

The Age of Appearance Augmentation: How Marketing and Influencers are changing the way we form Self-Image

By Briget McShane

My guiding curiosity for this research was viewing the changing manner in which individuals are engaging and creating their self-image, namely through the use of appearance augmenting technologies, and trying to find where those changes emerge from, and what consequences they might create. These augmentation practices, which encourage the manipulation and editing of visual appearance, are becoming more established and embedded on social media platforms and have an increasing effect on the digital sphere at large and the formation of self-image, both digital and physical. Engaging in augmentation online is a distinct, dysmorphic action that disconnects an individual from their physical embodiment, and it carries specific dangers of fragmenting an authentic being from their self-image.

Digital Natives are growing up with one foot in the physical world and the other in the virtual, and it hasn't been properly established that the body that they inhabit in one world may not be the same as their form in the other, which can create a confusing and even dangerous clash of experience. Young children and adults are still shaping who they are and who they want to be, forming a sense of self that will be inauthentic and fractured unless there is a legitimate understanding and acknowledgment of the dangers that come with image editing on social media. Content consumers on social media, digital natives or recent transplants, are being fed an illusion of what reality is by Influencers and marketers without real context or awareness. Navigating this new augmented version of themselves and the world is like they are viewing everything through a funhouse mirror, without even knowing that they're at the circus.

I fear that image augmentation is another technology that we are simply "sleepwalking through," and will fail to consider the many dangers and effects of it until we are too deeply

entrenched to care. In this paper, I worked to combine relevant analysis on recent developments in imaging technology and social media platforms, psychological research on the development and influences on self-image, and the philosophy of fragmentation and authenticity to look at five progressive aspects of this issue.

Aspect 1: The Formation of Self Image

Our sense of self, and the perception of our physical body and appearance that it encompasses, is fundamentally relational to the medium through which we engage it. The first medium through which this occurs is the natural one—reflection. This type of image engagement and self-image creation has transience and warp to it—the image is brief, the reflection is wavering, the subject is in motion. Contrasting the transient nature of reflection, the next medium is the permanent depictions done through some human manipulation of a medium. Through the lens of a camera or the brush of a painter, these images are a still depiction of a single moment or individual in time. They will not change without physical manipulation and contain tone to them—the style of the painter, the grain of the film, the aperture of the lens. And the last, emerging medium through which we engage our own appearance is that of digital imaging technology. What I argue makes these emerging technologies separate from the permanent methods of photos or videos is their ability to edit and *augment* the image in real-time, or after the fact. The images created in new technology have none of the naturality of reflection, nor the permanence of traditional media: they are an entirely new way of seeing our image, and therefore an entirely new way through which we are creating our own self-image.

A 2016 study surveyed 130 individual's ability to categorize and rank photos of themselves from "best to worst likeness," which was compared to the rankings done by strangers, who watched a minute-long video of the individuals to compare the photos to (British,

2015). The study found that the strangers were able to more accurately judge how similar the photos were to the individual's appearance than the person in the photos themselves. The author of this study writes that "knowledge of one's own appearance comes at a cost: Existing memory representations interfere with our ability to choose images that faithfully depict our current appearance." (White, 2016) The human mind has an amazing capacity to recognize, process, and recall the smallest traits and differences to compare and retain the appearance of others, but we are not able to apply that same ability and accuracy to our own image.

The pervasive use of image augmentation technology is dangerous, or at the very least, impactful, because it is now forming so many of those "existing memory representations" of the self. Our ability to be impartial and accurate when it comes to our own likeness is hindered, meaning these distorted versions of self-image not only build up the basis for the understanding of our appearance, they are also difficult to contrast or correct without the impartiality and direct relationship that we have to the appearance of *others*. Because the formation of our self-image is tied to the medium with which we interact with our appearance, the shift to engaging primarily with augmented images changes the self-image that is formed as well. Self-image created by image augmentation is unable to separate from its source: just like the augmented content itself, it is impermanent, amorphous, and above all, distorted.

Aspect 2: The Emergence of Appearance Augmentation

We are now entering an age and environment where the primary medium through which we engage, and therefore create, our self-image is digital— and that digital image is inherently tied to the ability to augment appearance, both automatically and intentionally. Image augmentation technology can change appearance without the constraint of physical reality, the time difference between the image and the augmentation, or even the need to do the editing

purposefully. The editing that occurs is generally the flaws and imperfections of the appearance of a person or object, so it can be more appealing to current standards of beauty or aesthetics. I say current standards because one of the key traits of image augmentation is the fact that it is unmoored by time. An image could be filtered in the moment or months later, constantly changing to fit whatever is trendy or appealing at the time.

That ability to appeal, to perfect, is the reason these technologies are so popular, and growing quickly. People tend to prefer and gravitate to the images which best highlight conventionally attractive qualities, regardless of their objective likeness. In his 2015 study on the ability to self-select photos for official identification, White notes several shortcomings of people to objectively judge their likeness, one of them being that “perceptions of self are biased systematically towards socially desirable impressions.” (White, 2016) This tendency to self-select a likeness for its attractive qualities is another reason that image augmentation is so impactful on the formation of self-image. Augmented images will confirm that bias towards attractiveness and therefore be more easily accepted as a genuine likeness that helps build up the construct of self-image. Many social media platforms include built-in augmentation to their application’s cameras, with a variety of “filters” that offer a host of interesting visuals and fun effects, but all contain some degree of augmenting the user’s appearance and face to be more attractive. Filters on social media, while ostensibly made to create entertaining or interesting content, are a service of validation and flattery as much as anything else.

One of the more concerning aspects of this appearance augmentation technology is that for some, they do not even realize they’re using it. Companies, particularly cell-phone producers, realize the tendency to select and prefer more flattering photos, regardless of realism, and built-in biases for conventional attractiveness into their phone cameras. Almost all smartphones currently

being produced have some form of a “Beauty mode” included in their stock camera application, which focuses on smoothing skin, enlarging eyes, and can even sharpen the jaw or shrink the nose. These “beautifying” modifications have an implicit bias of Westernized beauty standards and can often look ridiculous and slightly inhuman when over-applied, and for most cell phones, these filters are “opt-out” rather than “opt-in” upon first using the phone, where the front-facing camera is automatically applying these filters. For many, particularly the less tech-savvy, they don’t realize that this program exists, much less is being automatically applied all their photos. This leads to a disconnect between the image they see in the mirror and the one they see on their screen, leading some to ask, “why don’t my photos look like me?”

A 2019 study used self-reporting and unconscious body language responses to gauge the appeal of images of the participants themselves that were augmented to different degrees, from minimal change to extreme augmentation. While participants found the highly edited photos disturbing, the study found that a mildly retouched image was found more attractive than the original image of the face and that this suggests that the appeal of “increased attractiveness in their mildly retouched face promotes this behavior of retouching one's own face.” (Tamami, 2019) That “mild” retouching is the level at which phone manufacturers pre-set their front-facing cameras for, knowing that their customers will find the augmented photos more appealing and are therefore more likely to use that same camera, and with it, the company’s phones. Tech companies, especially cell phone producers, are knowingly favoring their profits and consumer engagement over the distortion of their customer’s self-image.

This disconnect and distortion of the self-image and reality of appearance is a concerning one, particularly in cases where corporations are applying their bias and augmentation to end-users without their knowledge and willing consent. It shows a bias towards perfection over

honesty and the technocratic and capitalist motivations of having “better” images and customers addicted to the way they look better on their phone screen rather than in the mirror. The 2018 iPhone X is a strong example of this, where the front-facing camera was automatically augmenting user’s images for smoother skin and brighter eyes, without even a “Beauty mode” being active. This was noticed by many users at the time, prompting an Atlantic article on the phenomena, which noted that “What makes the iPhone XS’s skin-smoothing remarkable is that it is simply the default for the camera,” and that “phone manufacturers and app makers seem to agree that selfies drive their business ecosystems. They’ve dedicated enormous resources to taking pictures of faces.” (Madrigal, 2018) The current tech economy and social media driven markets are not only supportive of this transition to augmented appearances: they are actively driving it forward.

Aspect 3: The Setting and Social Ramifications of Augmenting Image

While cell phone and tech producers are building in augmentation into their basic cameras and programming, to the point that many customers are using this technology without being aware of it, there is also an emerging trend of intentional, specific content augmentation that is concerning. The very things that make accessible image editing and augmentation attractive are what make it dangerous—it’s a rewarding process that increases enjoyment and engagement with content, forming a feedback loop that trickles down until end users are habitual, intentional users along with the professional content creators. Content creators refer to personalities or companies that use social media as a platform to create content like Instagram posts or YouTube videos and create a following online.

One specific segment of content creators that is very relevant to this topic is that of an “Influencer.” Influencers, most often found on Instagram, focus on creating visual content about

a specific or lavish lifestyle, be it for makeup, fitness, travel, etc. They build a peer-like relationship with their following, focusing on a shared interest or community, and maintain their picture-perfect lifestyle while maintaining a more “real” and “approachable” air than, for example, a celebrity or model with a lavish and exciting lifestyle. This ability to be seen as a peer is an essential one because it is that close relationship with their followers that allow Influencers and content creators to make a living—by seeming honest and approachable, their recommendations and services seem more honest and appealing to the content consumers following them. This makes this a very profitable market for corporations and marketers to tap into: while an Influencer has nowhere near the reach a commercial spot on television might have, the impact of an endorsement is far more potent and likely to promote consumer engagement with a brand.

In David Craig’s article on Creator Management in the Social Media Industry, he describes the value that content creators have to advertisers:

Content creation is complimented by community interactivity conducted through iterative and typically non-scalable practices of commenting, liking, sharing, sending direct messages, and more, depending on the platform’s networking affordance. Across these platforms, creators engage with global communities with similar affinities, interests, identities, and values that can be converted into commercial value. (Craig, 2019, p.364)

However, a content creator’s value to advertisers, and therefore their earning potential, is directly related to the content that they create; social media and the platforms on which these content creators operate are inherently visual, and therefore their content must be visually appealing and engaging—enter the rise of image augmentation. Photo and video editing are rampant in the Influencer/content creator industry because it allows for more appealing content,

which can be translated into income for the creators. Image augmentation is a business tool for these creators as much a camera or the platform they operate on, but it preys on the trust that their followers have in them, as they use editing to misrepresent what they are selling to convince their follower's it is worth buying. What they sell could be anything from makeup and diet supplements, companies and services, or even their own lifestyle and appearance, but what is important is because they cultivate the illusion of being a peer to their followers, their word is trusted far more than a celebrity sponsorship or production-company created advertisement.

As image augmentation technology becomes more accessible, it also becomes more accepted and even expected on platforms such as social media. This creates a sort of cycle that, one which starts with the use of Image augmentation for profit by marketers and influencers online. This could be done by an editing team or individual producing their content, made easier with the rise of image augmenting technologies as standalone products, from the more complex computer program Photoshop to phone apps meant to “better” your appearance in photos with just a few click, the most famous of which is the Facetune app, downloaded by millions around the world.

Next, comes the rewarding nature of using these technologies—if used correctly (meaning, not so dramatically or noticeably that the image enters Uncanny Valley territory) this augmented content will look and perform better online. More products are purchased, more followers gained, and the expectations are shifting for the consumers—their conceptions for products are changing, but more importantly, so are their expectations for what is reasonable and *attainable* in the lifestyle and appearances that these influencers are projecting. The additional influx of profit and engagement means additional image augmentation from these and other content creators, as the cycle will grow even larger.

The changing expectations from content consumers and followers is a very important step in this process because it is what distinguishes it from traditional advertisements and celebrity endorsements. The “Influencer” method of advertising is insidious because of that peer-to-peer relationship they cultivate, and their followers might not even notice that they are being advertised to, particularly if they have a younger audience. In a 2018 study on the impact of Facebook browsing on shopping habits, they found that “passive browsers,” or content consumers, are more likely to engage in a “comparison process where they define themselves through the lives of others rather than through their own lived experiences.” And those comparisons have more impact on social media because “social comparison to peers and friends in social media is more dangerous than self-comparison to celebrities in traditional media.” (Strubel, 2018, p. 328) Those passive browsers will be more likely to buy online or be interested in a product, as well as internalize beauty standards and expectations when the content they are browsing comes from their peers, which is exactly what Influencer marketing preys on.

This feeds into the last step of the social media Image Augmentation cycle: the trickle-down of expectations and acceptance that comes from this content manipulation. As more and more content creators start to augment their images, this begins to set and standardize new standards of appearances and lifestyle attainability for their followers. This leads to feelings of inadequacy or pressure to compete with these shifting and cementing social standards. This also can create the need to compete with the changing expectations of appearance on social media (poreless skin, slimmed waist, etc) and users begin to edit their own content to fit in and increase self-esteem. Now, as intentional users of Image Augmentation technology, they start to warp and internalize their augmented image. This is particularly concerning in the case of younger users like teenagers or young adults, who are already more impressionable to their peers and have a

fairly unformed sense of self-identity, meaning their self-image is still forming and likely to be very influenced by these augmented versions of their appearance.

This cycle is highlighted by the emergence of “Instagram Face” the seemingly amorphous and yet standardized appearance that many Influencers online are emulating—leading to a very set and fairly unreasonable expectation of beauty online. In her New Yorker article, “The Age of Instagram Face,” Tolentino discusses this phenomenon:

Did Smith think that Instagram Face was actually making people look better? He did.

“People are absolutely getting prettier,” he said. “The world is so visual right now, and it’s only getting more visual, and people want to upgrade the way they relate to it.”

(Tolentino, 2019)

The obsession with visual perfection on social media is exactly what feeds into the need to compete and leads to many starting to augment their appearance to try and meet the unattainable expectations of beauty set online. But at a certain point of continual use of this technology, with enough image augmentation, that will become the basis for the user’s sense of self-image, and the expectations are no longer social, but their own.

Aspect 4: The Dangers of Image Distortion and Disconnect of the Self

As image editing and augmentations becomes a more accepted, and even expected, social practice in the digital world, the idealized, technocratically perfected virtual self will become at odds with the flawed, embodied experience that is the physical body, which creates a fracture in

the self that directly opposes an individual's authenticity. After consuming enough augmented content, an individual will have internalized the standards of appearance set by the digitally enhanced, visually perfect world online. And if they have started creating enough of their own augmented image, that will become the medium through which they form their self-image. This is guaranteed to have impactful repercussions on a person's self-esteem and relationship with their appearance, especially in more comparison-vulnerable populations like young men and women.

In a 2015 study, young women between fourteen and eighteen were shown digitally altered Instagram photos of other women, "perfected" with filters and body reshaping. The study concluded that "exposure to manipulated Instagram photos directly led to lower body image" and this was especially true for "girls with higher social comparison tendencies." (Kleemans, 2018) While the filters on the photos were noticed, presumably because it is a well-known aspect of the platform with distinct color and tone shifts applied, the reshaping of the body (e.g. thinner legs, slimmer waist) was rarely noticed and the participants found it realistic overall. Body reshaping and appearance modifications are one of the more common ways that Image Augmentation is used by Influencers and content creators, and one of the most dangerous ones for the warping of appearance standards and self-esteem, but it is rarely noticed by the content consumers themselves.

One of the largest concerns about the effects of Image Augmentation is the inauthentic experience of the self and body it fosters. At a certain point in the continual use of Image Augmentation, the self-image has shifted to reflect the new beauty standards that an individual is trying to meet. However, the physical reality does not match the internal perception of appearance, so when confronted with a reflection or non-augmentable image, there will be a

disconnect or break between the two experiences. This could be a discomfiting experience of cognitive dissonance as an individual tries to reconcile their augmented self-image with the physical one that can't meet those digitally perfect standards. And unless they can rectify that difference in experience, they will continue to face and grow that disconnect, an inauthentic experience of the self, both to themselves and the world.

And as these changing ideals for beauty and lifestyle cement in social and personal expectations, we are starting to see some individuals trying to reconcile their augmented image with their physical reality. Tolentino describes a visit to a popular plastic surgeon in LA in her "Instagram Face" article, and the surgeon himself uses Facetune on a photo of her to modify her image and show the changes he could make using procedures like Botox and fillers. This account perfectly encapsulates the effects that we are now beginning to see of the use, abuse, and acceptance of widespread image augmentation. It would take a surgeon, thousands of dollars, and the reshaping of the human face or body to achieve the results wanted for a "perfect" appearance, and an app manages to do it in a few taps. The accessibility to perfection, the ease with which a person can idealize themselves, is addictive and dangerous because it will never be possible to fully match your reality to your idealization. But to continue to edit and augment, knowing that, creates a disconnect and inauthenticity which is harmful to the way a person views themselves and the way they interact with the world.

In their 2011 paper analyzing the supermorphic persona online, Young and Mitty view a variety of applications and versions of cyberspace embodiment and consider the effect of identifying with a virtual self as a physical form. They discuss the benefits of having a virtual persona that one feels embodied in but also comment that "if the virtual self-as-object is merely a digital representation of one's own understanding of certain idealized standards of attractiveness

and desirability within a given community, then there is a danger that this will lead to the pursuit of inauthentic expression, and ultimately to the marginalization of one's offline body-image” (Young, 2011, pg. 537) This is essentially the root issue of Image Augmentation: a preference for and default to the virtual, augmented self-image to the point that experiencing the physical self-image is destructive or regressive. The virtual self-image becomes “real” to the point of dysmorphia when confronted with anything refuting that virtual reality.

Aspect 5: Actions for Engaging with Image in the Digital Age

While there is a general awareness and even some degree of acceptance for the obfuscation and editing that occurs in media like with television stars or runway models, I argue that the editing done on social media is inherently more hidden and harmful and must be exposed and regulated both on a large scale as well as acknowledged and processed on the personal level of engagement. The formation and manipulation of peer-relationships from Influencers are centrally immoral for their purpose of creating a trust to exploit for profit, especially when the content being created is false and potentially harmful to the content consumers as shown in the case of image augmentation.

Using peer relationships to advertise to followers is very common on social media platforms, but not particularly well regulated considering the negative effects that the content and product editing can cause to the followers, particularly when many are younger and impressionable. The Digital Natives, for example, may be well-versed in online experience and interaction, but that doesn't negate that they are more impressionable and likely to listen to peer-mentors than other groups, which makes them a prime target for digital exploitation and manipulation from Influencers. Some effort has been made to correct this, in that guidelines for advertisements and sponsorships on social media was developed by the Federal Trade

Commission in 2015 that allowed punishment for predatory advertisement practices online (Hart, 2016).

But considering the scale of social media and the subtle way that these content creators engage with editing and advertising, more direct and large-scale action is necessary to stop the current profitable system of influencer editing and advertisements. Possible systematic solution options include: the requirement to disclose any editing done to content when it includes a product or sponsorship, all “influencer” accounts who engage in advertising must only be viewable to users older than eighteen years old, or Facetune and other easy image editing contemporaries cannot be downloaded by users under eighteen. These are all quite hard to enforce and likely impossible to occur, but the goal would be to break the perfection-illusion cultivated online and remove an easy target for peer-based advertising.

Young and Whitty comment on the danger of supermorphia deriving from trying to find authenticity by preferring their virtual world persona (Young, 2011) without it being fully synchronized to the physical world. There is an emerging disconnect and preference for the augmented persona compared to the physical, and it is only through awareness and intentional consideration on this new form of content that it can be resolved. A potential move for positive practices is, in the absence of total synchronicity between the virtual and physical selves, and particularly in the lifestyles and expectations posited online, because these standards and images cannot transcend context, we must work to cement them in context. Make them permanently and unalterable situated in the digi-scape of social media fantasy, and not realistic or expected to be easily attainable.

In that case, the only real change and positive growth would arrive by raising awareness of this emerging technology, so that we are not just “sleepwalking though” image augmentation

and its negative effects. Meaningful conversations and practices meant to become aware and remove the influence of these image augmentation social standards are key to ensuring that those with higher peer comparison tendencies and impressionable self-image are not sucked into the cycle of image editing or become disillusioned and inauthentic with their own appearance. Social media feeds on escapism and the fantasy of perfection that users can post and indulge in, but what is important is to remember that the content created for those platforms is just that, a fantasy.

One of the simplest ways to escape the pressures of image augmentation is simply not to follow or engage with social media content creators and influencers, as those are the individuals profiting off creating unattainable and edited standards of image. Being aware of editing and image manipulation is an important skill, because if you can recognize that it is manipulated and therefore false, you will not be building it into your schema of what is expected/attainable/ideal for appearance and lifestyle, and thus avoiding the “trickle-down” effects of image augmentation. The creation of self-image may always be tied to the medium it is viewed through, and there is nothing to be done to change that. What can be controlled, however, is the medium and manner in which you engage your own appearance. You can choose what you see and what you think about it, and I believe that in a world that is more visually focused than ever, that is a very important choice to make.

In the end, I will never know what I look like when I am laughing. I will never walk behind me on a narrow hiking path and notice that I step inline or that I favor my right foot. I will never see my eyes light up or my hands start moving when I talk about something that excites me. Those around me can see these things and notice and synthesize them into the shifting and yet stable image of who I am and what I embody. These are things I can and do notice and appreciate about those around me, and they help form the image of them that I hold in my mind's eye. But that will never be the way I engage with myself. The best I can do to build up the image of me in my mind is take every glance in the mirror, every photo I've seen, every selfie I've taken and paper mache them into a construct of who I think I am and what I believe I look like. But if most of the images making up that construct are viewed through a distorted lens, at what point does that version of my image become real? And what happens when you see yourself in the changing room 360° mirror or a candid photo that disagrees with that image?

Social media and the ever-present image editing that it fosters needs to be acknowledged and understood for the illusion that it is before the perception of self-image and the reality of embodiment are permanently at odds. Ultimately, I believe that the ubiquitous use and support of these technologies are insidious and harmful. Unless there is more oversight on corporate manipulation, increased transparency from content creators, and personal reflection from social media users, the disconnect between the digital image and physical embodiment will only grow. If there is no action taken to expose "Instagram vs. Reality" and modify the standards for online content creation, there will eventually be widespread effects on the disconnect of virtual and physical senses of self and embodiment, particularly in the Digital Native, whose sense of self is being steeped in this virtual world of impermanent, unattainable appearances and expectations.

Bibliography:

- British Psychological Society (BPS). (2015, June 23). Photo selection study reveals we don't look like we think we look. ScienceDaily. Retrieved May 3, 2020
- Craig, D. (2019). Creator Management in the Social Media Entertainment Industry. In Deuze M. & Prenger M. (Eds.), *Making Media: Production, Practices, and Professions* (pp. 363-374). Amsterdam: Amsterdam University Press. doi:10.2307/j.ctvcj305r.29
- Hart, C. (2016). Social Media Law: Significant Developments. *The Business Lawyer*, 72(1), 235-242. doi:10.2307/26419119
- Madrigal, A. C. (2018, December 18). No, You Don't Really Look Like That. The Atlantic. Retrieved May 03, 2020
- Mariska Kleemans, Serena Daalmans, Ilana Carbaat & Doeschka Anschutz (2018) Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls, *Media Psychology*, 21:1, 93-110
- Strubel, J., Petrie, T. A., & Pookulangara, S. (2018). "Like" me: Shopping, self-display, body image, and social networking sites. *Psychology of Popular Media Culture*, 7(3), 328–344.
- Tamami Nakano and Yusuke Uesugi. *Cyberpsychology, Behavior, and Social Networking*. Jan 2020.52-59.
- Tolentino, J. (2019, December 12). The Age of Instagram Face. *The New Yorker*. Retrieved 2020
- White, D., Burton, A. L., & Kemp, R. I. (2016). Not looking yourself: The cost of self-selecting photographs for identity verification. *British Journal of Psychology*, 107(2), 359–373. <https://doi.org/10.1111/bjop.12141>
- Young, G., & Whitty, M. (2011). Progressive embodiment within cyberspace: Considering the psychological impact of the supermorphic persona. *Philosophical Psychology*, 24(4), 537–560. <https://doi.org/10.1080/09515089.2011.556606>

Original Annotated Bibliography

Mariska Kleemans, Serena Daalmans, Ilana Carbaat & Doeschka Anschutz (2018) Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls, *Media Psychology*, 21:1, 93-110

This is a study conducted to analyze how manipulated images can affect the self-esteem and body image of young women ages 14-18. The study was conducted around 2015 and first published online in December 2016, and it describes how the authors tested and studied the reactions to digitally altered or “perfected” Instagram images of other women. The study questioned 144 girls in a secondary school in the Netherlands, fairly evenly distributed across the different tiers/types of schools to account for educational aptitude. The young women were told that the focus of the study was to analyze the effect of “how contextual factors affect preferences for different face types,” so as to cover the true aim of the study. The participants were shown a series of 10 Instagram photos and were then asked a series of questions to analyze their reaction to each photo, as well as to attain each participant’s “social comparison tendency,” which shows if the participants tend to compare themselves to others around them. This was relevant because a focus of the study and context was to address how editing of photos in *peers* affects self-image, as it is theorized that we compare ourselves to peers more often than we do to media figures (celebrities, influencers, etc). As such, if individuals, specifically young women, are looking at manipulated images of someone they see as a peer, it could have more effect and seem more “attainable” than the same manipulated perfection on a media figure. The results of the study concluded that “exposure to manipulated Instagram photos directly led to lower body image” and this was especially true for “girls with higher social comparison tendencies.” The manipulated photos were regarded more positively than the originals, and while “filters” were noticed, reshaping the body (e.g. thinner legs, slimmer waist) was not noticed well, and the photos were found realistic overall.

I think this study, though it uses a smaller sample size than ideal, and slightly out of date in such a quickly evolving technosphere, was designed well and demonstrates some of the effects of retouching and image manipulation on social media. While the article focuses on young women as the affected party, I would hope to extend my analysis to online/Digital denizens overall and look at how their self-image is changed by this. I appreciated the point in the study to address how images from peers are more likely to incite comparison than those of a more elevated figure like a model or celebrity. I think the points it makes overall are valid and the study was well-conducted for the newness of the topic at the time.

Tamami Nakano and Yusuke Uesugi. *Cyberpsychology, Behavior, and Social Networking*. Jan 2020.52-59.

This article was only published online last month, which has its appeals for how relevant the information and social context are. This article touches on something I thought might be an interesting aspect for my paper, the role (or erasure) of the “uncanny valley” in image editing, and how it could affect the perception of the self. In this study, they looked to analyze what personal traits could affect preference for manipulated images, similar to how the other study I selected includes how a girls’ social comparison tendency affected her rating of an edited image. However, in this study, the image manipulation was not on a set of random, peer-seeming photos, but on images of the participants themselves, as well as images of peers. The study was conducted with “Thirty young Asian women [who] evaluated the attractiveness and naturalness of their face images” after they were edited to various degrees, from “mild to excessive” manipulation. These edits were done to reflect current/relevant Asian standards of female facial beauty, which included expanding eyes to appear larger and slimming the chin to appear thinner/sharper. This is apparently the most popular method of retouching done in Asia, according to the study. The subjects would look at the eight different versions of their retouched face, ranging from the original to the excessive editing, and evaluate each image. The study determined each subject’s “preferred degree of edit” based on those “subject evaluations” and the dilation of the subject's pupil when viewing the image, due to the fact that pupil diameter unconsciously increases when “interest or attention to an object is high.” The results of the study found that a mildly retouched image was found more attractive than the original image of the face, but the highly edited images were found unnatural and unattractive in comparison. The claim they make is that their results “suggest that an increased attractiveness in their mildly retouched face promotes this behavior of retouching one's own face.” This study also was analyzing the participants for traits on the Autism Spectrum to see how that affects image responses and found that participants with a higher “autism-spectrum quotient” were less reactive to the uncanny valley effect of the highly edited faces.

I thought this study was an interesting one, and I appreciated the recent nature of the data and the slightly higher age range (university rather than secondary level students). This study is interesting that it analyzes the reaction to edits, both of peer images and that of the self. While the sample size is somewhat small at only 30, the data is thorough and the method of several face types (own vs. peer vs. stranger) along with various levels of editing gave detailed results to analyze. The use of self-evaluations for reactions, along with the unconscious pupil expansions allows for a more accurate response rating. The focus of the “uncanny valley” in this study is not entirely relevant to what I wanted to focus on for my paper, but the reactions to the highly edited images by face-sensitive individuals than those on the autistic spectrum is an interesting analysis by the authors. I would not focus on that in my paper, but I would look at the degree to which higher editing seeming “unnatural” contrasts with it also seeming more “attractive” at mild-medium levels on one's own face.

Research Report:

When I first started this research project, my original intention was to look at how the use of image augmenting technology was interacting with the “uncanny valley,” mainly in the removal of it as the technology advances enough that we no longer notice or are discomfited by highly edited/augmented/manufactured images. This was spurred by seeing a trend of fully computer-generated Instagram “influencers” that look almost true to life. But the more research I did, and in working on my presentation I shifted more towards the analysis of image augmenting technology as a whole. This allowed me to focus on the way that social media supports the use of image augmentation tech. as a manner of commerce and capitalist engagement, but also creates shifting social pressure on the content consumers.

I think that the topic of computer-generated social media content is still a very interesting one, and I think there is a lot of commentary on the manner with which we engage with online personas and content known to be manufactured, but in the end, I think looking at the more relational and social slant of image augmentation was more challenging and interesting to explore. I started this project wanting to look at how sufficiently developed image augmentation technology is removing the uncanny valley and disconnect between real and produced imagery. But in the end, I ended up seeing how the everyday use of more basic image augmentation is changing the way we relate to our image and can create its own sort of “uncanny valley” where the virtual image seems more real, and the physical image is what seems dissonant and off.

That is where the two sources from my original annotated bibliography were helpful, where I was able to see scientific/statistic support for the engagement with augmented images as a negative influence on the self-image and esteem of those viewing that content, particularly when they have higher peer-comparison tendencies. The peer comparison tendencies was an

important aspect that I got from those sources because I believe it highlights what makes content creators and “influencers” online particularly negative and unethical, in that they are manufacturing a false sense of being a peer with their audience, along with manufacturing the content itself. This exploitation of trust and augmentation of content is motivated by a capitalistic drive for profit and has a decidedly negative effect on the content consumers, not just in that they are buying products that have been misrepresented, but also that their expectations and social pressures are shifting as a result of augmented content from the creators.

I think one of the most useful sources I found after that first bibliography was the 2011 “Progressive embodiment within cyberspace: Considering the psychological impact of the supermorphic persona” philosophy paper by Young and Whitty. This was useful because it helped me see a more structured philosophical take on the self-image topic, which helped supplement the more social phenomena and psychological sources I had found. This source was more largely focused on the engagement with virtual personas and embodiment in the form of avatars online, but the discussion of the idealized versus fantasized personas was one I was excited to apply to my topic. I enjoyed getting to extend their argument and view it in this context of social media and augmented imagery because I think that is a scene perfect for that style of commentary, but there was nowhere near the level of image augmentation or virtual personas on social media sites in 2011.