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Cinch, filter, erase: Virtual bodies and the editable self

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Abstract

Selfie-editing technologies (including in-phone editing tools, filters, and apps like Facetune) provide the ability digitally edit and "enhance" facial and body features in photos. This article extends a theorization of "the virtual" developing from earlier approaches in feminist sociology and digital media studies, to consider the implications of selfie-editing capacities for how young people navigate selfhood in contemporary visual cultures. We draw on qualitative data, including in-depth semi-structured interviews and participatory selfie-editing group workshops which used an innovative "smartphone live capture" method, where participants screen recorded on their smartphones and narrated how they edit selfies in real time to understand how bodies materialize through the everyday technologies of visual culture. We theorize that editing apps

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facilitate a "virtual gaze" that can create new ways of sensing embodiment, producing both intensified self-scrutiny and a seemingly increasingly plastic virtual and physical body, available for remaking according to intensifying demands for visual perfection.

Keywords
Body image, embodiment, femininity, gender, selfie

Introduction: selfie-editing and feminine body ideals in image-based media cultures

Today's generation of young people must navigate intense socio-cultural pressures related to self-presentation and appearance (MacIsaac et al., 2023; Rich, 2024). In Australia, where our study was conducted, body image is a particularly gendered issue of concern, with young women (39%) and gender diverse youth (46%) stating they were "extremely or very concerned" about this issue, compared with 13% of young men surveyed (McHale et al., 2023). The proliferating aesthetic standards of femininity as "perfect" beauty are presented as normal and everyday in digital and social media content (Gill, 2023; Toffoletti and Thorpe, 2021). Young people are encouraged to "optimize" themselves and undertake body work to improve appearance as a crucial form of (gendered) self-work required in youth cultures (Coffey, 2016a). These pressures have been broadly studied in psychological literature as causing body image problems; however, a wide body of work in other fields like sociology, cultural and media studies are critical of social psychological "effects" research with its hypodermic understandings of cultural influence (Gill, 2007). Such work illustrates how the cultural dynamics of bodily display on social media are contested and complex, and require careful attention to the relationship between bodies and images, and on- and offline contexts (Toffoletti et al., 2023). This article contributes to this area of study by exploring how the relationship between bodies and selfhood may be changing through image editing capabilities which are now "standard" in all new smartphones, as well as dedicated image-editing apps.

When we designed the study, editing apps such as Facetune had just been released, promising "professional-quality photoshopping and airbrushing" editing tools, enabling a user to "effortlessly enhance the attractiveness of their selfie." The tools for "perfecting" and "improving" appearance provided by selfie-editing apps are indicative of how technological filters are intimately shaped by social and cultural norms (Rettberg, 2014). The "make me pretty" button in Facetune, for example, is a tool which automatically "corrects" the user's facial features to appear "more beautiful" in line with conventional heterosexual femininity. Gendered and racialized bodily ideals which privilege heterosexuality and whiteness are "baked in" to the design of selfie-editing apps (Noble, 2018). Scholarship on selfie-editing technologies show a context in which proliferating aesthetic standards of "perfect" beauty are presented as normal and everyday in visual social media cultures. Cultural studies accounts demonstrate how this pressure manifests in self-branding as an increasingly common-sense way of negotiating social digital media (Abidin, 2016; Banet-Weizer, 2012). Psychological studies using surveys have found

that the use of photo editing applications can increase the acceptance of cosmetic surgery for women (Sun 2021), and can detrimentally impact mood and "facial satisfaction" (Tiggemann et al., 2020). However, the majority of research on image editing has either studied the "effects" of editing, or the technological capabilities of selfie-editing apps (Elias and Gill, 2018), rather than seeking to understand the meanings and epxeriences of image editing from the user's own perspective of the practice situated within the broader socio-historical context of visual culture and embodiment.

Feminist scholarship pertaining to the "postfeminist" media landscape of the 00s and 10s charts the growth of an image-based media culture promoting a gendered entrepreneurial self (Banet-Weizer, 2011; Gill, 2007; McRobbie, 2009), defined in large part by an "obsessional preoccupation with the body" and notions of compulsory visibility (Gill, 2007: 226). As Gill notes, the normative requirement is to possess a "sleek, toned, controlled figure" and its achievement can be seen as the ultimate marker of empowered femininity, good character, and social success (Gill, 2007: 91). With the rise of social media culture, the importance of the body has only increased in a culture in which permanent visibility is increasingly promoted (Gill, 2023). In the shift from legacy media to digital and social media, these pressures have taken on new manifestations within the increasingly visual and image-based social media landscapes that shape and define contemporary social and cultural life and youth socialities (boyd, 2014; White et al., 2024). This intersection of technology and bodies produces emerging forms of mediated selfhood predicated on exclusionary forms of gendered ideals and the everyday celebrification of the self (Warfield et al., 2020). At the same time, the growth of digital image-editing technologies (Elias and Gill, 2018) toward ephemerality in popular social media platform affordances and practices (Leaver et al., 2020), and new norms around image-sharing as everyday communication and sociality among young people (Cambre and Lavrence, 2023; Kofoed and Larsen, 2016) have the potential to intensify the body concerns that charge young people's engagement with digital image-based cultures.

Feminist scholarship has shown how the fashioning and judgment of young people's bodies is premised on the idealization of "perfectible" femininity. Idealized social media images operate within a "postfeminist biopedagogy" which instruct and regulate young women's bodies and subjectivities through a language of choice, empowerment and health (Camacho-Miñano and Gray, 2021: 2). Research locates young women's engagement with health and fitness content on social media as produced through the prevailing conditions of neoliberalism and postfeminism in western societies (Evans and Riley, 2015; Gill, 2007, 2017; Toffoletti and Thorpe, 2021). The significance of image-editing apps for intensifying new norms and standards of perfectible femininity is an important area of focus (Elias and Gill, 2018; Gill, 2023). Recent scholarship traces the new forms of visual literacies being produced through image-editing technologies, where young women in particular see themselves differently through intensified self-scrutiny, termed "nanosurveillance" or a "metric gaze" (Elias and Gill, 2018), or a "digital forensic gaze" (Lavrence and Cambre, 2020), to describe the sense that that one is always available to be looked at in ever-more intense and forensic forms of looking (Gill, 2023). Cosmetic and skincare industry apps which deliver product recommendations based on the submission of a selfie further show how such apps are commercializing the digital forensic gaze (Eriksson and Kenalemang, 2023). The connection between the potential to change the

body through digital image-editing applications and actual practices of cosmetic surgery altering the physical body signals a new aspect of body modification practices which have not yet been explored.

A growing body of qualitative work addresses young people's lived experiences of these image-based cultures to understand how body-imaging pressures are navigated (see Coffey, 2021). These studies, focusing on affect and embodiment, explore how bodies are deeply entangled with various complex material, discursive, and affective processes (Tiidenberg et al., 2020; Warfield et al., 2020). The body, rather than a static object to act upon, is understood as "becoming" (Coleman, 2008) in generative and fluid ways through social media. Such approaches seek to move away from pathologizing accounts that adhere to a simplistic "media effects" model, which poses that young people uncritically soak up and reproduce negative influences "hypodermically" (Gill, 2012). Instead, they point toward the highly contextual nature of sharing and reading digital images and the complexity of meaning-making that occurs among social networks of young people and their peers in response to visual media cultures (Albury, 2015; Dobson and Ringrose, 2016; Gorea, 2021; Wargo, 2017). Recent studies have illustrated how the relations between bodies and images in visual digital cultures are produced through intersecting modalities of practice: flesh, selfhood and cultural context (Tiidenberg et al., 2020). Selfie-production has recently been explored as a "socio-technical affective practice" (Hynnä-Granberg, 2022: 1) as a way of deepening understandings of the physical registering of tensions and ambivalences which abound in selfie practices (see Cambre and Lavrence, 2023; Tiidenberg, 2018). Cambre and Lavrence (2023: 9) theorize the processes of looking and reading selfie images, where selfies are "both real, and yet not actual", and thus "virtual." We take this point further, to argue that the process of selfie-editing specifically *invokes* virtuality. We suggest that the broader process of engaging with a digitally mediated and editable image of one's self represents a potentially significant shift in the dynamics of selfhood.

Theorizing the "virtual": boundaries of bodies and digital data

Issues related to "virtual" embodiment have been a key theoretical focus from early cyberculture studies, feminist media studies, and sociology. Where early cyberculture studies debated the potential for virtuality to enable an "escape" from the confines of materiality, more recent scholarship has argued the "virtual" realm is always already formed by and implicated with/in material forces (Boler, 2007; Brains, 2011; McGlotten, 2013). Posthuman theories have been at the center of these debates. Hayles's (2002) conceptualization of virtual embodiment rests on a posthuman reconceptualization of subjectivity as "a material-informational entity whose boundaries undergo continuous construction and reconstruction" (Hayles 2002: 3). From this perspective, bodies and virtuals are co-implicated, rather than separable entities on the basis of "biological" or "technological" features. Here virtuality is understood as a material-historical process, not the result of some "irresistible technological determinism" (Hayles 2002: 20). Similarly, feminist scholars from a range of fields including sociology, education, and

philosophy have drawn from and extended Deleuze and Guattari's (1987) theorizations of bodies to understand the complex relations between materiality, virtuality and embodiment; in particular, they have highlighted the centrality of affective relations in making sense of the dynamics of bodies and images (see Coleman 2008, 2013).

Rebecca Coleman's (2008, 2009, 2013) feminist sociological scholarship on the materiality of images helps to re-orient the relationship between and status of bodies and images of bodies. This perspective challenges psychological approaches where the relationship between media images and bodies is one of straightforward "cause and effect," where media images themselves are causal of body image harms without adequate attention to the social and cultural relations of power informing image production and visual economies. Bodies and images are instead understood as "inextricably entwined" (Coleman, 2009: 3), where the broader socio-cultural and historical conditions informing body ideals such as gendered norms, hierarchies and inequalities must be of primary focus. This understanding also aligns with more-than-representational understandings of images, so that images can be theorized as "potentials" rather than simply mirrors of "reality"; images "do" things and have the affective power to provoke physical responses (Bell, 2012).

The concept of "the virtual" is drawn from Deleuze's (2003 [1993]) ontology of bodies as "relational becomings," where tensions between "the virtual" and "the actual" inform a body's possibilities for living. The virtual is "that which is so in essence but not actually so . . . The virtual is a potential – a process, becoming – which might yet become actualized" (Coleman, 2013: 18). Coleman has drawn on these concepts to theorize interactive mirrors in women's department stores as surfacing virtuals as that which is "not-yet-so," as part of the broader promises offered through the "imperative of transformation" through booming health, wellness and cosmetic industries which promote and sell practices and products aimed at controlling, optimizing, and "perfecting" bodies. Her analysis shows how the impact and politics of images is "intensive" – that is, the power of images works not just as an external force on a body, but internally, through a body. Thus, she suggests, the power of images often *exceeds* the representational. Following Coleman (2013) we focus on what images "can do" – how relations with images make particular ways of seeing and knowing bodies possible for the participants in this study. We develop this framework to analyze edited selfie images and practices in terms of what they do; and how particular ways of seeing are invoked by digital editing technologies that may catalyze new feelings and experiences of bodies, and have particular implications for understanding the conditions of contemporary selfhood and gendered embodiment.

Katie Warfield's work on the mediated digital practices and embodiments related to selfies is particularly relevant for us in extending Coleman's theorization of "the virtual" operating in virtual mirrors to the practice of selfie-editing. Warfield (2017) focuses on the power dynamics that shape technological–human relations, theorizing technical "glitches" as moments that may be productive for a feminist politics (extending Russell's original theorization of glitch feminism) in the way they make visible the conceptual and actual boundaries between bodies and technology in selfie practices. Glitches are metaphors and literal instances that are "felt" and noticed by users at particular moments where technology fails (Warfield, 2017). Glitches express how bodies and technologies

are always both mediated and "at stake" in an encounter. When a technological glitch occurs, such as a frozen screen, this event "marks a reminder of the give-and-take that always exists in any body–technology encounter" rather than being separable processes (Russell cited in Warfield, 2017). In a similar vein, Greene (2021) explores the messiness of boundaries between "real" and "virtual" embodiments of Instagram, using Haraway's figure of the cyborg, which aimed to unsettle binary distinctions between categories such as human/non-human, human/machine and mind/body. Greene (2021) describes a process of anxious boundary-work between "the real" and "the perfect" through slight variations in posture and pose in Instagram images designed to showcase "authenticity" alongside the façade of perfectability in "Fitspiration" posts.

Our theorization of "the virtual" aims to make sense of the tensions that animate participants' experiences of fleshy embodiment in image editing practices, where the body is felt as *editable* yet caught between physical and digital limits. This theorization aims to provide new understandings about how the contemporary techno-social context of visual media platforms, intensified technologies of looking, and the prevalence of filters and editing tools built into digital platforms and cameras are experienced by users of image editing technologies. Digital facial image-editing apps and digital camera filters constitute newly charged understandings of bodies themselves as not just material but digital, processual and "editable." Facial image editing apps, we suggest, offer a way of engaging with a *possible* self-image or appearance that is apprehended by the user as a "virtual" self; simultaneously "real" in the digital screen yet not physically actual. We suggest this constitutes a new, or at least newly intensified, way of understanding bodies as virtuals through being perceived and worked on as "editable data."

Methodology

The project used qualitative methods to understand how the capacities and tools enabling image-alteration provided by selfie-editing apps are used and experienced. We conducted 33 in-depth semi-structured interviews and 13 participatory "selfie editing" group workshops[1] with a further 56 young people aged 18–24 who take selfies, and who use editing apps in Melbourne and Newcastle, Australia. The study was promoted through hard-copy fliers posted on University campuses and public spaces like shopping centers in Melbourne, Newcastle, and the Central Coast regions, and also through Meta advertisements on Instagram and Facebook. This was targeted to reach young people aged 18–24 who edit their self-images. Interested participants then self-selected to participate. This method of purposive sampling is appropriate for exploratory qualitative methodologies and aimed to generate theoretically illustrative rather than externally generalizable data (Schreier, 2018). This approach also meant that a wide range of different editing experiences and practices were captured in this study. Participants self-identified their gender, and were predominantly cis-gender women identified as "female" or "cis woman" (56), followed by "non-binary", "genderfluid" or "questioning" (12) and "male"/"cis man" (11). They identified as from a range of ethnic, racial and cultural backgrounds, with majority as "White Australian" or "Caucasian" (41), or "of Asian descent" (27). Most were studying at university and working, and were from a range of class backgrounds,

some with parents working in trade and mining industries, and others from families with professional backgrounds as public servants, doctors and lawyers.

Editing practices varied from those who made only minor edits to lighting and cropping, to those who regularly used beauty apps and altered their faces and bodies in forensic detail, mimicking the forms of "optimization" enabled by cosmetic surgical interventions. Approximately one-third of participants described currently or previously making dramatic or "structural" edits through changing the dimensions of facial features (reshaping noses, cheeks, head size, shoulders or waist "cinching"). The majority of participants used filters, and/or and "minor," "light" and "colour" edits. Regardless of whether or not participants actually made "structural" or "heavy" edits, dramatically editing one's features was widely described as a boundary marking a potentially significant change for how the self is seen and known. This was most clearly illustrated for those participants who did make a higher volume of "edits" or changes to their facial features and bodies. We focus on some of those examples where the boundaries between bodies and technology were specifically discussed, with the aim of illustrating tensions around virtual embodiment and the perception of self in relation to selfie-editing. These examples feature predominantly white cis-women, with the exception of Mars, who is non-binary; Chrissy who is "bi-racial"; and Andi and Sami who are "Bruneian." Facetune was the most widely-used facial editing app used by the participants we discuss here (and in the wider study), with Snapseed, Meitu, VSCO, Lightroom and the built-in beauty filters which are now standard in newer Apple or Samsung smartphones.

The project's methodology aimed to produce multiple different forms of data, including narrative (interviews) and visual data. This included photos of edited selfies discussed in photo elicitation interviews. We also held participatory selfie-editing group workshops, and developed a "smartphone live capture" method where participants screen-recorded on their own devices while narrating how they edit typically edit a selfie. These different approaches enable the relational and embodied dimensions of selfie-editing (such as gestures and feelings) to be explored, capturing the affective and hard-to-articulate processes by which selfies are edited by young people in the workshops, and the meanings made of the body, self and others. Following Taguchi (2012) and Coleman (2009), we aim to highlight the significance of affective relations between images and bodies and create new understandings of how young people "materialize" their bodies through digitally mediated practices. Our analytic approaches capture data across different "registers" (visual, affective, textual, socio-technical practices) that are analytically distinct but intertwined in the use of selfie-editing apps. Analysis was attuned to embodied, affective, and relational dimensions of selfie-editing, including between bodies, images, and socio-cultural discourses. The project draws from established qualitative techniques of narrative and thematic analysis of textual interview data (Nowell et al., 2017), and visual analysis of photo elicitation and selfie images (Bell, 2012). These visual and textual analytic approaches focus on exploring the affective relations as central in guiding the meanings and practices of selfie-editing. These analytic techniques capitalize on the different forms of data created by the mixed methods approach and foreground the role of bodily practices and affect in understanding the significance of selfie-editing apps in contemporary youth digital cultures. Interviews were fully transcribed by a transcription company, and transcripts were uploaded and

initially coded using NVivo software. Transcripts were coded by the research team to organize the data. Themes emerged through team-based analysis qualitative analysis techniques (Waller et al., 2015), which involved all authors reading and viewing all visual data. Themes were developed collaboratively and iteratively through discussions after reading each others' writing notes and preliminary analyses. This included descriptive and case study narrative processes, where the researchers re-watched the video recording of interviews alongside the transcript and NVivo codes, and wrote their own impressions and summaries of the interviews, incorporating their own embodied emotional and sensate responses to the textual and video data.

Surfacing virtual bodies through selfie-editing

In the analysis below, we deploy the concept of "virtuals" to signify the enmeshment of bodies and images, in possibly new modes and/or levels of intensity. First, we explore how cosmetic surgery was discussed by participants as a way of demarcating a boundary between the material "real" and edited "ideal" at stake in selfie-editing. We then discuss dissonances experienced by participants in failing to recognize the physical self, in favor of the improved, normalized edited self. We suggest that the potentials enabled by digital facial image editing apps and smartphone camera filters may constitute a "virtual gaze" where bodies and selves are apprehended as "editable," with implications for understanding some of the associated contemporary constraints of gendered embodiment in this setting.

Dissonance between digital and physical body images

Participants described the changes enabled by facial image-editing apps as a way of engaging with a possible appearance, typically aligning with gendered body and appearance ideals related to feminine embodiment. Participants discussed the tensions that arose for them around viewing the perfected self through automated beauty filters. These tensions between "real" and "digital" modifications were seen as being particularly damaging through having the potential to create a "distorted" self-perception:

Mars: A lot of the other TikTok filters, they try to say that oh, they just give you some mascara or something like that, but they full on actually change your face, like they'll make it a bit slimmer or brighten up the eyes. It's like they don't say that that's what they're doing.

Jacinta: And they should disclose that.

Mars: Yeah, you put it on and you look so much better and you're like "Wow, it looks great."

Jacinta: And you take a normal selfie and you're like "Ugh, disgusting."

Mars: Exactly, because you have no idea that that filter is actually changing how you look – like your brain is taking that in as like that version of yourself against the actual version of yourself.

(Group discussion, Workshop 7, Central Coast)

In this exchange, as well as in other similar discussions, participants were incredulous at the "deception" of in-built beauty filter features on smartphones and social media platforms which automatically changed their features in subtle ways. This automated process directly clashes with participants' carefully learned tactics to ensure their edited photos would still look "real" as part of a broader imperative of authenticity in social media self-presentation (Greene, 2021). Participants in this discussion were particularly concerned that the "improved" version of one's face, when viewed through the quiet changes made by the app's filter, could create a sense of distortion: *your brain is taking that version and comparing it to the actual version of yourself*.

Such tensions between "real" and "digital" modifications (Nash, 2022) are particularly evident in Abigail's description below. She discussed how editing practices could be seen as an extension of the "90s makeover"; however, the "virtual image" of her perfected face created a "dissonance" when compared with the way "you actually are":

> You know, you have all those '90s like makeover movies . . . [back then] you did the makeover, you reinvented yourself. But now when a lot of our lives are online and you have the option to like change the way that you look [through selfie-editing] but . . . it can get out of hand and then you have an idealized version of yourself and you have the way you actually are and if they don't line up . . .There's no longer like the gap between you and who you want to be. It's the gap between you and yourself and it's just like this really – it's like dissonance. It's this like – like really shaky, uneven feeling about like you . . .

The "reinvention" and beautification of feminine bodies and selves so familiar in makeover beauty culture (Gill, 2007; McRobbie, 2009; Skeggs, 2008) are paradoxically presented as both virtuals and actuals by Abigail, creating a sense of dissonance where "there's a gap between you and yourself." Digital editing practices, in her analogy, provide the techniques where the "gap" between "who you are and who you want to be" are collapsed, presenting a tangible and "actual" version of a digitally altered self. The incongruity of the "gap" between this "virtual" you and your physical body is described as creating for Abigail a "shaky, uneven feeling" where the idealized, desired image is simultaneously felt to be "real," yet does not align with flesh. Again here, flesh and data are understood less as being on a continuum, and the "hard limits" of the flesh are sometimes experienced in ways that can feel painful or confusing in relation to digital data. Abigail described the experience of relating to an "idealized version of yourself" made "real" through editing as contradictory and fraught, where the edited image where she "looks good" felt sharply contrasted with an unedited and "flawed" image, in a way that she felt as deeply unsettling.

> You look at that idealized version of yourself and you just want it – you just want it to be real . . . the more you do it, the better you get at it and the more subtle your editing is *the easier it is to actually see yourself as that version*. You go "I look good" and then you do that little button that takes it back to how the photo actually was and it's like blunt – your flaws that you've just fixed literally blow up straight in front of you and you go oh Jesus like – yeah. Yeah.

For Abigail, facial editing practices created new, and problematic, possibilities for how she understood and presented herself, with intense embodied and affective impacts.

Abigail's descriptions illustrate how expectations and practices geared toward perfectible femininity are being intensified through facial image editing technologies, as well as how the boundaries between "digital" and "real" bodies can become particularly confusing through such practices.

Daphne articulated another kind of painful disjuncture that arose for her when looking through old photos which had been heavily edited. She told us that the only photos she now has of herself when she was a teenager were intensively edited, and for her this created a sense of absence or loss between the present and a past self who "doesn't exist," saying,

> I genuinely don't know what I looked like back then because any sort of photo I had of myself in those ages, they're all edited, and any original photo I had, it's gone. So anytime I look back at myself then I almost start to feel worse because I almost feel like I have to live up to this expectation that I put out for myself that doesn't even exist. (Daphne, interview, Melbourne)

Her past heavily edited selfie images depicted a self-image aligned with a more idealized femininity, which then carried for her a heavy weight of expectation through comparing to her "real" unedited present self. When feminine beauty ideals are read not only through the bodies of distant others, such as celebrities or aspirational beauty influencers on Instagram, but are applied and viewed on one's own body and facial features, a sense of incongruence and melancholia may surface, signaling a particular "glitch" in feminine-body-technology relations. For Abigail, the longed-for "ideal version" felt cruelly tangible and within reach through a perfected image (*there's no longer the gap between you and how you want to be*); however, this could be destroyed at the touch of a button when edits were reversed. Daphne longed to recover a no-longer-accessible "unedited" image of herself from the past, and she felt a sense of loss in relation to her edited data. These tensions are a central dimension of the concept of virtual bodies we are suggesting in relation to digital editing practices, where the potential to digitally edit one's own self-image produces not only a new image or "version" of oneself, but new expectant ways of seeing, understanding and relating to oneself.

Cosmetic surgery is "like editing in real life"

Participants in both interviews and workshops compared flesh and data, and articulated their thoughts about the relationship between bodies and images, by comparing cosmetic surgery to selfie editing. Some participants explained selfie editing and cosmetic surgery as a "continuum" of flesh to data. For instance, Chrissy emphasized the practical aspects of digital or virtual editing practices as a way of attaining femininity "perfection" ideals without having access to the material wealth of celebrities.

Chrissy: [Cosmetic surgery like Botox] is literally editing in real life. It's editing without a screen. The surgeries, and the way you present yourself, it's just a real-life version of editing. [overtalking]

Amber: I feel like a lot of plastic surgeries are now one step further than a filter.

Chrissy: It's a more permanent version of editing yourself. . ."You're not feminine enough. You have to change yourself'. The easiest way to do that, if you can't cough up the money for surgery, is editing your photos with a free app on your phone. There's always some form of editing yourself. Digital, physical, whatever. If you can't cough up the money because you're not rich, you're going to be editing yourself in photos, because it's the only way you can achieve that perfection that they're trying to push. It's really damaging for people. [Workshop 6, Newcastle]

Here, flesh and data are put on a continuum of body work practice in explaining selfie editing in a context where visual and consumer culture is understood to be always pushing "some form of editing yourself": plastic surgery is described as "one step further" than a filter, and a more "permanent" and expensive form of "editing" the self. Similarly to Amber, many of our participants positioned cosmetic surgery practices as a direct and logical next step that could be taken from digital self-image editing. For most, this next step constituted a "hard limit"; and the comparison between "virtual" and "actual" self-editing helped them to articulate the limits of the bodywork practices they felt willing, or materially able, to engage in. For instance, Andi and Sami discussed using editing techniques to remove flaws and blemishes, including "surgery" filters, without intending to make these virtual digital edits into physical changes to their "actual" faces:

Andi: I don't want people to see my flaws . . . blemishes
Sami: I use filters, like surgery, instead of doing actual surgery. I just use filter, because I don't want to do surgery. Face surgery. Like . . .
Andi: Yeah.
Sami: So, I just fake it on my pictures. [Paired discussion, Workshop 3, Newcastle)

For a small number of our participants, the "next step" of cosmetic surgery not only made sense, but also seemed desirable and was described as something they might pursue if they had the material resources needed to do so. Abigail, for instance, described cosmetic facial procedures as a next step from self-image editing that, at first, seemed worth taking for her in the context of her work and related social life in a high-profile hospitality job where intensive gendered bodywork demands and cultural pressures around maintaining idealized gendered bodies and images were normalized (Coffey, 2016a):

Abigail: I started out with editing on Facetune and it turned into me editing myself.
Facilitator: The physical self.
Abigail: My physical self.

Abigail explained her practices of closely scrutinizing and "analysing" her face as digital data. The intensification of looking practices was enabled by filters for her, she felt. She described using the "golden ratio" app, for example, which provides a supposedly objective "mathematical" appraisal of facial features to establish and quantify the beauty standard. Abigail recounted to us the first time she decided to try a facial filler, and how

she felt this quickly spiraled into a cycle of ongoing surgical procedures in a way that she described as feeling out of control of, and very costly to her, both emotionally and financially.

> I remember the first time I got [filler] I was with my best friend. We were in Sydney. We walked past a laser clinic – we'd been like kind of joking around and went like, "Oh, just want to get it done" and I was like, "You know what? Yeah, I will." Once it happened, I was never going back, like I was hooked like that . . . You get used to like seeing all these filters and editing these photos to how you think you should look . . .

For Abigail, the close scrutiny of her face as digital data, enabled through "golden ratio" apps, paired with the intensive gendered body ideals surrounding her at work, in her friendship groups, and the wider visual social media landscape meant that fillers came to be seen as a way of attaining edited perfectibility on her material body.

However, other participants described less a "flesh- data" continuum of editing the self, and a more painful relationship with the "hard limits" of the flesh, *when imagined in relation to digital data*. Freya, for instance, described the way that the process of digitally editing her face and body in photos changed the way she saw and related to her body in the mirror. She described a kind of longing for her flesh to be data when looking in the mirror, telling us how she would imagine the mirror as a screen:

> Ever since I started [editing my body in photos], like especially when I was younger, it was just like I would look in the mirror, especially when I've just hopped out of the shower or whatever and I would like grab my stomach and I'm like "wouldn't it be great if I could just cinch it, flatten it." It's the way I think about it, it's definitely every single day, like I will look in the mirror and be like "what if I could just, you know, lift my face" or whatever, which is something, and I would imagine it happening as [if] it was happening on a screen. Definitely, 100%, it definitely affects the way that I think about my insecurities. Because I know so easily I could just, if it was on a screen, I could just rub out the stretchmarks or I could just cinch in the waist, you know, things like that. (Freya, 20)

Freya discussed how, after using Facetune, she would register the potential to "lift her face" anytime she caught a glimpse of herself in a reflection. Freya described forensically analyzing (Cambre and Lavrence, 2023) her body and face as though she was not only editing it as a digital image on her smartphone, but editing the physical flesh through smoothing skin, cinching her waist, or "flattening" her stomach. This potential to digitally modify or "edit" her body image illustrates how the virtual gaze works: images of transformation promise the "potential of a better future" (Coleman, 2013: 18); one that, as a virtual, is tangible yet not concrete or physically realized. Where others have explored the intensification of looking practices enabled by filters (Cambre and Lavrence, 2023: 11), the imagined potential to reshape and reduce one's physical flesh "as if onscreen' denotes an important extension of already-intense demands of perfectability in contemporary femininity (Elias and Gill, 2018; Gill, 2023). This relation with editing images extends to a desire to edit flesh, signaling a particularly intensive and distinct body-technology relation arising from the practice of selfie-editing. In these examples, the comparison of cosmetic surgery to selfie-editing, as well as the conceptualization of

surgery as a form of "editing," helps to illustrate a new mode of engagement with and *way of thinking about* selves and bodies as "virtual," influenced by new ways of engaging with digital data. The process of engaging with digital data in the form of digital images of one's own face and body has particularly significant implications for how bodies and identities are known and felt. The implications of these new ways of seeing, knowing, and relating to the self and others in digitally networked visual cultures urgently require more research, and thinking through in relation to gendered issues of mental health and wellbeing.

Discussion and conclusion: virtual bodies and "editable" selves

Selfie editing apps provide new ways to virtually realize embodiment: editing tools can lift and reshape one's face and body through stretching, tilting and smoothing; and "shaving" bone or "cinching" flesh. We explored how particular moments of jarring or incongruity in selfie-editing practices – "glitches" (Warfield, 2017) in body-technology relations – can have a range of affective qualities. For example, in Mars and Jacinta's exchange, incredulity and anxiety when noticing the presence of an automated AI filter in a "normal" smartphone camera; in Daphne's example, a sense of melancholia for a past "real self" lost intensive editing; and deep dissonance between an edited "ideal" and physical "actual" self in Abigail and Freya's articulated experiences. Abigail in particular described a range of affective intensities which registered through the instability of the digital-material body through selfie-editing and described the loss of this boundary as a physical sensation: a "really shaky, uneven feeling." For Abigail, the promise of an "improved" appearance and an "idealized" version of herself, composed through intensive and "luminous" femininity ideals (McRobbie, 2009), and systems of value operating through social media beauty norms, could be realized through selfie-editing tools and practices. However, these practices were also experienced as jarring or "incongruous" when her physical body and face did not match with the edited, "perfected" images. "Enhancement" of their faces and bodies enabled by image editing apps were a way of engaging with a possible self-image or appearance, where cosmetic surgery emerged as a key reference point. For some participants, digital and physical body modification were seen as being on a continuum, with cosmetic surgery described as an extended form of "editing" the self. For others, the "hard limits" of the flesh became known and experienced, through engagement with surgical practices, and through experiences of dissonance and disjuncture between flesh, unedited self-images and edited self-images.

Freya described a way of relating to her embodied self that is historically new. Her experience is contingent on the place of digital data and screens in everyday life, whereby one's self-image in a mirror could be imagined as if it were a self-image on a screen. In this digital-physical encounter flesh is sensed "virtually" and responded to as "editable data." These examples illustrate how digital media technologies, particularly selfie-imaging practices, can be involved in "altering the material constitution of bodies in 'real life'" (Greene, 2021: 331), as well as producing new ways of thinking about and relating to bodies. From a Deleuzian understanding where bodies become through relations (Coleman, 2009, 2013), these affects of dissonance and melancholia are particularly

meaningful for understanding the implications for selfie-editing practices to have profoundly limiting impacts on a body's capacities (see Coffey 2019).

The tensions participants described align with theoretical tensions regarding the relationships between technology and embodiment: including the porous and unstable boundaries between the digital and material, and the ambivalences and dissonances associated with normative pressures of "perfectible" femininity, which are arguably intensifying in contemporary digital visual cultures. The young women in our research had a broad awareness of the larger social context where particular "perfected" feminine bodies are socially rewarded and desirable (Gill, 2023; Toffoletti et al., 2023). This awareness informed a "virtual gaze" ("how I see myself in my head") participants described, where images or their bodies and faces were increasingly mediated by "live" filters and selfie-editing features as a feature of everyday life. We analyze their engagements with smartphone cameras as involving a similar ontological set of processes between bodies and images as Coleman (2013) describes, where the interface of the interactive mirrors used in retail assist in not merely reflecting but *producing* particular gendered subjectivities and embodied possibilities for viewers. Similarly, we suggest this "virtual gaze" operates in affectively intensive ways through participants' self-image-editing practices to actively produce the conditions for gendered embodiment.

The "virtual gaze" assists in analyzing how the affective processes of boundary-making occurring through selfie-editing invokes an "editable self," where the "not-yet" self-image depicted in an edited selfie can be read as registering a virtual or potential version of the self in the process of becoming actual. Like interactive mirrors which are "engaged with" by physical bodies, where the images are "made to move and change through the doing of them" (Coleman, 2013: 45), selfie-editing apps enable a viewer to engage with and interact with an image of oneself. Selfie editing apps, like interactive mirrors, produce images of transformation that do things "intensively," through a body.

The practice of editing images, then, can be understood as process whereby virtual bodies materialize. We extend Cambre and Lavrence's (2023) point that selfies are at once "real, yet not actual" (p. 9), to suggest that the process of selfie-editing specifically invokes virtuality. Images in this space are conceptually virtual, as not-yet-concrete potentials which signal a possible becoming, and with particular implications for understanding gendered embodiments. In the examples discussed above, the possible becomings available connect with the demands of feminine perfectability – smoother unblemished skin; skinnier, hourglass figures; and "mathematically" balanced features. Affective relations can create the conditions for new possibilities for body work and modifying the body, including through surgical procedures (Coffey, 2016b). The virtual self surfaced through digital cuts have the potential to become actual through creating an affective relation whereby a greater range of modifications to the physical body becomes a thinkable "next step," through the logics of "data editing." This virtual edited self was registered as a tangible potential for Freya and Abigail, who underwent physical body work. This potential was also recognized by Mars and Jacinta in comparisons between "that [edited] version of yourself [and] the actual version of yourself." They suggested that this process of viewing and engaging with an edited "perfected" version of themselves had potentially profound implications for how they experienced and understood their gendered and embodied selves. We suggest that notions of virtuality offer

an important way of understanding the highly gendered tensions, ambivalences, and complexities regarding new image-making and image-reading practices signaled in selfie-editing. In other words, image editing practices illustrate how gendered embodiments and selves materialize through the broader social and cultural conditions of a sexist visual social media economy (Ringrose et al., 2024) which demands ever-finer forensic attention in the pursuit of feminine perfectibility (Gill, 2023).

Feminist scholarship has been at the forefront in mapping how shifting boundaries of physicality are being drawn, redrawn, and altered through a range of technological developments (see Elias and Gill, 2018; Nash, 2022; Ringrose and Harvey, 2015; Warfield, 2017). Digital selfies capture an image as more than a mirror-reflected moment in time, which can be frozen, zoomed in on and now edited and shared in networked publics. This aligns with and extends Coleman's (2013) theorizations of how screens "bring images of transformation – the potential – to life" and that "different screens arrange or coordinate intensive experiences differently (p. 27). Our findings also connect with other recent studies which have explored selfie-production as a 'socio-technical affective practice'" (Hynnä-Granberg, 2022: 1) and the tensions and ambivalences which abound in empirical qualitative studies of the experiences related to selfie taking (see Cambre and Lavrence, 2023; Tiidenberg, 2018). While Deleuze's (2003 [1993]) theorizations of the actual and the virtual originated well before digital technologies of selfie-editing we are exploring here, they capture the ephemeral, "not concrete" but nonetheless "real" and impactful aspects of digital images as they circulate in digitally networked publics. Our findings extend other studies exploring how the boundaries of physicality are being redrawn and altered through the range of technological developments including, wearable tech, and image-editing and enhancing apps (Hawker, 2023; Nash, 2022).

Studying the dynamics of virtual and physical embodiment should continue to be an important consideration for feminist scholarship, which has for decades been at the cutting edge of these theoretical and empirical debates. Better understanding of these contemporary fleshed and digital dynamics will be particularly important for understanding the growing popularity of cosmetic surgery and normalization of "tweakment" procedures, where cosmetic surgeons report young women increasingly bring digitally enhanced pictures of themselves, saying "I want to look like that" (see Gill, 2023). Furthermore, while sex and gender binaries are being increasingly challenged by queer and feminist theories, and increasingly rejected by the current generation of young people, paradoxically, heterosexual cis-feminine body ideals are becoming more intensively felt and practiced through the rising rates of hyperfeminine physical surgical procedures and AI-informed beauty apps used in the cosmetics/skincare industry. The theoretically illustrative examples we have developed here speak to relatively new modes, new levels, new tensions and new intensities of inequalities through enmeshment between the virtual and the physical. These dynamics are becoming ever-more crucial for understanding bodies and selves and consequences for inequality in the era of visual social media.

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Note

1. Selfie-editing workshop methods explored in "real time" how young people use and experience image-editing apps. Participants worked in pairs with their own smartphones and screen recorded while narrating the process and rationale behind their editing practices as they edited their images. Most participants took a photograph in the workshop space and edited that photo; a small number worked on an existing selfie from their camera roll. Participants then volunteered to discuss their experience of editing with a partner in a whole-group discussion. Group discussion questions asked what it was like to use the apps; and how it felt to alter their bodies and faces with a partner; what they noticed about gender, race and other appearance-related norms through the filters and editing options.

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