

SOCIAL MEDIA AND SOCIETY: A GENERATION TRANSFORMED AND
TRANSFORMING CONSCIOUSNESS AND CULTURE

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Abstract

The purpose of this thesis is to analyze the scholarly literature regarding social media use and the effects it has on human communication, consciousness and culture. Social media are ubiquitous; thus, our mediated and non-mediated interactions are being affected and transformed because of it. After analyzing myriad studies, it is possible to conclude that the literature tends to surmise the implications of media are either all good or all bad but fail to acknowledge the complexity of the impacts on transforming consciousness and culture and how they exist on a continuum. One dichotomy that appears in the literature is that people are either being selfish or selfless in their motivation for sharing on social media, but not both. In this paper I analyze two case studies that explode this dichotomy. Stoneman Douglas activists and Greta Thunberg and youth climate activists use their social media for activism both in their own self-interest and in the interest of the greater good of society at large. The literature review suggests this dichotomy can only exist exclusively. Yet, integrating and analyzing current examples it is possible to conclude this dichotomy is false. Moreover, the reality of this false dichotomy is exactly what has shaped this generation to be transformed by, and transform, consciousness and culture.

Keywords: Communications, Public Relations, Social Media, Motivation for Sharing, Intergenerational Relationships, Media Ecology, Health, Fear of Missing Out, Sleep, Performance, Emojis, Nonverbal Communication, Sharing, Computer Mediated Communication, Greta Thunberg, Marjory Stoneman Douglas High School

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Review of the Literature

History of New Media Ideologies

“Media, I will argue, are vessels and environments, containers of possibility that anchor our existence and make what we are doing possible,” John Durham Peters, professor at Yale University argues in his book *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (2016). Peter concludes that while media are environments, environments *are* media. Peters argues that media are the very infrastructures which combine nature and culture. Further, he argues digital media is an extension of practices that were deeply rooted by the establishment of civilization. He suggests that “new media” do not take society into uncharted territory but rather challenge us to ponder fundamental questions of our society, such as how we manage our relations and interactions with ourselves, our peers and the world around us. Peters poses an important ideology that stands as a testament to the importance of this thesis and discussion that reads:

Media are not only important for scholars and citizens who care about culture and public opinion, but for everyone who breathes, stands on two feet, or navigates the ocean of memory. Media are our infrastructures of being, the habitats and materials through which we act and are. This gives them ecological, ethical and existential import. (p. 14-15)

This quotation inspired this thesis. This ideology that media are of critical importance to every person is vital because of the way media overwhelms our societal landscape. Understanding the

ecological history of media is critical establish a basis to then further understand its present-day implications on consciousness and culture.

Marshall McLuhan, one prominent media scholar has been studied, quoted and challenged widely and with profundity. *The Legacy of McLuhan* by Lance Strate and Edward Wachtel is compiled of essays by various media scholars who highlight, challenge and discuss the legacy of McLuhan's impact on media scholarship. McLuhan is credited with implementing the rhetoric "the media" into the public sphere, allowing it to become a recognizable and used phrase in public discourse (Strate & Wachtel 2005). One of McLuhan's most famous ideologies is the medium is the message. This transformative idea has been quoted, supported, denied and modified, even by McLuhan himself. This ideology arises in McLuhan's work *Understanding Media* (1964) where he proposes the medium itself, not the content it carries, should be the focus of study. Strate and Wachtel highlight McLuhan's view that media are part of our environment. While they fade into the background of daily life they are constantly influencing and shaping us. McLuhan's investigation into media focused on the relationship between culture and consciousness through his investigative attempt to define the relationship between media form and cognitive effect. Ultimately, McLuhan's ideologies and thought processes regarding media have shaped the landscape of media ecology in a lasting way. Strate and Wachtel concede

The significance of any individual's brilliance is not so much in what it sheds light upon, but what that light enables others to see. McLuhan's light has made visible the invisible environments of media, of communication, culture and technology. He has extended our powers of perception and our capacity for understanding. (p. 11)

Paying homage to the origin of media scholarship is critical in proposing further analysis. While Marshall McLuhan remains a controversial figure in the study of media ecology, it is only right to make note of his vast theoretical contributions and influence.

Contextualizing the history of communication pre-social media is imperative to discuss where society has been relative to where society is now. Joshua Meyrowitz in his essay *From Trial to Global: A Brief History of Civilization from a McLuhanesque Perspective* in the book *the Legacy of McLuhan* paints in broad strokes a concise description of the general history of communication in civilization (2005). He remarks how human civilization has been marked by three major phases—traditional, modern and postmodern. Each of these phases has been linked to a mode of communication; traditional to oral, modern to literate, and postmodern to electronic. Meyrowitz describes how traditional oral societies had thick boundaries separating them from other oral communities, thus, their communication had been the most constricted and limited. Modern societies had a larger boundary, but new internal boundaries within the society allowed them to encounter strangers. Finally, in the postmodern society, as marked by the internet and dawn of social media, the electronic matrix led to permeable boundaries between different nations and social categories, thus giving a global sense of familiarity, ultimately increasing human interconnectivity.

Media scholars varying methods of inquiry allow them to draw different conclusions about the implications of media. Donna Flayhan's essay *Early Medium Theory, or, Roots of Technological Determinism in North American Communication Theory* in the *Legacy of McLuhan* discusses two media scholars, McLuhan and Harold Innis and their varying contributions to media scholarship (2005). Most notably, Flayhan dissects their ideologies about

implications of media on consciousness and culture. Flayhan clearly defines the reasons for difference in the scholarship:

The main differences between the ideas of Innis and McLuhan are a consequence of their different methods, paths of investigation, ways of looking. Innis' empirical, historical, "dirt research," method led him to investigate the *cultural* implications of communication technologies concerning access to information, power, empires, and monopolies of knowledge. McLuhan's theoretical, literary, "probe," method led him to discuss the effects of communication technologies on *consciousness*—changes in sense ratios, sensory balance, and alterations of the central nervous system." (p. 237-238)

Ultimately, Innis was concerned in his scholarship about the cultural consequence of forms of communication and the interaction between existing social structures and the time and space bias of various forms of communication. McLuhan conversely theorized that our thoughts and ideas (brains) are mere content (thoughts as symptoms) reflecting changes in forms of media that alter our sense ratios and the balance of our central nervous system (Flayhan, 2005). Flayhan concludes that both scholars offer unique contributions to media scholarship. Moreover, there is a transformative opportunity to expand if scholars find a middle ground between the two ideologies.

Malcom Gladwell in his book *The Tipping Point: How Little Things Can Make a Big Difference* (2000) discusses his concept of "the tipping point." This idea encapsulates Gladwell's theory expressing how ideas spread like epidemics. Gladwell defines his own theory as,

...the biography of an idea, and the idea is very simple. It is that the best way to understand the emergence of fashion trends, the ebb and flow of crime waves, or, for that matter, the transformation of unknown books into bestsellers, or the rise of teenage smoking, or the phenomena of word of mouth, or any number of the other mysterious changes that mark everyday life is to think of them as epidemics. Ideas and products and messages and behaviors spread just like viruses do. (p. 7)

When an idea reaches a point of “critical mass,” it is bound to “tip,” meaning its virality becomes unstoppable. Gladwell insists there are three types of people responsible for the tipping of ideas. These people are who he labels connectors, salesmen and mavens. It is critical for an idea to reach the hands of these key players to hit critical mass. Moreover, a sequential vital component of tipping is the idea needs to maintain Gladwell’s “stickiness factor.” This concept relates to the memorability of the idea—playing a vital role in getting people to take action. Gladwell states, “...the hard part of communication is often figuring out how to make sure a message doesn’t go in one ear and out the other. Stickiness means that a message makes an impact” (p. 25). Gladwell’s “tipping point” relates directly to the concept of social media virality. One contemporary example of an idea reaching critical mass and tipping is vaping or e-cigarette use among the younger generation (16-25) who are the basis of the discussion in this thesis. Had the information about vaping and e-cigarettes such as the juul not spread like wildfire over social media, perhaps they would have not had the knowledge of it—possibly leading many of them to not start smoking in the first place. This social trend exploded, leading the trend of vaping to tip. This tip is evident through the multiple cases of confirmed death directly linked to

use, and the public policy that has been shaped and implemented around this issue. This is one of many contemporary, concrete examples of a theoretical concept in the present media landscape.

Social Media and Quality of Life

In the study *Multiple Determinants of Life Quality: the Roles of Internet Activities, Use of New Media, Social Support, and Leisure Activities* (2005) Leung and Lee discuss the results of a study which sought to examine the effects of internet activities, new media use, social support and leisure activities on perceived quality of life. The results of this study conclude that people with strong social support reported a higher quality of life. Further, this study was released around the timeframe when Facebook and other social media platforms were making their way into the marketplace. However, Leung and Lee assert "...many of the social relationships people maintain online are less substantial and less sustaining than relationships that people have in their actual lives" (2005). Analyzing the utilization of the internet for sociability at the dawn of social media sets a basis for comparison. Being aware of the history allows room to comparatively analyze the present-day relationships individuals have with social media platforms and their mediated relationships that consequently form. This study further concludes that using the internet for sociability was found to be positively related to various dimensions of social support. Despite this, a subsequent conclusion was drawn that there was an inverse link between using the internet for sociability and overall assessment of quality of life. Leung and Lee proposed a harmful potential of the internet, stating, "however, the addictive potential of the internet with harmful consequences could silently run rampant in our schools, our universities and our homes" (2005). Looking retrospectively at this assumption, as will be defined later in this literature

review regarding questions of sleep disturbance and fear of missing out, this potential danger has yielded itself a reality.

Dunbar's Social Brain Hypothesis suggests we may naturally form only a small number of very close friends (the support group ~5), with more good friends (sympathy group ~12-15) and about 150 in our active social network of friends and acquaintances. Sutcliffe, Binder and Dunbar use this theoretical framework to investigate the effect of social activity and social media use on social satisfaction and loneliness. One of the main conclusions drawn in their study *Activity in Social Media and Intimacy in Social Relationships* (2018) is social media networks help to maintain real world social networks. They state,

Individuals often use social media to seek and obtain social support (Ellison et al., 2011; Wright & Bell, 2003); however, the nature of support afforded by social media may vary according to the intensity of relationships. Rozzell et al. (2014) in a Facebook 'likes' study, found that social support from weak ties was more prevalent in overall frequency, although responses from strong ties were perceived to be more supportive. Similarly, strong ties were perceived as providing more emotional and informational support than weak ties, in a study of SNS use. (Sutcliffe, Binder & Dunbar, 2018)

This study shows the way media have reshaped Leung and Lee's 2005 ideology which claimed online social relationships were less substantial than relationships in person. This study concludes individuals are actually utilizing social media as a means of perpetuating and sustaining their real-world relationships, and support from real world connections via social

media was considered as greater support. There was no association found with social satisfaction, however. This suggests the positive relationship between frequency of use and social support may not translate directly into satisfaction. Social media's ability to allow individuals to maintain real world social relationships is not directly correlated with increased satisfaction.

Social media's anxiety inducing potential was verified by a 2019 study done by Jones and Silver, *This is Not a Drill: Anxiety on Twitter Following the 2018 Hawaii False Missile Alert*. This study discusses the aftereffects of the eminent ballistic missile threat in Hawaii in 2018 that turned out to be a false alarm. This study utilized big data on Twitter to gauge the levels of anxiety experienced as a subsequent result of this false alarm. The study aimed to identify if false alarms of this nature pose real consequences to the homeostasis of society. Their findings conclude that false alarms of inescapable and dangerous threats provoke anxiety. Moreover, even once the threat is dispelled, the anxiety can be lasting. The quantitative data they provide concludes:

In the most fine-grained analysis, results were consistent with the incubation of threat hypothesis, which states that anxiety experienced in anticipations of a threat will increase in the moments during which one waits for the threat to arrive. Specifically, anxiety increased 3.4% every 15 min until the transmission of a message 38 min later reporting that the initial alert was a false alarm. (2019)

The underpinning implications of this study are vast. The results prove how powerful social media are in shaping society's experience. Further, proving potential these media have in causing adverse physical and mental health effects.

Pittman and Reich further analyze the possible psychological effects social media can have on members of society in their 2016 article *Social Media and Loneliness: Why an Instagram Picture May be Worth More Than a Thousand Twitter Words*. This study investigates Instagram and Twitter in relation to how they affect loneliness. They conclude that image-based social media platforms, such as Instagram and Snapchat, have a positive link with less perceived loneliness. This is due to the ability of images to facilitate social presence. They explain this phenomenon in simple terms:

Naturally, then, a photo of one's friend making a silly face or eating at a restaurant—even more so if it is a video and his or her voice is audible—is more likely to signal the brain that the friend is really there. (Pittman & Reich, 2016)

This auditory and visual combination stimulates multiple senses; therefore, it is understandable how these social media interactions can facilitate social presence. This study utilizes the theoretical framework of the Uses and Gratifications approach, a framework for approaching the study of media which assumes that consumers are active in their choice of media and they engage with specific technologies to fulfill specific needs. This study shines a light on the way photo or video messages sent via social media have the potential to “recreate the intimacy of social presence,” therefore potentially mitigating the symptoms of loneliness (Pittman & Reich, 2016).

Addiction to social media is also a possible outcome stemming from widespread adoption of these networks such as Instagram, Facebook and Snapchat. According to Sheldon, Rauschnabel and Honeycutt in *The Dark Side of Social Media: Psychological, Managerial, and Societal Perspectives*, the plausibility of enjoyment felt through using social media can increase the likelihood of developing habitual patterns of use, thus in turn causing high levels of addiction (2019). According to He, Turel, and Bechara (2017), social media addiction includes the following symptoms,

Salience (preoccupation with the behavior), mood change (performing the behavior to relieve or reduce adverse emotional states), tolerance (increasing engagement in the behavior over time to attain initial mood modifying effects), withdrawal symptoms (negative feelings and discomfort when the behavior is reduced or prohibited), conflict (putting off other activities as well as one's own and others' needs because of the behavior), and relapse (unsuccessfully trying to cut down or control the behavior). (Sheldon, Rauschnabel and Honeycutt, 2019)

There is an immense amount of plausible danger when individuals are trying to mitigate negative moods through social media use where the likelihood of social comparison is high. Social comparison often leads to negative evaluations of the self, compared to others. Thus, highlighting the potentially dangerous nature for this cycle to foster an endless stream of negativity when the original action was seeking relief.

Social Comparison and the Fear of Missing Out

The nature of social media facilitates the possibility of social comparison. This concept as it relates to relative happiness is explored by Chae in the study *Reexamining the Relationship Between Social Media and Happiness: The Effects of Various Social Media Platforms on Reconceptualized Happiness* (2018). The study was done in Seoul, South Korea and examines the relationship between social media and happiness. The study analyzes a more comprehensive list of social media networks and questions the effects on a reconceptualized definition of happiness, concluding only relative happiness was applicable to the study. Chae draws on other scholarship to express the plausibility of the inherent nature of social media leading to comparison:

Comparison with similar others can be made with just one click, and because of the asynchronous nature of online communication, people have more time to present the self in more ideal ways than reality would dictate. (Verduyn et al., 2017)

A critical underpinning to acknowledge is social media have the ability to foster new perceptions about others, these may be reality or an illusion, but they *become* reality. As Sheldon, Rauschnabel and Honeycutt underscore,

The widespread use of digital editing has expanded from public content such as advertisements and magazines to private use in personal social media

accounts...A variety of computer programs and apps allow for endless manipulation of images to the point that the image the audience sees does not resemble the actual photograph. Techniques such as airbrushing can remove any flaws on a face or body. (62)

This addresses how society consumes images of augmented reality on social media and accept them as what now takes the place of reality. A key finding of the study suggests conclusions that are contradictory to each other. This finding suggests that Instagram leads to social comparison due to its vivid visual cues, but LinkedIn leads to social comparison due to its lack of visual vividness. This dichotomy seems fundamentally implausible; however, it is possible both of these statements can exist simultaneously and be valid. Instagram was positively associated with comparison behavior on social media due to its enablement of “immediate sharing of one’s happy moment images (Stapleton et al., 2017),” this provides information which facilitates social comparison (Chae, 2018). An important distinction found through this study that social comparison is related only to the relative part of happiness. The ultimate conclusion of this study is comparison on social media does not influence individuals’ fundamental attitudes towards their life. Further, social media may only be linked to negative effects on happiness through social comparison, and that otherwise, social media may have the potential to increase happiness.

The highly comparative nature of Instagram was acknowledged by the company themselves. In November 2019, Instagram implemented a new feature that does not allow users to see the number of likes on other users’ posts. Users can still view how many likes they have on their own posts, but not on others. This encourages “liking” content that is authentic simply because an individual enjoys it. Instagram’s CEO Adam Mosseri said removing likes was “about

creating a less pressurized environment where people feel comfortable expressing themselves” (Meisenzahl, 2019). This highlights the acknowledgment by the owner of the platform of the power social media has in affecting mental health enough to change their policies and platform.

The comparative nature of social media in light of horrific events such as mass shootings can be analyzed to assess whether or not coverage on these media can lead to an increase in these crimes. Kristina Lee in her article *Mass Shootings and Media Contagion Theory: Social Media's Influence on Frequency of Incidents* addresses the question of if there is a positive correlation between the spread of mass shooting news on social media platforms and the increase in these crimes. Ultimately, through analyzing three different mass shootings, Columbine, Virginia Tech and Parkland and the different media eras these shootings were a part of, Lee found significant patterns between the spread of mass shootings news on social media platforms and the increase in those crimes. According to Meindl and Ivy, 2017, the “media contagion” theory “suggests that society’s never-ending news cycle has a “copycat” effect on these crimes” (Lee). Lee highlights the sentiment that,

Researchers have also found that shooters are attracted to media’s ability to easily facilitate fame. The combination of the narcissistic tendencies of these shooters and heightened media coverage seems to have assisted in the increase of these crimes. (Lee)

An example that highlights this fame seeking behavior is represented through the Virginia Tech shooter who stopped in the middle of the shooting to “mail a confession package to NBC News” (Lee). Moreover, Lee states, “...behavior reveals just how desperate he was to become

recognized within the public eye.” Ultimately the overarching conclusion from this study and comparative analysis of three different mass shootings during three different media eras marked the spike in mass shootings after 2011’s social media surge. Lee found “evidence from an archive then showed that shootings tripled in numbers around the same year that social media use skyrocketed” (29). Social media can be viewed as at least one responsible factor effecting the spike in these crimes, although the degree of its effect is beyond the scope of the present study. In the case of the Marjory Stoneman Douglas High School shooting in Parkland, Florida, the mainstream coverage diverged greatly from previous shootings such as Columbine and Virginia Tech. This is due to both the changed nature of the media landscape and the advocacy by students to refocus the narrative of the mainstream media coverage.

The fear of missing out, commonly referred to as FoMO, can be a subsequent result of social media usage. It is important to note that the relationship between FoMO and social comparison can be understood as bidirectional and interrelated. Seeing positive portrayals of other’s experiences on social media can lead individuals to compare their experiences, leading to feelings of missing out. Feelings of missing out can consequently lead individuals to compare their experiences to others. The 2016 study *Fear of Missing Out: Relationships with Depression, Mindfulness, and Physical Symptoms* by Baker, Krieger and Leroy explores FoMO fairly comprehensively. This study sought to examine how the fear of missing out relates to, affects and is affected by social media and three broad areas of mental and physical health: depressive symptoms, mindful attention and physical symptoms. The results of this study reveal that FoMO was positively associated with time spent using social media. Moreover, experiencing higher levels of FoMO was associated with less mindful attention and more depressive and physical symptoms. Baker, Krieger and Leroy attribute these conclusions to the idea that,

The relationship between FoMO and poor health, in part, can be explained by the suggestion that modern technologies have changed several facets of the human experience and that digital communication mediums can impair self-reflection and degrade well-being. (2016)

This study serves as a vehicle that encapsulates how conditions of the mind, as a result of our physical environments, translate into qualities of physical health. Thus, distinguishing that there is a causality between the brain and the body. Therefore, activities humans engage in, such as social media use, should be considered in light of how they will affect overall health and well-being. According to Sheldon, Rauschnabel and Honeycutt,

Beyens et al. (2016) argued that constant access to social media further feeds adolescents' FoMO. As a result, studies have found that teens may lose sleep because they feel a constant need to use media, reportedly keeping their mobile phones by the bed and under their pillows in order to avoid missing messages at night. (Lenhart, Ling, Campbell, & Purcell, 2010)

This captures a glimpse into the severity of how fear of missing out has a cascading effect into other areas of physical and mental health, highlighting the importance of analyzing these effects.

Social Media and Sleep

The study of social media usage effects on sleep is an important and critical area of analysis. Haripriya, Preetha, and Gayatri Devi make a general contribution to the question of does social media affect sleep in their 2018 study *Effect of Mobile Phone Usage Before Sleep* by discussing the general way mobile phone usage before sleep affects sleep quality. They conclude excessive use of mobile phones, especially before sleep affects the quality and duration of sleep. Overuse of these devices in the nighttime can lead to daytime fatigue. They attribute this to mobile phone addiction, to which they remark may not even be recognized, asserting:

Research suggests that media use has become such a significant part of student life that it is “invisible,” and students do not necessarily realize their level of dependence on and/or addiction to their cell phones. (Haripriya, Preetha, and Gayatri Devi, 2018)

The excessive use of mobile devices before bed can also be linked to the fear of missing out. An explanation for this as outlined by Haripriya, Preetha and Gayatri Devi is “individuals who are obsessed with their mobile phone do not want to miss any text messages or social network posts, and this might disturb their deep sleep” (2018).

The general importance in understanding how social media use affects sleep has been targeted by other scholars in their research. Levenson, Shensa, Sidani, Colditz and Primack researched this in their 2016 study *The Association Between Social Media Use and Sleep Disturbance Among Young Adults*. This study could not determine a precise link between social media use and quality or duration of sleep but offers insight into the ways which social media has the potential to disturb sleep quality. Three ways social media use may displace sleep include

if an individual stay up late posting to social media, their sleep time may be reduced. Second, social media use may promote emotional, cognitive, and/or physiological arousal, thus keeping an individual stimulated and unable to fall asleep. Third, the bright blue light emitted by social media devices may delay circadian rhythms and affect the production of melatonin. The authors of this study offer a positive suggestion to mitigate the possibility that this will be detrimental to individuals sleep cycles. They state,

...it may be valuable for school and clinic-based education programs to address healthy social media use, as has been done for other health behaviors such as obesity and safe driving. Public health programming and social media education can be used to inform the public of the strong associations between social media use and difficulty sleeping, as well as to disseminate information about evidence-based strategies for improving healthy social media use. For example, social media product manuals could include information on the impact of light emitting devices on melatonin secretion, sleepiness and circadian rhythms. (Levenson, Shensa, Sidani, Colditz & Primack, 2016)

This suggestion highlights the idea that knowledge is power. Being knowledgeable about the effects of the habits an individual is actively partaking in can be the first step in practicing healthier habits. Questioning the effect of social media on transforming consciousness and culture stems from a basis of wanting to know how these habits affect us, therefore producing the possibility that we can reclaim our power in how we utilize them. “The significance of any

individual's brilliance is not so much in what it sheds light upon, but what that light enables others to see" (Strate & Wachtel, 2005).

Woods and Scott in their 2016 study *#Sleepyteens: Social Media Use in Adolescence is Associated with Poor Sleep Quality, Anxiety, Depression and Low Self-Esteem* sought to understand how nighttime-specific social media use affects sleep. Further, this study analyzed how emotional investment in social media (feeling upset or disconnected when unable to access social media accounts) affected sleep quality. The study concludes that nighttime-specific social media use and emotional investment in social media were both more strongly related to poor sleep than overall social media use. This suggests social media behaviors around bedtime are more critically related to poor sleep than general behaviors during the day. Ultimately, this study found the timing of adolescents' social media use and the emotional connection they have to sites are more important factors than simply the frequency or duration of social media use. As previously mentioned, nighttime-specific social media use is also linked to FoMO. Woods and Scott pull from other research to elaborate on the link between nighttime specific social media use and FoMO. They assert,

...constant incoming alerts create considerable pressure to be available 24/7 and contribute to a fear of missing out (Thomee, Dellve, Harenstam & Hagberg, 2010). Young adults experience considerable anxiety when their access to texting is restricted and report feeling stressed or guilty when they do not reply to a message immediately (Skierkowski & Wood, 2012; Thomee et al., 2010). It is therefore possible that young people struggle to relax at bedtime due to anxiety at missing out on new messages or content. (Woods & Scott, 2016)

This conclusion is critical to recognize the interrelatedness and interconnectivity these various components social media affects and is being affected by, such as sleep, social comparison and fear of missing out.

The implications of nighttime use of mobile devices and social media not only affect the mental health and well-being of individuals but further implicate physical health too. Studer et al., in their 2019 study *Effects of Blue- and Red-Enriched Light on Attention and Sleep in Typically Developing Adolescents* outline the effects of blue- and red-enriched light on attention, alertness and sleep. The study deduces the implication of blue light on sleepiness, alertness and cognitive performance at night. Studer et al., discuss the effect light has on human beings stating,

Light has a crucial impact on the physical and mental health of human beings. Via the internal clock, located in the suprachiasmatic nucleus of the hypothalamus, light synchronizes the circadian rhythm with the natural day-night rhythm. These mechanisms in turn lead to a regulation of the non-image forming functions, including initiation of wakefulness/alertness or sleep. (2019)

They summarize that at night, adults exposed to a high percentage of blue light were reported to experience reduced sleepiness, and increased alertness and cognitive performance/attention. This could be conversely viewed as beneficial for people working or studying at night. However, adolescents most often have to wake up early for school and/or work. Thus, increased alertness at night delaying bedtime is not beneficial. Studer et al., further describe the implications stating,

Screen light also has an effect: Unrestricted access to social media in teenagers' bedrooms was reported to reduce sleep time and had negative effects on daily functioning and mood. Moreover, screen-based media consumption in children and adolescents is known to be adversely associated with effects on sleep health. This effect is possibly related to time displacement, psychological stimulation by media content, and "the effects of light emitted from devices on circadian timing, sleep, physiology, and alertness. (2019)

Social Media Use and Performance

Distractions are ubiquitous. With smartphones constantly at an arm's length, it makes succumbing to the distractions more likely. Brooks in their 2015 study *Does Personal Social Media Usage Affect Efficiency and Well-Being?* investigate the effects of personal social media usage on task performance. Brooks acknowledges other research that highlights the pervasiveness of distractions stating,

A typical worker gets interrupted at least six to eight times a day, which consumes about 28% of a knowledge workers day (Spira & Feintuch, 2006). Research has shown that workers jump to an interruption about 40% of the time instead of focusing on the original task. When they come back to the primary task from the interruption, it can take up to 25 min to return to the original cognitive state (Czerwinski, Cutrell & Horvitz, 2000). (2015)

When looking at these statistics generally, if a worker jumps to a distraction four out of ten times, and each time it can take 25 minutes to recover their cognitive state, that essentially means a worker can spend an hour of a workday fully consumed by distractions. Furthermore, distractions are designed to capture individuals' attention. Brooks highlights how Facebook's notifications are inherently extremely distracting stating,

With the example of the social networking site Facebook, distractions can be initialized by sound (when a user receives a chat message) and by sight (when the web browser blinks colors or changes page titles for receiving a new chat message or relevant posting. (2015)

This highlights the pervasive and intentionally distracting nature of these notifications, thus making it clear why it's likely individuals will succumb to them. Additionally, Brooks sought to distinguish the effect media use has on individuals' technostress and happiness levels through the theoretical lens of the Distraction-Conflict Theory. The Distraction-Conflict Theory provides a theoretical lens which aids in understanding the effect that distractions and interruptions have on performance. The conclusion drawn by Brooks that higher amounts of personal social media usage during professional times led to lower task performance, higher levels of technostress and lower happiness.

Shen and Liu in their 2019 study *Time-Orientation, Social Media Use, and Coping Style: Cultural Similarities and Differences in How and Why College Students Procrastinate* take the question of distractions via social media a step further and apply it to procrastination. This cross-cultural study sought to examine whether and how social media use and coping styles mediate

the effects of time-orientation on procrastination for both Chinese and American students. They sighted other scholarship that indicates "...use of social media for enjoyment and short-term pleasure can therefore become a habit and increase individuals' failure in self-regulation (Heatherton & Wagner, 2011), (Shen & Liu, 2019). The underlying function of the study was to determine how and why college students from China and the United States may differ in their procrastination tendencies. Shen and Liu highlight the one conclusion of their study that states,

Specifically, when college students are oriented towards future goals, they are less likely to procrastinate, because a longer time orientation is negatively associated with their motive to use social media either for entertainment and relaxation, or for information to solve problems. Both types of motives for social media use were found to have a positive relationship with procrastination. These results provide empirical support to existing research that considers procrastination as a failure in self-regulation (Heatherton & Wagner, 2011), as the motive to use social media for entertainment and relaxation reflects a college student's prioritization of short-term emotional gratification over future goals and consequences. (2019)

This finding suggests that even if students are looking to utilize their social media for information it is still positively associated with procrastination. Moreover, the finding suggests that college students are likely to fail to self-regulate and succumb to their desire for emotional gratification through social media use, even when more important tasks are at hand. Furthermore,

Bermudez in *Social Media and Self-Control: The Vices and Virtues of Attention* (2017)

determines further implications of higher levels of social media use. Bermudez concedes,

Besides lower academic performance and lower self-control, higher levels of social media use are also related with a lower ability to filter out task-irrelevant stimuli. In other words, people who report spending more time using social media, like Facebook and Twitter, have also been found to do worse at endogenously controlling their attention. More frequent social media users, it seems, are more distracted people—especially if they use social media in multitasking situations, a trend that is increasingly popular, and increasingly demanded by jobs that require immediate reaction to messages and emails. (p. 67)

The implication of higher and more frequent social media use is that it contributes to greater difficulty with sustained attention and focus. Being unable to filter out task-irrelevant stimuli could and does have adverse effects in professional settings such as school and work. Sustained attention is an essential element to advocacy. Without it, the difficulty in shaping policy around myriad issues would be immense. The importance of sustained attention during period in media when there is an inundation of alerts at all times is critical.

Emojis and Computer Mediated Non-Verbal Communication

Nonverbal communication is a critical aspect of face-to-face communication. Some facets of nonverbal communication as defined by Fairfield in *Social Media and Communicative Unlearning: Learning to Forget in Communicating* (2017) include body language, facial

expressions, tone of voice, indirect communication, intimation, insinuation, double meaning, suggestibility, allusion, irony, subtlety, nuance and even humor (p. 111-112). Paul Ekman is an American psychologist and professor at the University of California, San Francisco who is considered a pioneer in the study of facial expressions as they relate to emotions. In his article *Universal Facial Expressions of Emotion* (1970) he conducted research to deduce the universality of certain facial expressions. The first method of research mimicked a method first utilized by Charles Darwin involving showing “still photographs of faces to people from different cultures in order to determine whether the same facial behavior would be judged as the same emotion regardless of the observer’s culture” (Ekman, 154). The results of this study revealed that for twenty-nine of the thirty facial expressions used, “majority of the observers in every culture chose the same emotion for each face” (Ekman, 154). To conclude that these results would be the same with groups of people who had no had mass media exposure, a subsequent study was conducted with members of the Fore linguistic-cultural group of the Southeast Highlands of New Guinea. Individuals selected to participate had “seen no movies, neither spoke nor understood English or Pidgin, had not lived in any of the Western settlement or government towns, and had never worked for a Caucasian” (Ekman 155). This was to ensure there was no external influencing factor that would shape their interpretation of these facial expressions. During this study these individuals were shown three photographs, told a story about a particular emotion and asked to pick which picture fit the story. These results further concluded there is a pan-cultural element in facial expressions. The only exception was these New Guinean individuals could distinguish fear from sadness, anger, disgust and happy faces but not from surprised faces (Ekman 155). A different approach was taken in the sequential research to prove the theory of universality in facial expressions. In this study, Ekman et al., (1970) took

videos of two groups, one of Japanese and one of United States college students' facial expressions without their knowledge. These videos were filmed in response to neutral material and stress-inducing films of body mutilation. These two groups both showed the same facial responses to stress. Ultimately the conclusions drawn through these studies validate the hypothesis that there is a pan-cultural element in facial expressions of emotion for at least the emotions happiness, sadness, anger, fear, surprise and disgust (Ekman). The underlying implication here is certain facial expressions are universally recognized and understood.

Communication via social networks and online communication consequentially limit these nonverbal cues that are present in face-to-face communication. Media scholars concern for how computer mediated communication affects human communication is growing. Fairfield expresses that the growing preference for electronic over in-person communication leaves room for such communication to omit, "the whole realm of nonverbal expression, nuance, and embodiment" (p.106). Fairfield's main argument is digital technology and social media are becoming less tools and more a way of life and thinking. With this preference, there leaves no room for the "unconventional, imaginative, intangible, unpredictable, indirect, incalculable, and non-preordained" (p. 106) To Fairfield, the meanings produced by nonverbal expression in face-to-face communication are

"...not so many bits of information, but meanings in a sense that can no more be reduced to words on a screen than a human being can be reduced to bare bones without the intervention of death" (p. 111-112).

Thus, reflecting the necessity of nuanced nonverbal communication in our relations as human beings. This realm of communication creates meaning both separate from and contributing to verbal expression.

Emojis are defined as a small digital image or icon used to express an idea, emotion, etc. They serve to add some nonverbal nuance back into digital communication. The 2018 study by Tang and Hew *Emoticon, Emoji and Sticker Use in Computer-Mediated Communications: Understanding Its Communicative Function, Impact, User Behavior, and Motive* outlines why people use emojis. Tang and Hew comprised this study utilizing 51 articles collected from 11 databases in the fields of communications, linguistics and psychology. They conclude that in addition to expressing emotions, individuals utilize emojis to perform pragmatic functions such as assisting message interpretation, avoiding misunderstanding or substituting textual expressions. The study further concludes that the use of nonverbal cues could supplement affective expressions and influence interpersonal relationships. Further, it could strengthen or mitigate the intensity of verbal messages. They concede,

Several studies have shown that emoticon use can influence how people perceive each other. For example, more emoticon use led to higher levels of perceived intimacy in online communications. The senders of friendly emoticons or emojis, such as the smiley face, ☺, were generally perceived as more outgoing and favorable. (Tang & Hew, 2018)

This underlines emojis power in affecting the messages they are attached to and even the people they are being used by. Emojis add some nuance back into computer mediated communication that otherwise would be lost.

Daniel and Camp in their 2018 study *Emojis Affect Processing Fluency on Social Media* further explore how the presence of emojis influence the perception of social media communication. They conclude that messages embedded with an emoji that matches the content of the message were rated as more believable than messages without an emoji. Messages with emojis in conflict with the content of the message were rated as less understandable or believable than messages without an emoji. These effects were consistent even when social media use was controlled, therefore, making it plausible to conclude that even casual users of social media may be influenced by the presence of an emoji in a simple message. This further exemplifies the power emojis have in effecting messages. Daniel and Camp state,

When these symbols are used in CMC, they do not simply replace preexisting words or characters—they may act as their own linguistic unit. In other words, emoticons and emojis do not simply supplement what a user is communicating; they may change the meaning of a sentence all together depending on the selection and placement of the symbol. (2018)

Emoji's power in affecting meaning reveal their importance in serving as a means of trying to portray nonverbal expressions in computer mediated communication. The integration of emojis into computer mediated communication as media have evolved underscore the importance of nonverbal expression in communication overall. While users may not utilize them, their

existence highlights an attempt to add nonverbal nuance back into computer mediated communication where it would otherwise lack.

False Dichotomy of Motivation for Sharing

A 2019 study, *What Drives Virality (Sharing) of Online Digital Content? The Critical Role of Information, Emotion and Brand Promise* (2019) analyzes factors that motivate people to share ads online, typically leading to virality. An important facet of this study is not the ad characteristics that led people to share, but the motivations for sharing. The three broad categories Tellis et al., outline as motivations for sharing are self-serving, social and altruistic. Self-serving motivations drive people to share content that benefits themselves without considering the benefit to others (Tellis et al., 2019). One self-serving motivation outlined is the motivation for self-enhancement, defined as the basic need to feel good about oneself in the eyes of others. Individuals also share content to “foster information sharing by others” and to “learn from others in the future” (Tellis et al., 2019). Individuals also share simply for the joy of sharing. Moreover, beyond self-serving motivations, individuals share content for social engagement purposes, such as feeling like they belong to a group. Finally, individuals may share content for altruistic purposes such as showing concern and empathy for others. This study outlines these motivations for sharing by suggesting these motivations exist in a dichotomy. As will be outlined subsequently through the case studies of Greta Thunberg and climate activists, and by the Stoneman Douglas Students, this dichotomy does not exist due to the reality that people share driven by all of these motivating factors at once. People can utilize their social media sharing and original content to both act in their own self-interest and in the interest of others, simultaneously.

Case Study – Greta Thunberg

Greta Thunberg is a 16-year-old Swedish environmental activist. In 2018 at age 15 she held a sign outside of Swedish parliament that said “School strike for climate” in Swedish. Her remarkable efforts have led her to speak at the 2018 United Nations Climate Change Conference. In 2019, she addressed the United Nations Climate Action Summit in New York. Thunberg is recognized as an influential climate activist and was featured on the cover of *TIME* magazine in May of 2019. On August 31, 2019 Greta tweeted,

“When haters go after your looks and differences, it means they have nowhere left to go. And then you know you’re winning! I have Aspergers and that means I’m sometimes a bit different from the norm. And – given the right circumstances – being different is a superpower. #aspiepower.” (Thunberg, 2019)

A defining feature of Asperger’s Syndrome (AS), according to the American Psychiatric Association (2002) is difficulty with social relationships (Semrud et al., 2010). According to the National Institute of Neurological Disorders and Stroke (NINDS) website, AS is a developmental and autism spectrum disorder. Further, it is characterized by “a greater or lesser degree of impairment in language and communication skills, as well as repetitive or restrictive patterns of thought and behavior.” AS is also classified by “problems with non-verbal communication.” This reveals how Greta’s passionate activism may not be overwhelmingly affected by the nonverbal behavior of others. Her potential difficulty with social relationships as a factor of AS may further be indicative of her being unphased by criticism from others. Though

it has never appeared to hinder her ability to connect with others in support of their shared cause. Tellis et al., define the motivation for self-enhancement as “the basic human need to feel good about oneself in the eyes of others” (2019). The dichotomy of sharing either for self-interest or the interest of others does not apply here because Greta is unlikely to consider how she is perceived. As outlined in her tweet, she even believes being different is her own superpower. Thus, her motivations for sharing are both in her own self-interest reflected in her desire for her own ability to affect change; additionally, her motivations are in the interest of others, sacrificing elements of her youth to directly benefit her peers and fellow human beings by making efforts to keep the planet habitable.

Gladwell labels people who are influential in the tipping of an idea as connectors, salesmen and mavens. He defines connectors as people who have a special gift for bringing the world together (38). Connectors are individuals “who link us up with the world,” and who “introduce us to our social circles” (Gladwell, 38). Mavens, as Gladwell defines them are information specialists. Moreover, according to Linda Price, a marketing professor at the University of Nebraska and a pioneer in Maven research, “a Maven is a person who has information on a lot of different products or prices or places. This person likes to initiate discussions with consumers and respond to requests” (Gladwell, 62). Further, Mavens wealth of knowledge is not what makes them influential in word of mouth epidemics. Gladwell concedes what sets Mavens apart is how they pass along their knowledge for no other reason than they like to help others. The third group Gladwell identifies are the Salesmen. Salesmen are especially persuasive and according to Gladwell, “part of what it means to have a powerful or persuasive personality, then, is that you can draw others into your own rhythms and dictate the terms of the interaction” (83). While these terms Connectors, Mavens and Salesmen may be considered dated

by some, they still hold relevance. Some contemporary terms that outline and define similar roles are influencers, opinion leaders and tastemakers. It is arguable that Thunberg embodies all of these traits. As an opinion leader, she is influential in drawing sustained attention to activism surrounding climate change. She stands as a figure who other activists, young and old, look to for inspiration and a sense of hope.

Sutcliffe, Binder and Dunbar conclude that social media networks help to maintain real world social networks and further, social media are utilized as a means of perpetuating and sustaining real-world relationships (2018). When analyzing Greta Thunberg is it plausible to take this research a step further and conclude social media are allowing her to ignite new cross-generational relationships. One recent example of this is evident in Oscar-winning actor Leonardo DiCaprio's endorsement of Greta as "a leader of our time" (DiCaprio, 2019). DiCaprio is an environmental activist and recently met Greta in California. The caption on his Instagram post reads,

There are few times in human history where voices are amplified at such pivotal moments and in such transformational ways – but @GretaThunberg has become a leader of our time. History will judge us for what we do today to help guarantee that future generations can enjoy the same livable planet that we have so clearly taken for granted. I hope that Greta's message is a wake-up call to world leaders everywhere that the time for inaction is over. It is because of Greta, and young activists everywhere that I am optimistic about what the future holds. It was an honor to spend time with Greta. She and I have made a commitment to support

one another, in hopes of securing a brighter future for our planet.

#FridaysforFuture #ClimateStrike @fridaysforfuture (DiCaprio, 2019)

This activist relationship that blossomed between Thunberg and DiCaprio, which spans generational constraints illuminates the transitory capacity social networking sites have in fostering new relationships. It also gives nuanced meaning to the possibilities—as seen through the cross generational foundation Thunberg and DiCaprio have established. This commitment to support one another takes fuel from the fire of activists from older generations and gives them a newfound fire to continue their activism both through and beside young activists like Thunberg.

Thunberg's efforts have inspired other activists from older generations such as Jane Fonda and Ted Danson. While it is important to acknowledge these individuals come from a privileged place, able to protest and have the financial means to get themselves out of an arrest. Acknowledging this, they are still using their privilege to draw attention to the issue of climate change as a sustained issue in effort to shape public policy. According to the New York Times Fonda moved to Washington in September to protest at the Capitol in a bright red coat to address the urgency of the climate crisis (Buckley, 2019). Fonda at 81 has been arrested four Friday's in a row and intends to continue to protest until mid-January. The influence Thunberg has had in these continuous climate strikes is undeniable. Her credibility is reinforced each time she posts on social media that she attended or is planning to attend a strike. It allows people to see that she is using herself as a vehicle to promote change. Not merely talking about her hopes for change but proving through her actions that her words and intentions hold weight. Thus, reflecting the power Thunberg has as an opinion leader—further revealing the way her social media activism has inspired a new fire in the generation of older activists and others.

In advance of the global youth climate strike in September 2019, Conversation International released a film titled, *Nature Now* featuring Greta Thunberg and writer and climate activist George Monbiot. This video mirrors the anxiety inducing state aforementioned in the study, *This is Not a Drill: Anxiety on Twitter Following the 2018 Hawaii False Missile Alert*. The very beginning of the *Nature Now* video is marked by the sound of sirens as it fades from black to the image of Greta marked by her stating, “this is not a drill.” The tactic of including this siren at the beginning is to induce a small feeling of anxiety in the viewers. This anxiety is not meant to be lasting or inescapable, as marked by the rational and factual statements further made by Thunberg and Monbiot. This momentary feeling of anxiety allows viewers to viscerally link their heightened feeling of anxiety to a fear for the well-being of our planet—perpetuating the notion that action needs to be taken, that this should be a priority. The anxiety is calmed when the sirens stop and Thunberg and Monbiot explain how merely protecting nature is a natural climate solution, describing further practical and reachable ways people can make a difference. Ultimately this video demonstrates ways social media can affect us negatively; through producing anxiety. But in this case, it is used as a vehicle to address a social issue in an effort to promote change. This fear induced as a result of momentary anxiety is not meant to leave individuals hopeless, but rather to address the potential danger that will come if people don’t act.

Brooks 2015 study highlights the ubiquitous nature of distractions. The prominence of distractions via online social networks have shaped our consciousness to always jump to the next alert. On a cultural level, this has conditioned us to jump to the next crisis. This is displayed by the news cycle; most crises rarely maintain longevity in the news. News outlets are quick to ditch the “old news” and report on what is new, it is the nature of the industry. Young activists like

Thunberg are in the process of reclaiming sustained thought and attention through activism which is intent on shaping public policy. Thunberg is drawing attention to the issue of climate change. Her fierce and relentless effort coupled with her sustained focus is demanding others to pay mindful, lasting attention. One overwhelming example of this is the cause Fridays for Future. According to the Fridays for Future website, the movement #FridaysForFuture began in August 2018 after Thunberg sat outside the Swedish parliament for three weeks protesting the lack of action on the climate crisis. This movement went viral and blossomed into a global climate strike from September 20-27, 2019. According to the global climate strike website, there were 7.6 million people involved in this mobilization. Further, individuals are continuing to strike each passing Friday. The Fridays For Future Instagram page currently has 412 thousand followers and the #FridaysForFuture has 591 thousand posts. Due to the nature of these events unfolding in real time, it is plausible to assume these numbers will be outdated and have grown even as this paper is being written. Greta Thunberg has 8.1 million followers on Instagram, establishing her connectivity and influence. This example of sustained attention is powerful, as it started from just one photo of Greta sitting outside the Swedish Parliament. The influence of the few, as Gladwell defines it, has the powerful to influence the many. Thunberg serves as one of the great examples of this as a member of the generation transformed and transforming.

New York public schools gave students permission to leave school to participate in the global climate strike on September 20th, 2019. NYC Public Schools verified Twitter account quote tweeted Mayor Bill de Blasio on September 12th, 2019 stating, “.@NYCSchools will excuse absences of students participating in the #ClimateStrike on Friday 9/20. Students will need parental consent. Younger students can only leave school with a parent” (Jones, 2019). This excuse of absences allows individuals in the generation transformed by, and transforming,

consciousness and culture to advocate in a meaningful and peaceful way for their cause. To some degree, it is known these individuals who truly care for their cause will participate regardless. However, having the support of their educators who are shaping policy around their advocacy is transformative in legitimizing the generation transformed by, and transforming, consciousness and culture's cause through acknowledging the importance of their utilization of their voices.

Nonverbal communication is impossible to mitigate. Emojis serve to add nonverbal nuance to computer mediated communication. As described by the National Institute of Neurological Disorders and Stroke website, Asperger's syndrome is classified by "problems with nonverbal communication." This could be a plausible explanation for Thunberg's refusal to incorporate emojis in her Instagram captions or tweets. As a member of the generation transformed by, and transforming consciousness and culture, it is rare to entirely dismiss emojis—the computer mediated expressions of nonverbal communication from your vocabulary. In this case, when considering these external but still relative factors, this omission becomes understandable. However, despite her lack of incorporation of computer mediated nonverbal expressions, Thunberg's nonverbal facial displays on numerous occasions speak volumes about her internal state. One example of this is visible through analyzing her nonverbal displays at the 2019 U.N. Climate Action Summit. Verbally she states, "You say you hear us and that you understand the urgency. But no matter how sad and angry I am, I do not want to believe that" (Staff, 2019). In various photos from this speech, as seen in Figure 1 and Figure 2, Greta's nonverbal expressions encapsulate immense anger and sadness. Her nonverbal displays match her verbal messages. Further, when analyzing Thunberg's facial displays in a situation where she feels heard and supported, such as standing next to Jane Goodall in Figure 3, admiration and appreciation are seen on her face. Moreover, when looking at Thunberg's nonverbal facial

expressions in Figure 4, the image DiCaprio posted on Instagram of the two of them, their cross-generational relationship founded on their shared goal is prevalent. Both of their facial displays reveal the hope their newfound relationship has given them.

On September 18th, 2019 Thunberg spoke to Congress. Instead of providing her own testimony, she submitted a report by the Intergovernmental Panel on Climate Change instead. On Instagram she wrote in a caption "...Then at 17h ET I will address Members of Congress in the Ways & Means Committee Hearing Room #UnitedBehindTheScience." (Thunberg, 2019). When Thunberg addresses Congress she says,

I am submitting this report as my testimony because I don't want you to listen to me. I want you to listen to the scientists and I want you to unite behind the science and then I want you to take real action. (Reuters, 2019)

This statement explodes the motivation for sharing dichotomy. In this single sentiment Thunberg reveals that although she is a vehicle to amplify the voice of others, she does not desire to use the influence specifically for her personal benefit. She is taking a step back and saying, this isn't about me, it is about the best available science. Her message to Congress is about her goal in getting them to acknowledge the science and unite behind it to shape subsequent public policy. She is trying to amplify the science not her personal voice, as a vehicle to promote change. This reveals her motivation in sharing for her personal reasons which include spreading information and making others aware. This is coupled with her motivation for the well-being of others, she wants Congress to acknowledge the science and shape policy around it so the planet will remain habitable for society. This single act alone is a representation of the complexity of motivation for

sharing, through the actions of the generation transformed by, and transforming, consciousness and culture.

Some of Thunberg's most noteworthy quotes further explode the motivation for sharing dichotomy. At the United Nations Climate Summit on September 23rd, 2019, Thunberg said "The eyes of all future generations are upon you. And if you choose to fail us, I say- we will never forgive you." (Thunberg, 2019) Thunberg's nuanced verbiage in stating "fail us", "I say" leading to "we will" highlights her existence as a vehicle or influencer that carries the message of the collective. This reveals that Thunberg's intentions are not selfish or self-serving but rather in interest of the benefit of the collective generation. This mirrors the intentions of the Earth Guardians who according to their website train diverse youth to "be effective leaders in the environmental, climate and social justice movements across the globe" (www.earthguardians.org). Further according to their website, they have reached a total of 54 million people via Facebook followers, YouTube views, Instagram, Twitter and mainstream media. Their goal through their crews is to have young people ban together representing the heart and soul of their organization. These crews are comprised of "young activists, artists and musicians" who drive action and fuel a "cultural shift toward a regenerative future." This further reflects the interconnectivity this activism creates spanning generational constraints. In this case, the older activists are supporting the younger generation being at the forefront of their advocacy. Earth Guardians Youth Director Xiuhtezcatl Martinez is reflective of this. Martinez currently has 93.9 thousand followers on Instagram. Though Martinez and Thunberg are different in various ways, such as relating to their country of origin, family, ethnicity, and gender identities, they share much in common. Both individuals became activists as children. They are both using social media to lead the fight against climate change by taking on governments, leaders and billion-

dollar industries. For example, Martinez is a member of the 21 youth who filed a constitutional climate lawsuit called *Juliana v. U.S.*, against the United States government asserting that the “government has violated the youngest generation’s constitutional rights to life, liberty and property, as well as failed to protect essential public trust resources” (ourchildrenstrust.org). After a constitutional hearing in Eugene, Oregon Martinez stated, “We are standing here to fight and protect everything that we love – from our land to our waters to the mountains to the rivers and forests” (Worland, 2016). Thunberg and Martinez have mastered using their voices and platforms as vehicles to promote change through means of advocacy even in the face of large governmental agencies. Ultimately Martinez and Thunberg mirror each other as members of this generation transformed by and transforming consciousness and culture through utilizing the transforming technology to begin transforming policy.

Case Study – Stoneman Douglas

On February 14th, 2018 17 people were killed and 17 others were injured at Marjory Stoneman Douglas High School in Parkland, Florida after a gunman opened fire with a semi-automatic rifle. As a result of this heinous event, young student activists banded together and emerged as leaders in the face of adversity. This group of students includes Emma Gonzalez, David Hogg, Jaclyn Corin, Alex Wind, Cameron Kasky, Alfonso Calderon, Ryan Deitsch and Sarah Chadwick, members of the generation transformed by, and transforming, consciousness and culture. Together these student activists formed the political action committee Never Again MSD to commemorate the lives of their friends and peers and teachers that were lost that day. In the wake of this event, these students began advocating for stricter gun laws to enact change, trying to prevent this from devastating other communities like it did theirs. As a result of their

message tipping, their personalities began to go viral in conjunction with their cause. Their Twitter accounts became verified, suggesting Twitter's acknowledgment of the credibility of their words (Wagner, 2018). Emma Gonzalez has 1.6 million followers on Twitter and David Hogg has 999.7 thousand. While these individuals all gained a substantial following, Gonzalez and Hogg have the most significant engagement. Along with their peers, they derived strength from a place of pain and utilized that strength as a means of advocacy. This advocacy entailed utilizing their traumatizing experience to advocate for shaping public policy in an effort to prevent this from happening elsewhere or to others. Their advocacy was enacted in part through their sharing on social media. Moreover, their motivation for sharing in defense of both their safety and the safety of members of their generation and others. This underlines Gladwell's stickiness factor which defines stickiness as the message's capacity to make an impact. In this case, it unfortunately took a traumatizing event to contribute to this message's stickiness, ultimately enabling it to tip.

On March 14th, 2018, one month after the fatal shooting at Marjory Stoneman Douglas High School, there was a national school walkout in honor of the lives lost and in protest against gun violence. Support and dissent for this walkout was mixed. According to the New York Times, "Principals and superintendents seemed disinclined to stop them. Some were outright supportive, though others warned that students would face disciplinary consequences for leaving school" (Yee & Blinder, 2018). Many marches lasted 17 minutes to commemorate the lives lost in Parkland, Florida a month prior. Social media posts from various schools on this day included the hashtags #NationalSchoolWalkout and #ENOUGH. A noteworthy effect this demonstration had on informing policy is regarding admissions decisions by United States universities. Prestigious universities such as Harvard, MIT and Yale made statements in support of these high

school students participating in civil demonstrations that are meaningful. Harvard's director of Media Relations, Rachael Dane stated,

The mission of Harvard College is to provide a deeply transformative liberal arts and sciences education that will prepare our students for a life of citizenship and leadership. Fundamental to our mission is our belief that students have the right to protest peacefully about issues of concern to them. Students who are disciplined for engaging responsibly in exercising their rights and freedoms would not have their chances of admission compromised or their admissions revoked. (Hess, 2018)

These universities supporting students engaging in peaceful demonstrations in support of advocacy and shaping and changing their policy to reflect accordingly is transformative in giving power to the voices seeking change. It reveals the power the cross-generational relationships encouraging advocacy gives to these voices. Further, the power the generation transformed by, and transforming consciousness and culture have in shaping policy that further endorses instilling change.

Later in March on the 24th, the March for Our Lives demonstration took place. The Parkland students led a march in Washington D.C. Their mission, according to the March for Our Lives website, is "to harness the power of young people across the country to fight for sensible gun violence prevention policies that save lives." During the event, Emma Gonzalez gave a speech during which she tried to remain brave as tears fell from her face. During this speech Gonzalez names all 17 of the people who were murdered on the day of the shooting.

Further, after speaking for approximately 2 minutes she maintained approximately 4 minutes of silence. A timer went off and when she broke her silence she stated,

Since the time that I came out here, it has been six minutes and 20 seconds. The shooter has ceased shooting, and will soon abandon his rifle, blend in with the students as they escape, and walk free for an hour before arrest. Fight for your lives before it's someone else's job. (Tognotti, 2018)

When analyzing Gonzalez's facial expressions during this speech, such as in Figure 5, the sadness is indisputable; the corners of her mouth are turned down, her brows are furrowed and there are tears streaming down her face. In Figure 6, during that same speech it is plausible to assess her sadness turns to moderate contempt and anger. It is logical to assess what started as sadness upon deeper introspection turned into anger at the lives lost and the feeling of a lack of policy in place. Thus, reflecting these student's motivation for sharing and advocating for their cause; they lived it, they do not want it to happen again thus underlining their motivation for the self. Additionally, they do not want it to happen elsewhere, to keep other communities as safe as possible through stricter policy, thus, their motivation for others. These two motivations are working simultaneously to foster sustained attention on an issue that has affected the lives of many for generations. This exemplifies how these students turned their tragedy into advocacy to seek a solution and change public policy regarding gun violence.

On March 9, 2018 just a few weeks after the shooting at Marjory Stoneman Douglas High School, The Florida Senate Bill 7026, also known as the Marjory Stoneman Douglas High School Public Safety Act was signed into law by Governor Rick Scott. This bill would ban bump

stocks and raise the minimum age to purchase a firearm from 18 to 21. Scott was quoted saying, “To the students of Marjory Stoneman Douglas High School, you made your voices heard. You didn’t let up and you fought until there was change” (Yan, 2018). This bill being signed into legislation is a powerful example of how advocacy via social media when an individual or a group of individuals have the capacity to extend a message beyond their own social circles, opens the door to shape public policy.

On February 21st, 2018 survivors of the Stoneman Douglas High School shooting took the stage at CNN town hall with their parents and teachers to ask questions of Senators Marco Rubio and Bill Nelson and Congressman Ted Deutch, Broward County Sheriff Scott Israel and National Rifle Association spokeswoman Dana Loesch (2018). They asked direct questions that evoked a tremendous amount of emotion in the wake of surviving their school shooting. Over the course of the discussion, Senator Rubio specifically was faced with a dense amount of criticism for his positions on gun laws. In Figure 7, the nonverbal displays by students, parents and faculty of Stoneman Douglas High School are indisputably representative of feelings of sadness, disgust and contempt presumably because they felt helpless in that moment that their advocacy was not going to be enough to change policy. The response by the audience cheering them on when they expressed their positions highlight support from members of their generation and members of older generations alike. Their facial displays and feelings of lost hope clearly ignited a spark and paved the way for their future advocacy after feeling like their representatives were not going to do enough to support and fight for their cause. Their sense of hopelessness in turn revealed their belief that in order to shape policy around their cause they would need to find a leader who represented and understood their grief. Or, further take matters into their own hands, taking to social media and banning together as a means of advocacy – which they did.

The possibility social media has in fostering cross-generational relationships is evident with the film *Parkland: Inside Building 12* directed by Charlie Minn. Minn is not a member of this generation transformed, but he is a documentary filmmaker who represents the experiences of innocent people in the wake of horrible tragedies. In his documentary about the Marjory Stoneman Douglas shooting, he gives a voice to the people who survived that day and allows them to illuminate the livelihood of the individuals who did not make it out of that day alive. Minn gives a voice to the generation transformed by and transforming and humanizes their experience in a way a traditional media outlet does not. In this documentary he carries the audience through a step by step recount of the six minutes the shooter was active, narrated by the individuals who lived through it. He defines his reasoning for doing so in his director's statement on the documentary website. In it he states,

I am a "victim-driven" filmmaker who tries to humanize innocent victims through the art of film. I try to put a human face on them. The media today has shamelessly given most, if not all, of their coverage to the attention-seeking perpetrators of mass-shootings, like the Parkland killer. For the average person who follows the news, ask them to name the Parkland killer, and they will go 1 for 1, then ask them to name one person shot in Parkland, and they will probably go 0 for 34. I am trying to change this entire dialogue. If the media follows my lead and omits the killers name altogether, I feel innocent lives will be saved in our country since killers will now know moving forward that their name will never be mentioned again. (Minn)

In this sentiment, Minn is addressing the element of social comparison that social media posits in relation to the Media Contagion Theory. As discussed by Lee, the statistics for number of shootings as they relate to different media eras suggests there is a correlation between social media skyrocketing and an increase in these crimes. One plausible explanation for this relationship is what Minn addresses in these killers seeking notoriety and fame. While the Parkland killer's name has been released and his photo plastered across social media, the media coverage to some degree was different than other shootings such as Columbine and Virginia Tech. This can be attributed to efforts of the generation transformed by and transforming consciousness and culture, as well as the individuals who are a part of the cross-generational relationships they have fostered in trying to reshape the media narrative around such a tragic event. As exemplified by Minn in this documentary and the Parkland students, a bulk of the coverage of this event was centered around the students and their schema to end gun violence.

Further, the documentary incorporates real footage that was taken by students that day. The footage is disturbing, but it contextualizes the horror the people who lived through that day experienced. This is something traditional media is unlikely to do, but Minn suggests this is the only thing that will humanize these events enough to motivate individuals to seek change. One troubling reality addressed in this documentary is that many individuals inside building twelve that day thought the gunshots they were hearing were indicative of a drill happening. One teacher, Dara Hass who taught in Room 1216 on the first floor of building twelve states in the film, "when the first shots were heard um, I honestly, I thought it was a drill" (7:43). A student Sophia Delia further states, "...I later found out that she was standing right by the door cause at the time she thought it was a drill. Everybody in the room kind of thought it was a drill..." (9:07). According to Peterson, Sackrison and Polland in their article *Training Students to*

Respond to Shootings on Campus: Is It Worth It? (2015), college campuses employ training strategies to prepare students to respond if there is a shooting on campus. “Some trainings use students as actors, even using pretend gun shots and fake blood” (Fox & Savage, 2009), (Peterson, Sackrison & Polland, 2015). Similarly, high schools employ lockdown drills and active shooter drills that simulate how to respond if there is an intrusion. It is difficult to determine the effectiveness of these strategies, perhaps impossible. Peterson, Sackrison and Polland outline,

To scientifically test the impact of training students, one would need two similar schools in which one student body had undergone the active shooter training and one did not. Then a shooting would need to occur on both campuses to see whether the training mitigated the impact of the shooting in terms of deaths and injuries. Obviously this line of research is impossible and unethical. (129)

While acknowledging the implausibility of ever scientifically determining the effectiveness of these trainings, it is possible to analyze the experiences of the Marjory Stoneman Douglas students and faculty’s experience as survivors of a mass shooting with respect to additionally experiencing these trainings and drills. In the documentary students and faculty outline how initially many of them attributed the sounds they were hearing to be a drill. There are many plausible explanations for this; students could have been experiencing high levels of stress and uncertainty, causing them to attribute a real threat to be a simulation in an effort to reassure themselves of their safety to maintain homeostasis. While there could be many plausible explanations for this attribution, the question still arises as to whether or not these intensive and

realistic drills hinder the ability for individuals to decipher when they are experiencing imminent danger versus a simulation. Moreover, it is possible to question whether these simulated drills foster a heightened state of anxiety in students.

Conclusion and Future Work

This thesis started by analyzing various implications of social media use through the studies of media ecology, health, psychology, and communication. Through reviewing scholarly literature and analyzing them with respect to one another, it is possible to demonstrate implications of social media use on various aspects of the human experience. Moreover, it is possible to conclude through two current case studies, analyzing Greta Thunberg in her climate activism and the Marjory Stoneman Douglas High School students in their gun violence activism that there is not a dichotomy applicable to motivation for sharing on social media. These two case studies reflect the plausibility for two things to be true at once. These activists both shared on social media for their own benefit, but they also shared on social media for the benefit of others. These motivations are intertwined and working concurrently, thus, making it implausible to claim they were doing either one or the other without the acknowledgement of the other.

Furthermore, the activism displayed on social media by these individuals of the generation transformed by and transforming consciousness and culture led to a spark in intergenerational relationships forming in favor of sustained thought and activism with ultimate efforts to shape policy. A preconceived idea exists that there is a split between the younger and older generations on social media, but these case studies disprove that theory. It is actually the opposite happening, these media are bringing generations together. The effort by the generation transformed by and transforming consciousness and culture via social media have passionately demonstrated their commitment to their causes. Thus, forcing policy makers to acknowledge the

human experience, bringing community and humanity together through sustained focus on critical issues.

The breadth of this thesis cannot encapsulate each individual effect of social media on every aspect of the human experience; thus, further studies should focus sustained attention on each effect in greater depth. Moreover, future studies should analyze other examples of intergenerational relationships forming via social media and acknowledge the comparisons. As John Durham Peters once said, “Media are not only important for scholars and citizens who care about culture and public opinion, but for everyone who breathes, stands on two feet, or navigates the ocean of memory” (Peters, 2016). Therefore, with the ubiquity of social media, this issue affects every sentient human being, thus underscoring the vitality in its acknowledgement and purport as a topic of comprehensive study.

Appendix

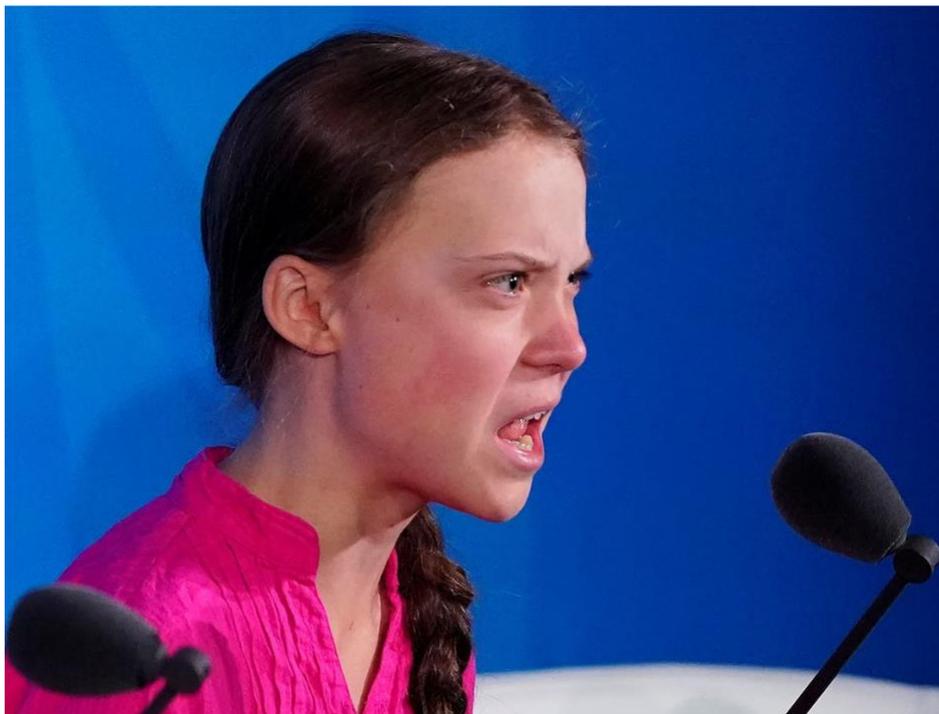


Figure 1: Thunberg of Generation Transformed Facial Display of Anger

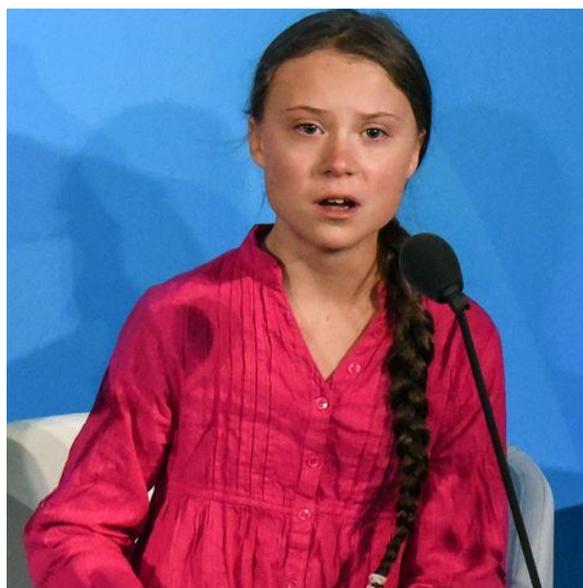


Figure 2: Thunberg of Generation Transformed Facial Display of Sadness



Figure 3: Thunberg Looking Admirably at Goodall Spanning Generational Constraints



Figure 4: Thunberg and DiCaprio Looking Hopeful Spanning Generational Constraints

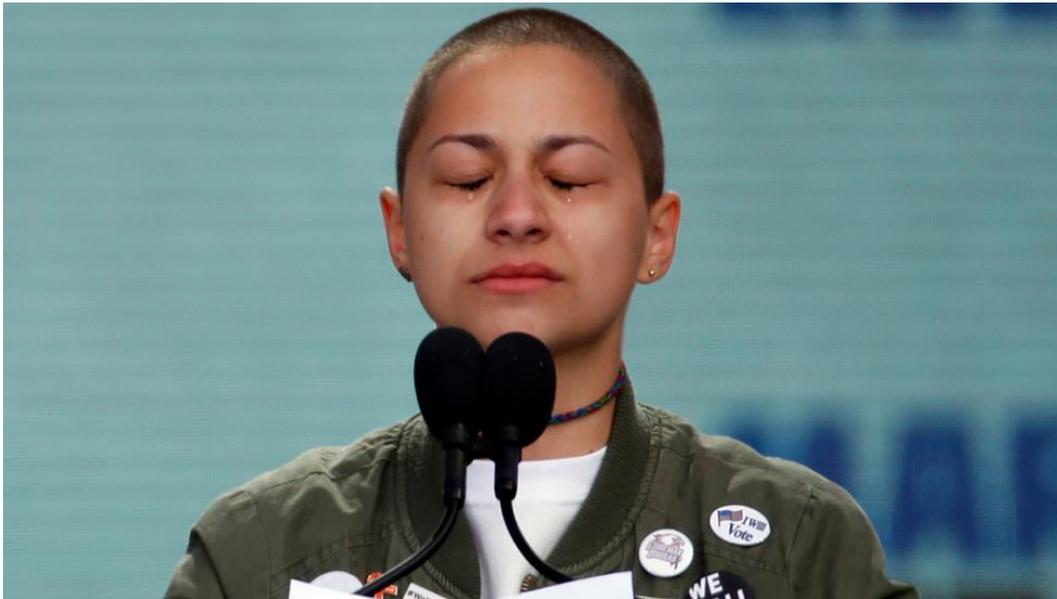


Figure 5: Gonzalez of the Generation Transformed Facial Display Sadness

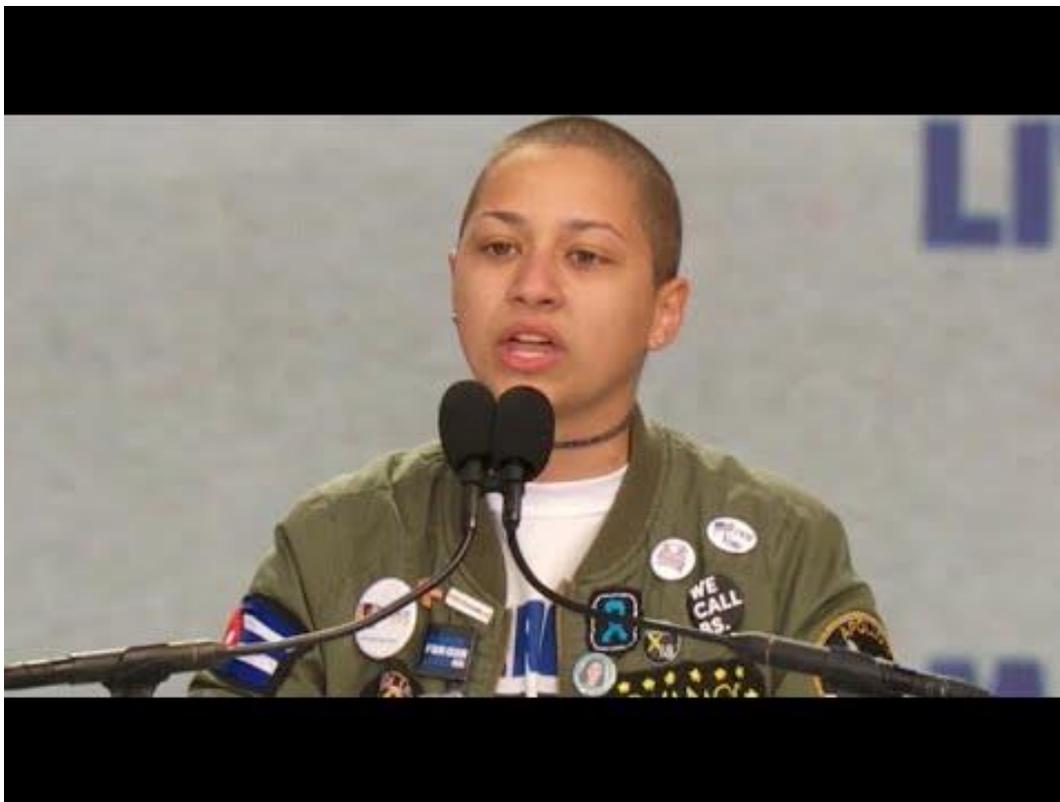


Figure 6: Gonzalez of the Generation Transformed Facial Display Anger



Figure 7: Parkland Students Members of the Generation Transformed with Parents Look at Senator Marco Rubio in Sadness, Disgust and Contempt

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