

A Disorder in Disguise: TikTok Exploits Social Dependency in 12- to 25-year-old Female Powerlifters through Glamorizing Eating Disorders

***By Allyson Najera, Irvine Valley College
Mentor: Emily Liu and Chris Loeffler***

Abstract

Human ancestors evolved to be socially dependent because it has positively influenced survivability by increasing capacity to obtain food, adapt physiologically, physically, and behaviorally to new environments. This social dependency embedded in our species history is satisfied today through social institutions and socialization modes, such as educational institutions, family environments, work, and social media (Schuen). Our homeostasis motives hold the purpose of keeping ourselves at a stable state to survive and reproduce, but due to technological advances, these motives have created a threat to 12- to 25-year-old female powerlifters' health. There is a growing issue of TikTok media manipulating human social dependency to gain profit by promoting eating disorder media to teen and young adult female powerlifters. I conducted a meta-analysis on literature focusing on health and fitness, human evolution and socialization. Additionally, I set up a descriptive content analysis on 300 TikTok videos targeted towards teen and young adult female powerlifting audiences to quantify the impact of the filter bubble on this vulnerable group. There is a direct correlation between powerlifting media and 12- to 25-year-old female powerlifters being endorsed into eating disorder tendencies. This paper demonstrates TikTok's usage of adaptive mechanisms by establishing social groups and group pressure through filter bubbles, creating harmful mental consequences, and furthering stigmatization on seeking help for eating disorders. To combat this issue, private companies should be required to have targeted advertisements on their social media platforms like TikTok promoting online dissonance-based eating disorder prevention programs to 12-to-25-year female powerlifting audiences.

Introduction

Human social dependency is an evolutionary adaptation that has been manipulated by social media companies and has developed generations of eating disorders (ED) through engulfing a vulnerable community right under our noses. Today, we are highly influenced by those who surround us. The brain continues to grow until the age of 25, and our social environment has a big impact on our brain development throughout the adolescent years. It encourages thoughts and behaviors that help form a foundation for the rest of an individual's life. With social media becoming a focal model of our socialization environment, our dependence on social dependency heightens the negative effects on mental health that come from social media use. As a powerful entity that has kept our species surviving, our homeostasis motives have had the intention of keeping ourselves at a stable state to survive and reproduce, but due to technological advances, these motives have also created a disaster for 12- to 25-year-old female powerlifters. EDs hold a strong stigmatization, and there is a large unawareness of this mental health problem. Social media provides a platform for this disorder to be sheltered, grow and strengthen a community that supports an unhealthy lifestyle that can have negative physical and mental effects for years. Female teens are 90% more likely to have EDs than teen males because of the social pressures seen throughout history and even to this day to fit a specific physical criterion (Polaris Teen Center). In another study it was showcased that college women are one of the highest risk age groups to have an eating disorder (Serdar). It was found powerlifters who are individuals who do three main compound lifts that exercises multiple muscle groups such as squat, deadlift and bench press, are more prone to eating

disorders than casual exercises (C. Brooks et al). This powerlifting group has the highest potential to get an ED, because sports focus on physical appearance, diet, and constant body change through efforts of cutting and bulking (Polaris Teen Center). TikTok is the second most popular social networking platform in the U.S. from Fall 2012 to Fall 2021, and proves to be a significant player in contributing to ED advancement through socialization in teen and young adult female powerlifters (Statista). Populations high at risk for EDs are higher at risk for problem internet use which increases the likelihood of chronic exposure to ED media and leads to negative influence upon exercises, confidence, etc. (Quesnel). TikTok takes advantage of young female powerlifters' social reliance by fostering eating problems. This is a problem because TikTok is generating social divisions and group pressure through filter bubbles, creating harmful mental consequences for past, current, and future generations of female teen and young adult powerlifters, and furthering stigmatization of seeking help for EDs. Social dependency reliance may be seen in our ancestors, currently in our social institutions, and in the rewired socialization model via TikTok. To address this issue, governments should pass legislation that allows greater control over private social media corporations, to uncover the logistics behind algorithmic methods, and educate powerlifting users about mental health and resources when keywords related to EDs are searched on social media platforms.

Socialization for Humans: Past, Present and Future

As social beings, humans have a centered way of life, with socialization being a prime factor for our species' success. Because humans rely on others to meet their social and psychological needs to develop successfully, they have created a society that emphasizes collaboration and teamwork within social groups such as family, friends, school peers, and vocational work (Walker). This social dependency can be observed in our ancestors, presently with the purpose behind social institutions, and rewired socialization models like TikTok, a social media platform which facilitates the potential for ED in the teen and young adult female powerlifting community. To better understand the ways TikTok has exploited this crucial evolutionary adaptation, first it needs to be established how EDs are more prone to the high-risk population of powerlifting teen and young adult females.

An ED is defined as a mental disorder that is unlike any other mental health illness, as sociocultural variables play a significant part in the development of them, and genes (Friero Padín). Body dissatisfaction has been demonstrated to precede the emergence of ED in young women, and it is a strong predictor (Friero Padín). There is a widespread misperception that ED is a choice. EDs are significant and frequently deadly illnesses characterized by substantial disruptions in people's eating practices, as well as related thoughts and emotions. A preoccupation may also indicate an EDs with food, body weight, or appearance (NIH). These EDs include binge ED, anorexia nervosa, rumination disorder, bulimia nervosa, binge ED, and avoidant/restrictive food intake disorder. Throughout history, there have been many models and theories formulated to explain the evolution behind these EDs, which all pertain to social and genetic backgrounds. The reproductive suppression hypothesis, which includes the parental manipulation model and kin selection theory, sexual competition hypothesis and flee famine hypothesis. All these models share a common element: EDs are created through responding to a social and/or hormonal change, which the mind considers a "threat" (Kardum). As seen through all species, we all share one common goal of surviving and continuing our species. With changing environments, new adaptive reactions are enabled to fulfill this motivation and be successful in achieving fitness. With this being said, many evolved mechanisms are adaptive reactions translated as dysfunctions throughout history. An example would be having a fever. Its symptoms are not favorable, including headache, chills, muscle aches, weakness, etc. But these symptoms are actually due to the body trying to combat infection (Kardum). Similar to fevers, adaptive mechanisms even include mental disorders such as anxiety, depression, and EDs (Kardum). Many teens and young adult females undergo hormonal changes due to puberty and social changes due to entering new school environments. With change, the mind immediately attempts to mediate the shift away from homeostasis, often resulting in tendencies that can have negative effects, but generally a positive intention. When there is a lack of correlation between reaction and

circumstance, it is a clear indication of a negative dysfunction of a psychological system with inappropriate intensity and length, such as EDs. With that in mind, teen and young adult females are susceptible to EDs, since the powerlifting sport is focused on body physique, tracking diet, and constant weight changes. This results in many similar mental effects as EDs, such as body dysmorphia, constant dissatisfaction with the body and preoccupation with food. These characteristics formulate a sport that can further ED thoughts and tendencies. It is clear that female teen and young adult powerlifters can be more susceptible to EDs especially when their social dependency is utilized by social media private companies.

Social dependency is an adaptation that has flourished under changing environments and food security over time to fulfill reproductive success. According to research published in the journal *Nature*, when humans' primate ancestors shifted from searching for food at night (to utilize darkness as protection) to carrying out its functions during the day, being gregarious became a critical strength (Cohut). All factors that promote reproduction are positively influenced through socialization, such as fewer negative thoughts correlated with isolation, greater ability to get food, and ability to adapt physiologically, physically and behaviorally to extremely altered environments (Scheun). Human primate ancestors lived primarily in communities called "bands" or "troops" where there was a social hierarchy in place including leadership and were active during the day (Larson). Examples of crucial social dependency that fulfill the social dependency adaptation of human primate ancestors would be seen through chimpanzees, with large social groups that consist of multi-male and multi-female groupings, and a core structure of bonded males with friendships that last for a lifetime (Larson). Through these groupings, there is greater success in finding food, further utilization of tools, ability to expand territory, and positive mental influence through physical actions that provide emotional support, such as hugging, kissing and even mourning the death of loved ones, which ultimately leads to heightened reproduction success. As brain size and cranial capacity increased with evolving human ancestors, mental health, which is emotional and social wellbeing, has been largely impacted by social dependency (Gorman). Another social grouping that tends to our social dependency and is valuable and seen through our ancestors, would be the mother and child relationship. There are longer gestation periods that enable a strong bond between the mother and child (Larson). This social dependency enables a furtherment of reproduction successes, because the mother teaches the cultural tendencies and how to survive. When this social dependency is unable to be met due to the mother being absent, there is still social adaptation to meet this need for social dependency, which is alloparenting. Alloparenting occurs when the mother is absent or unable to support her infant, and the silverback gorilla takes the place of the mother (Larson). It is clear that humans' primate ancestors have become dependent on social dependency because of the positive influence it has on the factors that progress reproductive success. As past non-human primates evolve into forms that align with today's current human species, this social dependency only grows, proving to be successful for *Homo Erectus* and Neanderthals survival and adaptation to environments with direct examples of community success like Terra Amata, France (Larson). With social environments evolving into mainly central based wandering and settling in closer proximity to one another, individuals were had greater success in manipulating environment to their species survival advantage, through creating new forms on technology such as Achaean tools and Mousterian tools, build more stable dwelling structures, trade, and utilizing fire (Larson). Social dependency has been embedded in our species history and as our species evolved this developing dependency has remained consistent even today.

Social dependence is not something we grow out of as we age but an essential part of life in society today (Kelly). We exist in various interdependent relationships, and our present social institutions abide by human social dependency. Throughout history, it is seen that social dependency has progressed our advancements in all realms of the world with new discoveries, unraveling the past, and advancing our knowledge to new heights. As seen with human primate ancestors, food availability and environment are two critical factors that impact our ability to continue our species. Social dependency has allowed humans to utilize new environments, physical and mental changes to their advantage, and has allowed our society to be successful in establishing

structured social institutions that keep order and advance opportunities. There are various examples of this social dependency adaptation that has enhanced our world today and is in place today. Nations employ their schooling systems to educate youth about their place in society, how to socialize, and learn the social standards they will use for the rest of their life including the need for family relationships. This is the first mode of socializing and provides the tools to survive through culturing them, etc. Social institutions today have been shaped by factors that all uncover the value humans hold in social dependency, such as struggle to find stability with those in social power throughout history, the location we decide to live, foods we decide to eat based on our cultural backgrounds, and technological advancements created through building on prior discoveries and utilizing resources by multiple people. For females between the ages of 12 and 25 who are undergoing physical and hormonal changes, social dependency is highly used because, similar to adaptive mechanisms such as flight or fight, it has allowed humans to maintain homeostasis in an unstable environment and increase our likelihood of survival. Overall, it is clear that humans' primate ancestors' adaptation to social dependency has been intertwined in all aspects of our world today, especially through social institutions.

Social dependency is evident and utilized in our rewired social environment on social media sites such as TikTok. With the world today, new technological advancements have taken over much of our world, and platforms that appease the social dependency for humans are of the most successful, such as Facebook, Snapchat, Instagram, and TikTok. By rewiring the main social model to focus on appearance and less physical interaction, TikTok has been able to use this evolutionary adaptation to their advantage. Media on TikTok manipulates the social dependency of humans to reinforce ED thoughts and tendencies in the powerlifting teen and young adult female community. This happens through the formation of communities that reinforce a cycle of endorsement and affirmation to negative social pressures that normalize severely distorted body image (body dysmorphia) and an obsession with appearance and diet.

Defining the Issue

As previously introduced, human dependence on social gatherings has been used by private companies owning TikTok to profit from using pro-ED media to teen and young adult female powerlifters. By creating filter bubbles, TikTok uses human adaptive mechanisms to amplify ED beliefs and tendencies causing negative mental impacts on generations of individuals, and stigmatization of seeking help for EDs.

With new technological advancements in our world being created every day, there are many lasting impacts this progress has on various communities through filter bubbles. In our capitalistic society, the craving for profit and power often overpowers genuine motives, and can be seen with social media platforms like TikTok. The filter bubble, which is designed to increase engagement and screen time with social media platforms that translate into profit for these platforms. Creator of the term filter bubble, Eli Parsier states that the social media platforms “shape how groups of people interact” *by showing individuals media that are to their preference only, creating a social divide between them and those who have differing perspectives* (Schiffer). By grouping individuals by political, social and physical preferences, there is an increase in confirmation bias, extreme unhealthy actions about health (Holocene). This can be seen through the different “FYP” (For You Page) individuals have on TikTok, which is based on their interaction with represented media. Constantly being affirmed of individual bias and having what feels like a “community” back up an individual's viewpoint that consists of other individuals interacting on the same content you like. There is less of an inclination to have an open mindset to see other perspectives, not only online, but in the real world. The information provided on TikTok is not always accurate or fact checked. With communities centered around this information, there are dangers to interacting with this media that can impact users' mental and physical well-being, such as the pro-ED media. Therefore, individuals constantly presented with pro-ED media disguised as “powerlifting” or “self-improvement” media are less inclined to seek help, and more inclined to continue their disorder. In a study to see the impact of exercise motivation on social media platforms on 1076 fitness subjects it was found that

exercise motivation has a significant positive predictive effect on state anxiety and this state anxiety has a significant positive predictive effect on eating disorder (Liu). In another study to see the relationship with adolescents and young adult females exposed to media that emphasized ED behaviors and mental health, 84% of the participants self-reported symptoms of an ED (Fitzsimmons-Craft). Being that pro-ED online terms searched on Google occur about 13 million times annually, and that youth have easy access to this media across the globe, engagement with this content is a direct indicator of facilitating ED behaviors and thoughts to adolescents (Fitzsimmons-Craft). Social media platforms allow communities to be built on misinformation about health and fitness, ignorance about EDs, and a space for EDs to be masked as "powerlifting" media, which endorses and affirms this behavior and reduces the likelihood of seeking help. These social groups created through filter bubbles play a critical role in directly influencing teen and young adult female powerlifters through constantly exposing them to pro-ED media by manipulating a critical part in our evolutionary adaptations: social dependency.

Previous research has correlated specific innocent exercise hashtags or gym inspirational media with endorsing ED thoughts and behavior, and TikTok holds various types of this kind of media on their platform, which have a high potential to negatively influence the mental health of teen and young adult female powerlifters. Powerlifting media, such as "fitspiration" images, which are images designed to inspire viewers to eat healthier and exercise, or microblog viewing, which is social media pages on which "influencers" share small updated content with followers featuring nutritional and exercises-related content, have been shown to be significantly positively associated with disordered eating (Fitzsimmons-Craft). TikTok exploits human social dependency by enabling social pressure so that there is no engagement or interaction with media that contradicts the beliefs of the teen and young adult female powerlifters' social group, which equates to profit. TikTok is successful in fulfilling their purpose of gaining profit as a company by piggybacking teen and young adult female powerlifters which is a group of individuals highly susceptible to social pressures. Teen females are inclined to interact with powerlifting media because it's their passion, but what is done without their awareness is they're signing up to pro-ED media by these disguised tactics from the platform TikTok to gain more profit. Another example of disguised unhealthy media that furthers negative health impacts that manipulate our social dependency would be the "#cheat meal" tag. This tag is the media that presents individuals who consume large amounts of food on designated days/times of the week. Found in a study that identified the problematic nature of cheat meals, the body-related information displayed in the #cheatmeal tag is also particularly relevant to current discussion of muscularity-oriented disorder eating, as it provides evidence for a direct relationship between the pursuit of muscularity and specific rule-driven and goal-oriented dietary behaviors (Pila). As a result, these permissive thoughts about how cheat meals can help in the pursuit of the muscular ideal may help mitigate the affective distress felt during excessive and uncontrolled meal consumption, distinguishing these episodes from the binge/compensatory behaviors seen in typical conceptualizations of disordered eating (Pila). The study's results show that cheat meals are welcomed, as long as they are "earned" and rewarded for going hours of not consuming food prior, and may even be deemed goal-oriented in the quest of muscularity, suggesting underlying illness in this practice, posing serious issues (Pila). With clear psychological correlations with dietary practice in the media, TikTok fails to raise awareness of EDs, resources, and simply generates a social "norm" that has lasting negative mental health effects on the teen and young adult female powerlifting community exposed to this media. This media is constantly singled out due to their vulnerable age, sport, and gender.

TikTok has established a platform that can negatively affect young female powerlifters by stigmatizing seeking help for EDs, by disguising hazardous material as harmless hashtags or inspiring media from "influencers". Within the study previously mentioned, it was found that 84% of adolescents and young adult females exposed to pro-ED media had self-reported symptoms consistent with a clinical/subclinical ED. The most prevalent treatment hurdles were the belief that the problem was insignificant and that one should assist themselves. Most participants agreed that seeking help through contacting individuals through online platforms for support

out of the ED was a smart option (Fitzsimmons-Craft). Through seeking help on social media platforms that have previously endorsed ED thoughts and tendencies because pro-ED media is masked as normal media, rather than going to medical doctors, it is more than likely that individuals suffering from an ED won't be provided with the right support and just be provided information that enables their unhealthy mindset (Fitzsimmons-Craft). Overall, ED behaviors are already consistent with tendencies of having difficulty admitting to having it. With this platform, it has a greater ability to rationalize individuals with ED behaviors and tendencies, get them farther away from receiving the support they need and glorify their unhealthy habits. It is clear that with the majority in the study seeking technology as their main option for therapy, it shows how ED tendencies are intertwining with social manipulation, to continue this trend of keeping ED as a disorder that is a "norm" for self-improvement. By using social inclinations to push users to follow along with those in their community, TikTok provides a safe space for an ED to flourish and not receive support to end it.

In conclusion, it is clear that TikTok has been profiting off of EDs by targeting individuals who are more susceptible to following these behaviors, and normalizing these disorders as harmless media that promotes self-growth through utilizing the social dependency component, we as a species have developed over time.

Examples of Media Endorsing EDs

Through normalizing drastically distorted body image, TikTok media manipulates human social reliance to utilize profit. Teen and young adult female communities who are more vulnerable to social pressures and rely on social dependency due to undergoing changing environments, hormonally, mentally and physically are placed into groups on TikTok that support ED ideas and tendencies due to filter bubbles. With previous research that details specific media that has been shown to progress and influence EDs to audiences exposed to this media another example would be body dysmorphia media. As mentioned before, filter bubbles enable misinformation to be spread and have communities built upon this misinformation that can further exacerbate mental health issues and normalize unhealthy symptoms to EDs, such as body dysmorphia. Body dysmorphia is defined as a condition that causes individuals to become extremely concerned with body self-image, which can cause detrimental mental and physical health (Davis). Those experiencing body dysmorphia regularly face excessive self-consciousness. Because body dysmorphia comprises significant dissatisfaction with one's physique and appearance, those who suffer from it may battle with an underlying ED. Almost serving as a pedestal for the disorder to advance, social media platforms abide by social fears by providing space for individuals suffering with body dysmorphia to connect and maintain this insecurity through normalizing it in the teen and young adult female powerlifting community. A clear example of this normalization and established communities that reinforce social pressures would be in Figure 1 and Figure 2, which is TikTok video by @marita.groven that showcases herself, a female powerlifter, engaging in a powerlifting activity, and the screen fills up with positive comments from teen and young adult female powerlifters about her progress. But she is mentally consumed by thinking through all the positive feedback and even during the powerlifting activity, which is an image of a woman looking in the mirror seeing something that is the complete opposite of her actual size. There are countless TikTok videos that have the same purpose of spreading the "relatable" content through the powerlifting community and on TikTok. As it can be seen with the large amount of engagements through likes, shares and comments, there are many powerlifters going through the same mental struggle. Social groupings can provide emotional support and propel individuals to new heights. However, in this community, the continuous media regarding body dysmorphia, there is no intention to seek help, because it downplays the real issue by labeling the negative mental health symptom of ED as a "relatable" effect all powerlifters experience. Female teen and young adult powerlifters who constantly see this media are less inclined to search for resources to get them out of this mentality, and can even aim to have this mentality fit in with the rest of their peers. TikTok serves as a platform that provides social group support that is continuing an unhealthy mentality through social pressure, and completely erases the positive purpose of the evolutionary adaptation to social dependency for humans by leading individuals into a mental disorder that can

cause death long term. This social dependency established in humans is used to benefit media platforms like TikTok in their purpose of profit, and decreases the likelihood of individuals searching for help and continuing in a negative mental state of an ED.

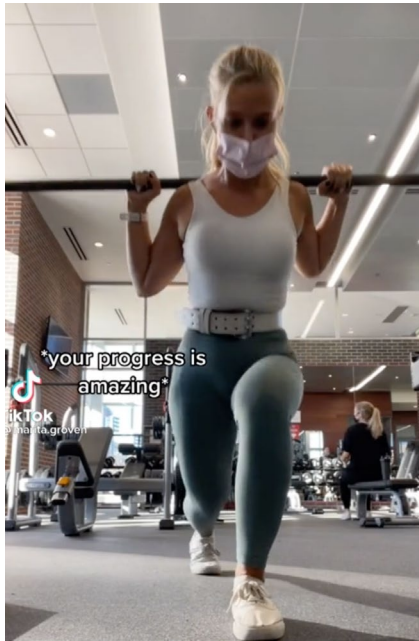


Figure 1: Female is powerlifting whilst motivational messages from others cross her mind and is framed on the left part of the TikTok video.

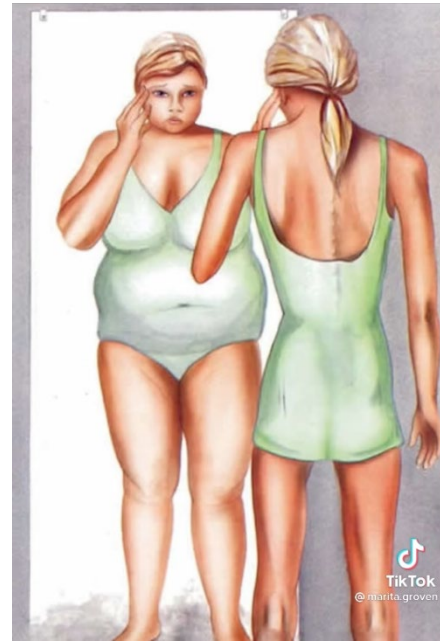


Figure 2: Women experiencing body dysmorphia and only able to see a distorted version of herself within the mirror.

By standardizing the over-obsession with appearance and diet, TikTok media manipulates human social reliance to support ED beliefs and inclinations in the powerlifting teen and young adult female community. EDs are evolutionarily linked to the internalization of social pressure caused by beauty standards in many societies, including the powerlifting community. The spread of these expanded aesthetic models on social media raises the danger of the development and maintenance of health issues, such as EDs. An example of the establishment of communities that prioritize social pressure would be the TikTok by @sienamancuso pictured in Figure 3 and Figure 4, which involves “what I eat in a day” media, which consist of “influencers sharing updates with followers to almost keep an agenda about the amount of calories intake, primarily healthy food consumed, and promote the diet by showcasing their body in the beginning of videos to get individuals to want to follow the same regime to look the same. With various TikToks that hold the same format, the supportive engagement by teen and young adult female powerlifters who interact with this media the most, indicate that these “influencers” clearly have a vulnerable audience who hope to be socially accepted. With this media, it provides a solution to feel accepted, by providing the idea of following restrictive diets to attain the body image their community promotes positively. By linking the urge for social acceptance enabled by evolutionary adaptation to social dependency, and bringing solutions to changing physical appearance by dietary regulations, many teen and young adult females are often placed in filter bubbles that hold negative information that formulate mindsets that center around the need for abiding to guidelines placed by media on TikTok.

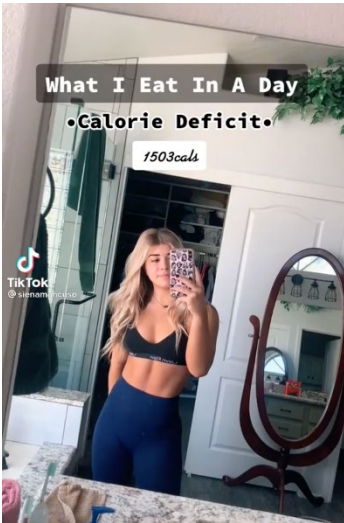


Figure 3: Female powerlifter influences users to follow her diet by showing her physique.

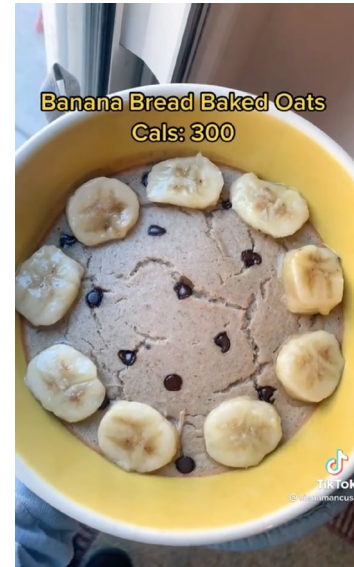


Figure 4: Female powerlifter documents her diet and macros through a "What I Eat in a Day" TikTok.



Figure 6: Male powerlifter on Tiktok shows his physique to promote his diet of "lean bulking".



Figure 5: powerlifter on TikTok posts media about "lean bulking" by documenting every meal consumed, macros, and weight for 8 months.

Another example of Tik Tok media normalizing symptoms of EDs, which progresses EDs in teen and young adult female powerlifters, would be the extreme bulking and cutting culture. In the powerlifting community, it is normal to go through phases of bulking, which is a period of eating in a strategic calorie surplus, which has an aim to increase muscle mass, and phases of cutting, which is a period of calorie deficit, to lose body fat while maintaining as much muscle mass as possible (Preiato). TikTok highlights this extreme culture through including before and after "progress" photos from cutting and bulking. In the TikTok video by @johnnybiggio pictured in Figure 5 and Figure 6, a male powerlifter first shows his body and explains how he got to where he is physically through completing a "clean bulk" to reach the weight of 200 pounds through excessive methods

of tracking diet and weight, weighing out, counting all macros, taking photos of every meal consumed, and tracking his weight everyday for 8 months. The engagement is primarily by powerlifters and indicates positive feedback through comments, likes and shares, endorsing Johnny’s dedication to keeping consistent with his goals, and completely disregarding the extreme efforts he took on that highly correlate with symptoms of an ED. Through TikTok, powerlifters are endorsed to go to excessive efforts to achieve a physical aesthetic, through the masking of a real ED as “progress” or “inspirational” media.

Often media promotes that physical changes provide mental liberation from mental disorders, such as the TikTok video by @meiravwe pictured in Figure 7 and Figure 8, where a female showcases her “before” lifting photos and titles them as “145 lbs and depressed”; the video continues through her lifting and ends with an “after” photo titled “135 lbs and strong”. This TikTok is again, like previous media, given positive feedback by a primary teen and young adult female powerlifting audience. This transformation is a feat, but there is an underlying issue that isn’t being addressed. How can enabling a physical appearance to change body weight through powerlifting shift a negative mentality to a positive mentality? With this mentality, it can lead to extreme efforts to change physically when an individual’s mental health isn’t all right. It can have detrimental mental effects, because it disregards the genuine values of individuals for who they are on the inside.



Figure 7: Female powerlifter shows her physique before powerlifting, tilting it “145 lbs and depressed”.

This normalization of this incorrect perspective further endorses ED thoughts within the powerlifting community by the added social pressure. Social comparison on social media generates body dissatisfaction in users when they realize they cannot achieve the generalized ideal within the powerlifting female community (Friero). The use of social media creates three effects: media group pressure, encouraging poor body image, and necessitating social-health intervention and preventative measures for probable ED. The usage of social media was linked to lower self-esteem and satisfaction, a negative body image, and an increase in depressive behaviors (Fiero). Sociocultural viewpoints argue that civilizations have diverse body standards that evolve over time. This is the tripartite impact model (van den Berg et al., 2002), which posits that primary sociocultural routes for the transmission of these ideals include the media, peers, and family. In this regard, the rapid increase in social media usage should be considered critical. It is clear that media on

TikTok utilizes the social dependency humans have adapted to gain profit, undermining the mental consequences put on TikTok users through normalizing symptoms of EDs, such as body dysmorphia and

obsession with appearance and diet.

Media that creates a cycle of endorsement and affirmation for ED tendencies and affects not only those who view it, but also those who create it. For example, in Figure 9 TikTok influencer @melstewyyyyyy, a female powerlifter entails her experience with creating fitness and diet related content while going through an ED. She displays various images and videos of herself at an extremely low body fat percentage doing extensive amounts of exercise, and while in this negative mental state, rather than being influenced to seek advice or help, she was affirmed of her behavior with an audience that felt inspired to be just like her.

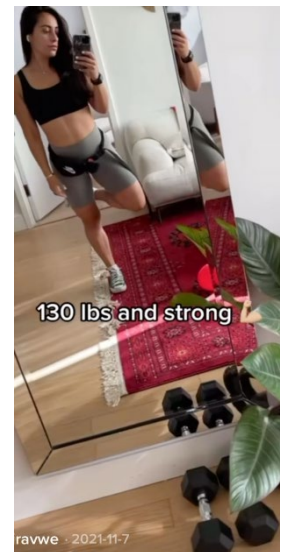


Figure 8: Female powerlifter shows her physique after powerlifting, tilting it “130 lbs and strong”.



Figure 9: Female powerlifter @melstewyyyyyy Showcases the negative effect of creating content on social media during an ED.

Because of the constant affirmation from social groups that she had formed online, she was delayed in reaching actual resources and remained in an ED for years as a result of feeling this intense social pressure. TikTok developed this mental constraint on her thoughts and actions to follow what her audience was encouraging her to do. TikTok was able to house this influencer's ED for years by utilizing this social dependency by creating social pressure. Over time, she entails in other TikTok videos that she recovered and is made aware of her ED by close friends and family, not the community created through social media platforms, which represents the photos at the end of the video where she is exercising herself and not to please others in Figure 10.

In conclusion, this reliance on socializing can be seen in our ancestors, modern social institutions, and rewired socialization models via social media platforms like TikTok, which facilitates the propensity for EDs in teen and young adult female powerlifters.



Figure 10: Female powerlifter @melstewyyyyyy Show the effect of not being influenced by the online community and continuing powerlifting for herself and not to be socially accepted by others.

Descriptive Content Analysis

To gain a better understanding of the impact of how social media private companies use social dependency by creating communities through filter bubbles that create a cycle of endorsement and affirmation regarding ED behaviors and thoughts, I conducted a descriptive content analysis on TikTok media targeted towards female powerlifting audiences.

To get media that was not based on my own "For You Page" which holds media that pertains to what I have interacted with most prior, I logged out of my personal account, and searched for terms targeted towards female powerlifting audiences such as "Girls who lift", "Lifting girls of TikTok", "Girl gym motivation", etc. To be able to see the content that is most interacted with and reviewed by these audiences, I filtered the phrases I put in the search bar to "Most liked". From the 300 TikTok videos I reviewed, 98% of the creators of this content were females ranging in ages from 15 to 25 years old.

From all the weightlifting TikTok videos targeting female audiences, I reviewed various terms proven in previous studies to increase or endorse ED behavior within these videos. Many of these videos were not exclusive to one type of media that influences EDs thoughts and behavior but rather overlapped one another such as showcasing physique and diet. Within Figure 11 I indicate specific examples of the powerlifting media that are on the TikTok platform that include content that have been proven to endorse EDs such as showcasing physique, diet, body dysmorphia, before and after, and microblogs. From the 300 TikTok videos, 95% showcase physique, 42% showcase diet, 46% mention or reference body dysmorphia and 51% showcase microblogs. From this data, it is clear powerlifting media targeted towards female audiences clearly induce EDs.

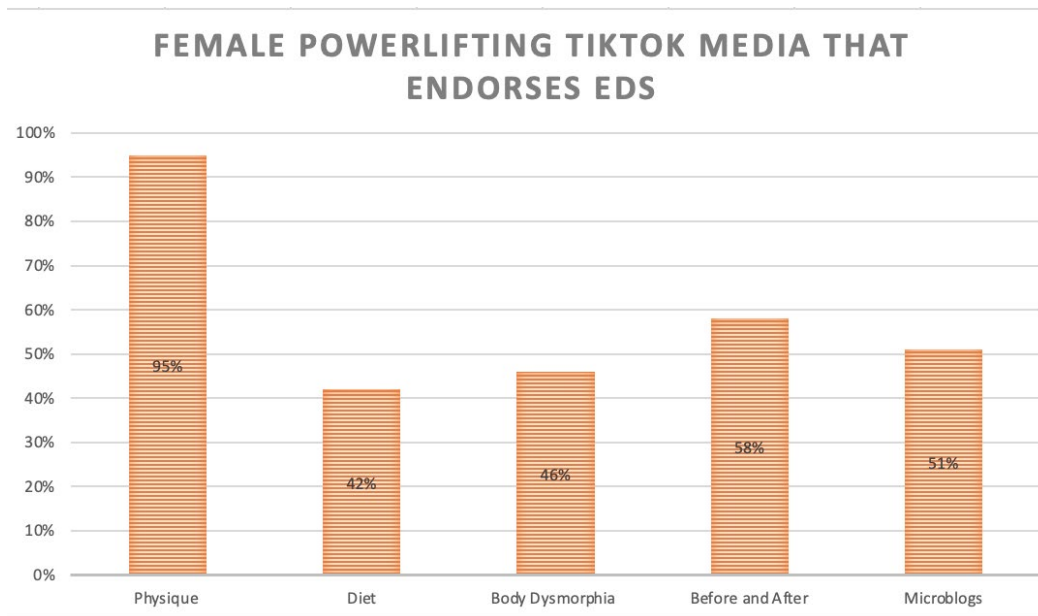


Figure 11: From 300 TikTok videos, large amounts of Female Powerlifting TikTok Media include content that endorses EDs onto vulnerable audiences.

To further understand the influence this media is having on the targeted audiences as well as whether or not this content is being positively received, I reviewed the most liked comments on the 300 TikTok videos reviewed. Most liked comments are comments by audiences that are most related to, bring a sense of appreciation and mutual understanding of what was stated in the comment. As showcased in Figure 12, over 50% of the most liked comments on the TikTok powerlifting media endorsing EDs include positive feedback, affirmation of behaviors, encouragement and a sense of community. To give more specific examples of how each of how positive this feedback was, I will showcase examples of the most liked comment for each specific content type. For media that included physique, 96% of the comments were positive and included feedback like “I want to be just like you”. For media that included diet, 52% of the comments were encouraging of this content and positive, stating feedback like “I’m writing these all down” and “Consider me inspired”. For media that included body dysmorphia, 75% were highly positive and brought a sense of belonging for individuals struggling through ED thoughts, with feedback like “Finally someone who is exactly like me” and “I thought I was the only one”. For Before and After media, 94% comments were extremely positive and affirming of the content within the TikTok stating comments like “If only I had the motivation, you are absolute goals”. In a previous study, it was mentioned how exercise motivation media decreased confidence levels making individuals feel more self-conscious (Fitzsimmons-Craft). As it can be seen with body dysmorphia content feedback, it is clear that this media is decreasing self-esteem, being that the individual is downplaying her capabilities and is aspiring to look just like content creators on TikTok that are influencing the need for physical change in order to achieve mental liberation from life challenges. For microblog media, 59% of the feedback was quite positive and encouraging of the behavior and actions within the content stating comments like “You are so hardworking, I’m tryna be like you for real”. It is clear that through all of these media examples bring a sense of community, belonging to the female powerlifting community. As a high-risk population for EDs because of the variety of social, hormonal and environmental changes occurring which increases the social dependency evolutionary adaptation, it is clear they are being faced with media normalizing EDs thoughts and behaviors, fueling a cycle of valuing ignorance upon EDs and resources and private companies profit from this.

In conclusion, descriptive content analysis of 300 TikTok videos, there is a direct correlation between weightlifting media and 12- to 25-year-old female powerlifters following ED tendencies.

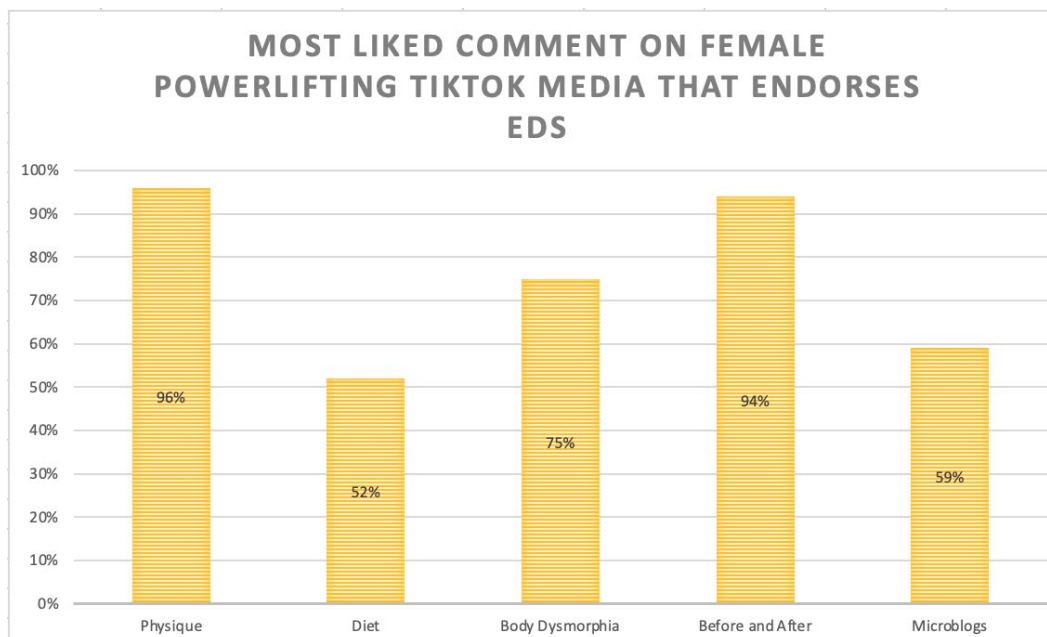


Figure 12: The interactions of female powerlifting spectators TikTok Media, which promotes EDS, is extremely positive and affirming of behavior through the most liked comments on the content.

Putting an End to Private Corporations' Exploitation of our Evolutionary Adaptations

The public exploitation of TikTok users of their social dependency has advanced EDs within the teen and young adult female powerlifting community. This manipulation is so high and at the hands of unjust corporations, it is entirely necessary to consider those of higher authority, such as the government, to end it and begin an era of progress for the sake of teen and young adult youth. Governments should enact legislation that allows for requiring private social media corporations to include targeted ads promoting dissonance-based ED prevention programs to teen and young adult female powerlifting audiences to not only educate this population about mental health but also resources available.

Cognitive-Dissonance theory is a psychological concept that defines the inconsistency between two thoughts that fuel anxiety, depression, and other mental activities considered to be "challenges" (Serdar). For example, an individual who smokes daily has awareness of their daily habit and is also aware of how smoking is bad for their health. If this individual were to use common sense, knowing that smoking is bad they would not continue to persist with this habit. Yet as they continue to smoke, the inconsistency between these two thoughts create stress. To prevent this stress and anxiety that comes with this inconsistency, dissonance-based prevention programs have been created for mental disorders especially eating disorders, through a series of interactive, verbal, written and behavioral activities to change behavior and thought patterns that endorse the negative habits (Serdar). These prevention programs have been proven to be effective and, in a study conducted by Serdaer to see the productivity of online versus face-to-face dissonance-based prevention programs, it showed that there was no difference in providing resources to patients. Therefore, with this issue being formulated from online, utilizing online based dissonance-based prevention programs would bring the ability to have more flexibility and accessibility for this vulnerable population of teen and young adult female powerlifters. By mimicking the face-to-face interactions through communication such as through skype and zoom, prevention programs have the ability to bring more awareness upon ED tendencies and support to this community that

have become constantly endorsed and affirmed of these negative behaviors as “normal” within the social groupings they were placed in through TikTok.

There is a growing need for private platforms that are more public friendly and promote awareness of symptoms of EDs rather than endorsing these symptoms, as this unhealthy media continues to engulf the powerlifting community (Schiffer). Governments have the power to enable private social media companies to abide by regulations that promote the greater well-being for all users. By creating legislation to provide direct awareness and real effective resources like online dissonance-based ED prevention programs, real positive change can occur.

By providing support to individuals who may be suffering from or are highly susceptible to getting an ED, such as being a 12- to 25-year-old female, education and resources must be provided before showcasing media that can further these unhealthy thoughts and behaviors is the best way to combat this mental illness. Individuals of teen and young adult age, female gender, that engage in powerlifting media will benefit from being provided with education and resources pertaining to EDs (Nagata). Through targeted interventions regarding body image and health risks of EDs like online ads will have a greater impact to get through the stigma of reaching out for help in teen and young adult females who engage in powerlifting and bring a new perspective that values awareness and resources for EDs the filter bubble on TikTok has not allowed this community to see.

To sum up, governments should enact legislation requiring private social media corporations to include targeted ads promoting dissonance-based ED prevention programs to teen and young adult female powerlifting audiences, not only to educate this population about mental health but also to make resources available to this population. Through past, present and future, social media has and will influence the world's population in many ways particularly 12- to 25-year-old female powerlifters because of the utilization of social dependency by owners of these social media companies. With awareness and resources of TikTok's negative impact on the teen and young adult female powerlifting community, there is hope to provide greater consideration and thoughtfulness towards all the impacts social media has played towards this high-risk population of getting an ED and bring change to the injustices occurring.

Conclusion

EDs are among the many mental disorders that are not discussed enough. Due to this oblivion, there are many more impacts from this mental illness that should be addressed if there was greater awareness of it. TikTok exploits the social dependency of teen and young adult female powerlifters by encouraging EDs. This is a concern, as TikTok causes unhealthy social pressure through filter bubbles, as well as negative mental implications for previous, present, and future generations of female teen and young adult powerlifters by further stigmatizing seeking help for EDs. Use of human social dependency may be observed in our primate ancestors, currently in our social institutions, and in the rewired socialization model via TikTok. To address this issue, governments should pass legislation requiring private social media companies to run targeted ads promoting ED prevention programs based on dissonance to audiences of female powerlifters 12- to 25-years old in order to not only inform this population about mental health but also the resources available. As an effort to further research on EDs within the female powerlifting community, this research paper analyzes the multitude of social factors that come into play, pertaining to the furtherment of EDs in our world today. With social dependency becoming a focal point in our ancestors and current lives, understanding the utilization of this evolutionary adaptation by new advancements can uncover a counterintuitive initiative by social media platforms like TikTok, who aim to provide a safe space for individuals to build positive endorsing communities. Further research is needed to be initiated to bring more awareness upon the influence of weightlifting media and its effect on the mental health of the 12- to 25-year-old female powerlifting community. Gaining a more holistic perspective carries our species' ability to grow and flourish. All in all, increasing awareness of EDs, having more government legislation that provides resources to this vulnerable population and further research

focusing on weightlifting media and ED behavior, more solutions can be created to support high risk populations of gaining EDs. With EDs, it is more important than ever to execute this step for not only the teen and young adult powerlifting community, but also for our entire world to broaden perspectives and bring awareness to our lives and the lives of others.

References

- Biggio, Johnny. "Unbelievable how far we've come". Sept 29 2021. <https://vm.tiktok.com/ZTdCpeQH4/>
- Brooks, C., Taylor, R. D., Hardy, C.-A., & Lass, T. (2000). Proneness to Eating Disorders: Powerlifters Compared to Exercisers. *Perceptual and Motor Skills*, 90(3), 906–906. <https://doi.org/10.2466/pms.2000.90.3.906>
- Cohut, Maria. "Socialization: How Does It Benefit Mental and Physical Health?" *Www.medicalnewstoday.com*, 23 Feb. 2018, <https://www.medicalnewstoday.com/articles/321019>.
- Davis, Kathleen. "What's to Know about Body Dysmorphic Disorder." *Medicalnewstoday.com*, Medical News Today, 12 Mar. 2019, <https://www.medicalnewstoday.com/articles/309254>.
- Dewey, Caitlin. "Self-Harm Blogs Offer Danger, a Way in: Experts Enter Online Echo Chambers, Hoping to Balance Validation with Behavior Change." *The Baltimore Sun*, Oct 03, 2013. ProQuest, <https://ezproxy.ivc.edu/login?url=https://www.proquest.com/newspapers/self-harm-blogs-offer-danger-way/docview/1439262955/se-2?accountid=39837>.
- Fitzsimmons-Craft, Ellen, et al. "Adolescents and Young Adults Engaged with Pro-Eating Disorder Social Media: Eating Disorder and Comorbid Psychopathology, Health Care Utilization, Treatment Barriers, and Opinions on Harnessing Technology for Treatment." *Eating and power Disorders*, vol. 25, Nov. 6, 2020, pp. 1681-1692. ProQuest, <http://dx.doi.org/10.1007/s40519-019-00808-3>.
- Friero Padín, Paula, et al. "Social Media and Eating Disorder Psychopathology: A Systematic Review." *Cyberpsychology*, vol. 15, no. 3, Sept. 2021, pp. 1–21. EBSCOhost, <https://doi-org.ezproxy.ivc.edu/10.5817/CP2021-3-6>.
- Groven, Marita. "It be like that sometimes". Feb. 6th 2021. <https://vm.tiktok.com/ZTdCgcukr/>
- Gorman, Don. "Maslow's Hierarchy and Social and Emotional Wellbeing." *Aboriginal & Islander Health Worker Journal*, vol. 34, no. 1, Jan. 2010, pp. 27–29. EBSCOhost, <https://search-ebSCOhost-com.ezproxy.ivc.edu/login.aspx?direct=true&db=a9h&AN=54710119&site=ehost-live&scope=site>.
- Holone, Harald. "The Filter Bubble and Its Effect on Online Personal Health Information." *Croatian Medical Journal*, vol. 57, no. 3, June 2016, pp. 298–301, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4937233/>.
- Kardum, Igor, et al. "Evolutionary Explanations of Eating Disorders." *Psihologijske Teme / Psychological Topics*, vol. 17, no. 2, Dec. 2008, pp. 247–63. EBSCOhost, <https://search-ebSCOhost-com.ezproxy.ivc.edu/login.aspx?direct=true&db=a9h&AN=36784903&site=ehost-live&scope=site>.
- Kelly, G. A. (1962/1969). In whom confide: On whom depend for what? In B. Maher (Ed.) *Clinical psychology and personality: The selected papers of George Kelly* (pp. 189-206). New York: Krieger.
- Larson, Clark S. "Our Origins: Discovering Physical Anthropology" *W.W Norton & Company*, 2017, Pg. 208-217.
- Liu, Yixin, and Yuping Cao. "The Effect of Exercise Motivation on Eating Disorders in Bodybuilders in Social Networks: The Mediating Role of State Anxiety." *Computational & Mathematical Methods in Medicine*, Aug. 2022, pp. 1–7. EBSCOhost, <https://doi-org.ezproxy.ivc.edu/10.1155/2022/7426601>.
- Mancuso, Siena. "Happy March!!! New month, new opportunities" Mar 1, 2021. <https://vm.tiktok.com/ZTdCgp7Bc/>
- Nagata, Jason M., et al. "Predictors of Muscularity-oriented Disordered Eating Behaviors in U.S. Young Adults: A Prospective Cohort Study." *International Journal of Eating Disorders*, vol. 52, no. 12, Dec. 2019, pp. 1380–88. EBSCOhost, <https://doi-org.ezproxy.ivc.edu/10.1002/eat.23094>.

- Pila, Eva, et al. "A Thematic Content Analysis of #cheatmeal Images on Social Media: Characterizing an Emerging Dietary Trend." *International Journal of Eating Disorders*, vol. 50, no. 6, June 2017, pp. 698–706. EBSCOhost, <https://doi-org.ezproxy.ivc.edu/10.1002/eat.22671>.
- Preiato, Daniel. "Bulking vs. Cutting: Pros, Cons, and Comparison." *Healthline*, 1 Mar. 2021, <http://www.healthline.com/nutrition/bulking-vs-cutting>.
- Polaris Teen Center. "Teen Eating Disorders: Statistics and How to Help - Polaris Teen Center." *Polaris Teen Center: Premier Adolescent Treatment Center in Los Angeles*, 12 June 2018, <https://polaristeen.com/articles/10-statistics-of-teenage-eating-disorders/>.
- Quesnel, Danika A., et al. "Inspiration or Thinspiration: The Association Among Problematic Internet Use, Exercise Dependence, and Eating Disorder Risk." *International Journal of Mental Health & Addiction*, vol. 16, no. 5, Oct. 2018, pp. 1113–24. EBSCOhost, <https://doi.org/10.1007/s11469-017-9834-z>.
- Saskatoon, Sask. "Social Media is Wrecking Human Socialization." *Star - Phoenix*, Dec 26, 2016. ProQuest, <https://ezproxy.ivc.edu/login?url=https://www.proquest.com/newspapers/social-media-is-wrecking-human-socialization/docview/1852919980/se-2?accountid=39837>.
- Scheun, J., D. Greeff, and J. Nowack. "Urbanization as an Important Driver of Nocturnal Primate Sociality." *Primates*, vol. 60, no. 4, 2019, pp. 375-381. ProQuest, doi:<http://dx.doi.org/10.1007/s10329-019-00725-0>.
- Schiffer, Zoe. "'Filter Bubble' Author Eli Pariser on Why We Need Publicly Owned Social Networks." *The Verge*, The Verge, 12 Nov. 2019, <https://www.theverge.com/interface/2019/11/12/20959479/eli-pariser-civic-signals-filter-bubble-q-a>.
- Serdar, Kasey, et al. "Comparing Online and Face-to-Face Dissonance-Based Eating Disorder Prevention." *Eating Disorders*, vol. 22, no. 3, May 2014, pp. 244–60. EBSCOhost, <https://doi-org.ezproxy.ivc.edu/10.1080/10640266.2013.874824>
- "Social Networks Used by Teens in U.S." *Statista*, <https://www.statista.com/statistics/250172/social-network-usage-of-us-teens-and-young-adults/#:~:text=Favorite%20social%20networks%20of%20U.S.%20teens%202012%2D2021&text=Fast%2Dgrowing%20social%20video%20app>.
- Steward, Melanie. "Do it for you". Aug. 17 2021. <https://www.tiktok.com/t/ZTR9kxuJv/>
- Walker M., Beverly. *Dependency*. <https://pcp-net.org/encyclopaedia/dependency.html>. Accessed 25 Oct. 2022.
- Weintraub, Meriav. "Keep showing up". Nov. 7 2021. https://www.tiktok.com/@meiravwe/video/7027898240402099502?is_from_webapp=1&sender_device=pc&web_id=7088025441315800619