without "correcting" them.

The systematic smoothing away of aquiline noses in AI outputs may appear, at first glance, to be a purely aesthetic concern. Yet it reveals a larger truth: our digital tools, shaped by data patterns and latent societal biases, can inadvertently perpetuate the notion that variation from the "norm" is undesirable. As Qadri et al. (2023) caution, the biases in T2I models can inadvertently reflect entrenched social prejudices, necessitating more inclusive data collection and training to mitigate harmful outputs. The erasure of aquiline noses is but one manifestation of this overarching dynamic.

Meaningful change requires sustained collaboration. Developers can expand and refine datasets, policymakers can demand transparent audits and clear accountability, and community members can champion open campaigns that celebrate distinctive facial features. A broader, collective shift in consciousness remains essential – one that acknowledges how seemingly mundane "corrections" replicate historical prejudices. Only by integrating technical fixes with public advocacy can we ensure that AI-generated imagery enriches our understanding of human diversity rather than constraining it.

In this sense, reintroducing the aquiline nose into the digital sphere is a symbolic stand against cultural homogenisation, echoing the clarion call by Jha et al. (2024) for AI tools to aim for equality and fairness rather than simply reproducing existing biases. By taking practical steps – from targeted social media campaigns to curated data submissions and petitions – we can move closer to an ethical, inclusive vision of AI that honours the genuine contours of the human face.

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