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**The Simulated Life: A Psychological and Philosophical Examination of Contemporary
Social Media Use of Adolescents**

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Honor Scholar Program Class of 2022

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April 11, 2022

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The Simulated Life: A Psychological and Philosophical Examination of Contemporary Social Media Use of Adolescents

Suppose you were born 50 years ago. You may not have encountered a screen for several years. Suppose you were born today. You would likely encounter a screen instantly. Unlike 50 years ago, adolescents are exposed to screens and social media quickly and frequently. For those born today, it can be difficult to imagine a world without social media, smartphones, and the internet.

Recently, China limited the amount of time adolescents under the age of 18 can spend playing video games. Bans and limitations like this may sound strange to a western audience, but many people are worried about the impact of heavy technology use on adolescents. Young children are learning to take silly pictures on their parents' smartphones at the same time they are learning to speak, which is undoubtedly unprecedented. Based on this new and strange connection between people and technology, one cannot help but wonder what is happening to our brains and, further, what this connection means philosophically for our worldview and existence experience. The increased use of and reliance upon technology are also being explored by psychologists, as there seem to be ties between mental health and technology use. Additionally, technology changes the way the brain works, potentially altering the physical brain structure and impacting mental health and abilities like attention, concentration, and socialization in young people with heavy screen use.

This paper examines some psychological effects of social media use on adolescents and explores the philosophical implications of social media use on our understanding of reality and

its value. The first section describes the significance of new smartphone and internet technologies, and the second section introduces a short fictional case study. In the third section, good, neutral, and negative effects of social media use on adolescents are discussed. The philosophical implications are discussed in the final section.

An Exploration of Social Media and Current Technology Use

Walking into a waiting room, the grocery store, a school, or nearly any other space now has something in common: one can reasonably expect to see others using a screen of some sort. It may be a smartphone, tablet, television, or computer, but people will be absorbed in their digital worlds. People are practically attached at the hip to their pocketable phones. There is near constant access to cameras, entertainment, social media showing what everyone else is doing, and any information one can think to type into a search bar. There is access to images one might otherwise never see, educational resources to learn nearly anything, music, books, films, and more, as well as reviews and commentary on all of these by anyone who wants to share their opinions.

Technology is not new of course. The brain-altering power of current technology is new. Therefore, the way in which people use this technology needs to be examined. This is especially true regarding the near constant connection between adolescents and technology. Some of the ways in which social media use can impact one's brain is addressed in Section 3, but the way people interact with social media and the internet are important to discuss first. Current uses of social media and the internet are significant because this use differs from previous technologies,

like the radio, television, and even books due to the ways in which it is used, the amount of time it is used, and the impact it has on individuals.

The internet is used on an extremely large scale; 90% of people in advanced economies use the internet, and 76% of people in advanced economies own a smartphone (Silver 2020). Particularly for those with smartphones, social media and the internet are always available at the touch of a few buttons, but anyone with the internet can access social media websites. People also use their smartphones for entertainment, work, or anything else imaginable; everything is nearly constantly available. Games, online books, photos, academic papers, blogs, videos, television shows, movies, others' opinions on everything, and more are all easily accessible for anyone with internet access. While previous developments like the radio, television, and books have all provided entertainment and even knowledge, they were also limited as compared to smartphones and the internet. They were able to provide one service, while current smartphone technology is more all-consuming by having a far wider range of uses. This wide range of uses also contributes to the amount of time spent on current devices.

Social media and smartphone usage varies, but one group of particular interest is that of adolescents. According to the American Academy of Child and Adolescent Psychiatry, in the United States, teenagers spend up to 9 hours a day using screens, and children ages 8-12 spend 4-6 hours a day. (AACAP 2020). With some teenagers spending nearly half of their waking lives on their screens, it is clear that screen times are worth examining. Adolescents, in particular, are an important group to analyze due to the clear differences in development and maturity between

adolescents and adults. Adolescents are generally considered to be between ages 10 and 22, and this is roughly the age group discussed throughout this paper.

An additional interesting factor to consider in this preliminary exploration of current technology is the difference in how the internet is used across age groups. For the younger generation that has grown up with technology, developing alongside their devices, the internet is used by many as an extension of themselves. Most adults will reach for a smartphone to look something up or contact a friend, but adolescents rarely put their phones down. The smartphone is like an additional limb, rather than a mere tool, that adolescents will unconsciously reach for and notice when it is absent. Descriptions of the many uses of social media and smartphones is important in understanding how quickly the internet changes and how large it truly is to be able to take up so much of people's time and to span across so many areas of people's lives.

Children and adolescents often seem to navigate technology better than adults; growing up with technology has made the younger generation able to use their technology nearly seamlessly. The near constant connection with one's smartphone or screens is unique and impacts childhood and adolescent development greatly. Unlike previous technological advancements like, say, the television, smartphones travel with the individual. The phones are wireless, often do not require WiFi, and are always on. This constant use or ability for use makes the smartphone-adolescent relationship so notable. Many recent psychological studies emphasize the high screen times of some adolescents and how they may connect to mental health outcomes. Combined with the psychological effects of the near-constant use of this technology to be

discussed in Section 3, it is clear social media and internet use are significant and ought to be discussed.

Along with the psychological impacts of smartphone use, there are interesting questions about authenticity, reality, and human values. Namely, is social media comparable to the real world, and is reality valuable? Additionally, one wonders about more practical questions, such as whether smartphones, or specific uses of smartphones and the internet, should be limited, especially for adolescents who are still developing.

A Fictional Case Study

To best explore the growing body of research on psychological effects of social media, screen time, and internet use, a kind of case study will be used. The case study is of a 12 year old adolescent girl named Jane. While there may be gender differences in psychological effects discussed in Section 3, Jane will represent the effects on adolescent girls. Jane just got her first smartphone and downloaded many popular apps, including Snapchat, Instagram, and Facebook. She is able to find and connect with her friends from school, post pictures, and comment and like others' posts. Her parents have followed her on all of her social media accounts to monitor what she posts. Additionally, her parents are aware of some ways to limit what Jane can access on her phone. A password is needed to download new apps, and there are parental control settings for the smartphone's search engine. Jane's parents have also set time limits on some apps, but the timeout can be easily overridden by Jane. Previously, Jane could only access the internet through a family computer that allowed her parents to limit how long she was online. Now, however,

Jane can access her phone at nearly any time, and uses her phone about 5 hours per day, which is representative of children's screen times for her age group. Jane is not currently diagnosed with any mental or physical health conditions.

Psychological Effects of Social Media Use on Adolescents

Cell phones have been around since the 1970s, and smartphones since the 2000s. For those born in the 2000s and 2010s, part of growing up for many was getting various pocketable devices with internet access. From music players to e-readers to tablets to laptops and computers to the smartphones themselves, there was certainly a variety of available devices that adolescents could dedicate their time to. In the same years that adolescents began to spend more time on smart devices, trends in mental health of adolescents began to show concerning information. The findings of research on mental health trends of adolescents in western countries show an association between mental well-being of adolescents and screen time, particularly with social media use (Twenge et al., 2018; Twenge & Campbell, 2019; Przybylski & Weinstein, 2017). The negative mental health outcomes associated with technology use largely include symptoms of depression and anxiety among others.

For the following discussion, it is important to establish the difference between correlation and causation. Correlational findings mean that researchers found some kind of relationship between two variables. In the research on relationships between screen time and mental health outcomes, for example, most research finds that higher screen time is correlated with a worse mental health outcome, such as depression. The findings would not state that

spending more time on one's screen causes them to have depression. Neither would the finding state that depression causes one to spend more time on their screens. There may be other variables at play that the researchers missed or simply were not able to account for. Whereas a causal relationship would mean that one variable, such as screen time, directly contributes to one becoming depressed.

It could even be the case that those with depression are more likely to spend more time on social media. The relationship could possibly have a kind of feedback loop. Social media could lead to some depressive symptoms that result in one spending more time online, which leads them to have more depressive symptoms and so on. The associations found in the psychological research can be very complex; the research only states that there is some correlation between the factors. In looking at the following information, this is important to keep in mind so as to not draw too strong of conclusions regarding potential effects of social media use.

However, correlational studies are important in cases for which studies proving causation are more difficult. In this context, assigning an adolescent to spend more time on their screen when there is a potential that it will be harmful for them may not be acceptable. As a result, much of the following information is a result of correlational studies. Correlational studies, even without showing causation, show how closely related two variables are, which can help with future research.

The following review of research is divided into three sections: positive outcomes associated with social media use, negative outcomes associated with social media use, and, finally, other important findings.

Benefits of Social Media Use

Despite the widespread use of smartphones, internet, and social media, it seems as though many people worry about the ways in which their use may be harmful to them, especially related to spending too much time online. Parents often tell their children to get off of their screens, and teachers stop students from using smartphones during class. Much like previous advancements in personal use technology, there is apprehension surrounding the change (Rosen et al., 1987). However, there are positives of social media that should be acknowledged, as they begin to explain why people turn to smartphones and social media initially and perhaps why people continue to use social media in spite of the consequences.

There are quite a few expectations of the good that can come from various ways that people use social media. First and foremost, social media allows connections and interactions among people who otherwise never would have met. Individuals can bond virtually over shared interests, values, and ideas. There exists a myriad of online forums for discussion. People can digitally converse about the weather, football teams, pop culture, clothing, and anything imaginable. There are forums for people wondering about anything from how to make tea to how to choose their career. Review websites can help people decide which new coffee shop to try.

Someone has tried it before, and if they like it, they post about it. If they dislike it, they also post about it.

Sometimes associated with these forums and sometimes completely separate, there are also online communities. People can meet one another in the comments of a mutual friend or an online content creator that they both enjoy and move their conversation across online platforms to create a community. In the comments of a post on Instagram or Facebook, many people express whether they like or dislike, agree or disagree with the contents of the post. In the comments, people will interact with one another and possibly find mutual interests. There are even online chat rooms for people to meet others without common interests. In all of these many situations, people are able to meet others who share their interests and discuss them. There is great potential for people to bond over this, which allows more people to engage with things they enjoy.

The ability for people to find common interests and generally be exposed to a variety of ideas and content also can allow for new discoveries and connections in the real world. Sharing videos or funny images are common ways for people to bond online, but these videos are also mentioned offline. From internet slang to quoting Tik Tok sounds when relevant, what is said online does not necessarily stay online. For example, a popular Tik Tok sound is that of a person asking “Are you new here?” References to this sound are made by people simply asking the question, sometimes in a voice similar to that of the videos, in response to certain situations. People quote various online content in the real world, and having access to internet culture

allows for better understanding of popular vocabulary, humor, and information that can help people fit in and connect with others offline.

Social media also allows for communication across distances and time zones, so that individuals can stay updated on the people whom they know in person and share about their own lives and experiences. Whether this pertains to a relationship made online or a relationship made in person, social media allows for connection over distances; people can talk to each other from anywhere. If someone has a passion and others around them do not seem to share it, the person can easily find others online who do. If someone is wondering how their old neighbor is, they can login to any social media website and find out by asking or even just viewing their profile and posts.

Social media acts as a place to post art, creations, and products, making it uniquely helpful for business, particularly small businesses. Websites like Etsy, Instagram, Ebay, and more allow users to post what they make and sell it online. This enables people to make unique and niche creations that might not have been sustainable without the aid of the internet. Sharing products and processes in this format also allows for a collaborative process from people with various backgrounds in comment sections. Along with potentially benefiting individuals' small businesses, larger corporations can also benefit from the advertising opportunities that social media presents.

Social media users can create and share digital art, write and post blogs, stories, and even books, compose music, and more. The social aspect and the ability to share things with a mass audience could be used negatively, but the potential connections are uses of social media that

have the potential to benefit the user significantly. For example, teenagers report believing that social media makes them feel more deeply connected to the lives and feelings of their friends, as well as more confident and included (Pew Research Center, 2018). Teenagers also report social media helping them find trustworthy information, talk to more diverse people, and support causes (Pew Research Center, 2018). While these benefits are merely reports on what teenagers feel about social media, they are important as expected benefits that contribute to teenagers' use of platforms.

In addition to and somewhat because of these benefits of social media, there can also be positive psychological outcomes associated with social media use. To explore these outcomes, I will share some recent psychological research and apply the results hypothetically to the fictional case study of Jane. The following studies found associations between social media use and largely positive outcomes, but many also found the possibility for negative outcomes given certain conditions. The same will be true in the section discussing the negative effects; while some studies report associations with mostly negative effects, there is potential for positive outcomes given certain conditions. This overlap between the positive and negative outcomes is discussed following the presentation of the studies.

Positive Outcomes Associated with Social Media Use

Many of the above noted benefits of social media revolve around the opportunities for community and connection. These connections create a potential area of positive impact by offering social support. Indian and Grieve (2014) explored this dimension by recording their

participants' social anxiety, offline support, online support, and subjective well-being on various scales. They chose to measure social anxiety because they predicted that those with greater levels of social anxiety would not gain as much social support and well-being from offline interactions that contribute to social anxiety. Indian and Grieve found that social support can be gained from online platforms such as Facebook, the platform used in this study. The well-being of participants with greater levels of social anxiety were found to be influenced significantly more by online support than offline support as compared to the participants whose scores reported lower levels of social anxiety. This shows that for individuals with social anxiety, social media platforms are a resource for receiving social support, which is associated with many psychological benefits. Though the average age of the participants in this study was higher than the adolescent range, adolescents were included in the study.

Similarly, Brusilovskiy et al. (2016) studied associations between psychology and social media looking specifically at those with serious mental illnesses. In this group, about $\frac{1}{3}$ of the participants had at least one social media account, and social media use was not found to be significantly associated with psychological well-being. However, the researchers did find a positive correlation between social media use and community participation, suggesting that social media can help people connect offline. Again, the age range of this study extended beyond adolescence, but adolescents with serious mental illnesses were included in this study.

Both Indian and Grieve (2014) Brusilovskiy et al. (2016) show significant associations between social media and community and personal well-being for those with mental health conditions. Further exploring the relationship between mental health and social media, Berry et

al. (2017) examined tweets under a particular hashtag on Twitter from 2015 under which people shared their reasons for discussing mental health on Twitter. The results showed four themes: “sense of community,” “raising awareness and combating stigma,” “safe space for expression,” and “coping and empowerment.” While the research did not determine the effectiveness of these uses, it suggests that social media is a place for people to strive for goals that relate to community building and support as related to mental health. While Jane’s case study shares that she is not currently diagnosed with any mental health conditions, social media may serve as a tool for Jane to learn more about others’ mental health or strategies that are helpful to her regardless.

Additional research also supports social media use as a method for gaining support online for those with mental illnesses, including bipolar disorder (Bauer et al. 2012). Research also suggests that social media use may help encourage health behavior changes among those with mental health conditions. In a study, Naslund et al. (2018) found that among those with serious mental illnesses and obesity, online interactions (posts, comments, etc.) were positively associated with weight loss. A similar study by Aschbrenner et al. (2017) achieved similar results. Among those with serious mental illnesses, weight loss was positively associated with perceived peer group support. The researchers facilitated peer group support through fitness tracking technology, apps, and a private Facebook group where participants could post about their progress between the study’s sessions. The Facebook group was used by 76% of the participants. These studies further support the positive outcomes related to community and feelings of support associated with social media use, particularly for those with mental health conditions.

Another major theme in the psychological research of social media benefits is that psychological outcomes vary depending on the way in which social media is used. One such distinction is between emotionally invested use and routine use. A study by Bekalu et al. (2019) examined the potential for divergence in mental health outcomes between emotional connection to social media and what the researchers call routine use of social media. For routine use of social media, individuals incorporate social media use into their daily social routine; it is not as emotional of an endeavor. Bekalu et al. found significant positive associations between those who reported using social media in a routine way and positive mental health, self-reported health, and social well-being. On the other hand, emotional connection social media use was significantly negatively associated with mental health, self-reported health, and social well-being. Thus, the way in which one uses social media may have an impact on their mental health outcomes, potentially resulting in positive outcomes. These findings suggest that Jane may feel healthier both mentally and physically, and even more socially well if she uses social media as part of her daily routine rather than investing emotionally in what she sees on social media. This study suggests that if Jane exhibits more symptoms of social anxiety, then social media platforms like Facebook may help her feel more connected to others, thereby increasing her well-being. However, if Jane does not show symptoms of social anxiety, then social media use will not lead to the same benefits to her well-being. As previously discussed, it seems plausible based on the correlational research that social media use is related and could possibly contribute to someone like Jane developing symptoms of social anxiety; however, there could also be a number of other factors involved in the relationship as well.

Outcomes of social media use change based on time. A study by Hunt et al. (2018) attempted to further assess the relationship between social media and psychological outcomes, examining potential causation. For this study, undergraduate participants, who likely fall within the adolescent age range of approximately 10-22, were randomly assigned to either limit social media use of popular platforms to 10 minutes per day or to engage with social media for their usual amount of time. The researchers found that those who were asked to limit their social media use showed significantly decreases in loneliness and depression compared to the usual usage group over the three weeks of the study. The results indicated that limiting social media use or possibly even simply being more aware of time spent on social media can improve one's psychological well-being. Based on this, Jane's parents may consider limiting Jane's social media use time per day. This could also help Jane's social media use be more of a routine, which would be better for her health as suggested by Bekalu et al. (2019).

Overall, research on positive psychological outcomes and social media use suggests that the relationship between the two is complex. While some studies found associations between social media use and the psychological well-being or feelings of emotional support of the user, these results were frequently present alongside the finding that too much time spent on social media is associated with worse mental health outcomes. Thus, finding the right amount of social media use may benefit an adolescent like Jane by making her feel more supported and less lonely.

Many of the studies also used participants with existing mental health conditions like depression, anxiety, and bipolar disorder, meaning that some of the potential benefits may be

limited to certain groups of people and not generalizable to others like Jane. For Jane, as she does not currently have any diagnosed mental health conditions, the amount of support or increased community engagement associated with social media use does not apply to her based on the studies discussed. However, if Jane has friends with mental illnesses, platforms like Twitter may be helpful for her to gain awareness about mental health. Additionally, if others are seeking support and community online, Jane's presence on social media could potentially help them by being a part of their support system.

Again, the way in which one engages with social media plays a large role in the impact its use will have. Using social media as part of a daily routine to prevent it from being a major emotional investment is beneficial, and using social media as a support network can be helpful to the user as well. The research shows that social media use is good to an extent, but spending too much time online often removes the positive outcomes one may experience as reported in the previous research. In addition to the potential positive effects of social media use, there are also a myriad of potential negative effects associated with social media use that will be discussed in the next section.

Drawbacks of Social Media Use

Compared to positive outcomes, more research reports associations between social media use and negative psychological outcomes. Social media use affects relationships, mental health and well-being, and more, particularly for the adolescent population. Growing research suggests that social media addiction may be a concern worth noting for adolescents. Given findings about

screen time and amount of time spent on social media, social media addiction poses a major threat merely because it involves increasing these times. This section will now discuss some important findings about negative mental health outcomes and social media use.

Negative Outcomes Associated with Social Media Use

One of the most discussed topics relating to adolescent social media use is the impact on adolescents' mental health. In a study examining the relationship between social media use and depressive symptoms in adolescents, Kelly et al. (2018) found a significant positive association between social media use and depressive symptoms for girls. The association was also stronger in girls than boys, though both were present. Time spent on social media was found to be significantly negatively correlated to self-esteem, and body image, and time on social media was positively associated with receiving online harassment. This suggests that Jane, as a young girl, is more likely to have depressive symptoms as she uses social media. Jane spends an average but high amount of time on social media, which is associated with lower self-esteem and body image. Jane is also more likely to experience online harassment if she continues to spend a lot of time online.

Another study on mental health associations for middle and high school adolescents found similar results. Twenge and Campbell (2019) surveyed over 200,000 adolescents from two countries and categorized them based on their time spent using digital media. Light users, those who used digital media less than one hour per day, reported significantly higher psychological well-being than heavy users, those who use digital media four or more hours per day.

Psychological well-being in this study included measures of happiness, general well-being, depression, suicidal ideation, and suicide attempts. Overall, Twenge and Campbell (2019) found that those who use digital media for less than one hour per day report better psychological well-being. Given Jane's average use of five hours per day, Jane and her parents should likely consider limiting this time more. Results from other studies also report that less time spent using digital media is preferable (Przybylski & Weinstein, 2017).

In a causal study, Engeln et al. (2020) found that spending time on some social media decreases college-aged women's body satisfaction. For the study, women aged 18-26 either used Facebook, Instagram, or played a game on an iPad for seven minutes. The women who spent the seven minutes on Instagram had decreased body satisfaction, decreased positive affect, and increased negative affect. The results show that spending time on social media platforms that highlight images leads to harmful comparisons. Instagram, one of the apps that Jane downloaded, is particularly harmful because it emphasizes pictures. Though Jane is a bit younger than the sample of this study, it is likely that she would feel these negative mental health related effects of using Instagram.

In addition to mental health concerns, social media use impacts sociality and relationships. A 2016 study by Woods and Scott examines teen nighttime social media use and its correlation with mental health outcomes, including anxiety, depression, and self-esteem. The study also reports that emotional investment is an important factor in the mental health outcomes of social media use. The more emotionally invested one is, the more likely they are to have depression, anxiety, and low self-esteem. Social media use is comparable to real life social

interactions, in which there is a high degree of emotional investment; the brain seems to not differentiate between the offline and online world for adolescents, which may pose problems in development due to the differences in how people communicate online compared to in the real world.

Jane is emotionally invested online. She is primarily interacting with her peers and her relationships with them are important to her; she cares about how they perceive her. Unfortunately, the emotional investment means that if Jane perceives an online interaction to be negative, it would likely have a major impact on her. This could then contribute to worse mental health outcomes including anxiety, depression, and low self-esteem.

Based on the importance of social connections for potential benefits of social media use, Primack et al. (2017) conducted a study measuring social media use and perceived social isolation. The researchers thought that social media may decrease perceived social isolation. Their study consisted of people aged 19-32. While most of the participants in this sample are likely outside of the adolescent range of 10-22 years old, the results remain important. Primack et al. found that those who spend more time on social media actually have higher levels of perceived social isolation than those who spent less time on social media, and the difference in perceived social isolation between time spent on social media was significant. For Jane, this supports previous suggestions that she may benefit from limiting her social media use time to avoid negative effects.

In a study conducted in 2018, Crone and Konijn examined social acceptance and rejection, peer influence on self-image and self-perception, and the role of emotions in social

media use, finding that the social influences present in the offline world are comparable to the social influences in the online world. They found that “the density of grey matter volume in the amygdala, a structure associated with emotional processing, is related to larger offline social networks, as well as larger online social networks. (Crone & Konijn, 2018). This means that there can be a physical change in the brain based on online connections that is similar to how the brain changes with a large offline, real world social network. The findings also suggest that the brain is not capable of distinguishing between an offline and online social network to some degree. The results of this study also relate to the results of Woods and Scott (2016), as both highlight a difficulty in separating online and offline interactions.

Social influences are especially impactful during adolescence, a time in which one is developing their self-image and self-perception. The finding that offline and online social interactions are comparable is important because it shows that online interactions affect a child’s development just as offline world interactions do.

Applied to Jane, this study suggests that her brain would not distinguish between socialization online and socialization offline. Therefore, online and offline events would carry similar weight as she develops her sense of self-image and self-perception. The inability of the brain to distinguish between online and offline is particularly worrying because people do not always act the same online as they do in person. First, online interactions lack nonverbal cues. They also lack tonation that can indicate meaning when online interactions are text-based. While on some social media sites, if Jane knows all of her online friends in the real world, anonymity may not be a problem. They are online, but they also know each other. However, anonymous

users online are more aggressive than non anonymous users (Zimmerman & Ybarra, 2016). If Jane is interacting online with anonymous users that she does not know in the real world, her brain is likely to consider their interactions in a similar way to how she would consider an offline interaction, despite the differences between online and offline interactions such as the lack of cues and potential for more aggression. The ability for anonymity online changes the way people interact with others, meaning that socialization online differs from offline socialization, even if the brain does not distinguish between the two.

Perhaps Jane and a classmate she does not know very well become friends online. Her classmate has a nickname as her username and no profile picture. If Jane's classmate is being more aggressive online or simply posts something about Jane that lacks indicators of tone, the post may be interpreted as something negative about Jane. Maybe the message is something like "Jane's outfit was interesting today." Jane may interpret this positively or negatively, and it will influence how she perceives herself. She may feel fashionable or slightly outcasted after reading the message. In person, the message itself may have differed or the true meaning may have been delivered. Jane's brain, according to the aforementioned study by Crone and Konijn (2018), would not think about how the message may differ from what would be said in the real world, and Jane's self-image would be based on the online message.

Beyond mental health and social impacts, there is growing research finding that time spent online is related to cognitive changes such as attention span, development, and memory processes. Due to the constantly updating nature of social media and the internet, its use forces a division of attention. There are various social media websites and websites in general and,

especially with notifications, these websites all demand attention constantly. By meeting these demands at their high rates, people sacrifice some sustained concentration in favor of jumping their attention around the internet. In a literature review, Firth et al. (2019) report that this attention jumping is a form of multitasking that actually makes people worse at multitasking offline by decreasing people's abilities to ignore distractions. Firth et al. also describe implications specific to adolescents, though the area is less researched. Multitasking frequently predicts attentional deficits in early adolescents, and Firth et al. suggest that media multitasking, the attentional jumps online, are also likely to predict the development of attentional deficits in adolescents.

When Jane is online, she will inevitably visit websites that display advertisements and pop ups. Her browser may display when she gets a new email or message from a friend. The computer may chirp when there is a new social media notification. Many things fight for Jane's attention, making her glance at an advertisement, then read a notification, then return to whatever she initially set out to do online. These distractions force her to multitask frequently, which, at her age, is associated with the development of attentional deficits. So, Jane's social media use may put her at more risk.

Social media use can also impact memory. In a 2018 study, Tamir et al. (2018) found that participants better remember experiences when they do not post about them on social media. The study involved three groups that were given a tour. The first group took pictures to post about their experience, the second group took pictures for themselves, and the final group did nothing. The group that took pictures to post on social media scored significantly lower on a memory test

about the experience later compared to the other two groups, although there was no difference in enjoyment of the experience. This study demonstrates an effect that social media use can have on memory. If Jane posts about experiences online, she may have more trouble remembering the experiences later on.

Overall, there is a trend of higher times spent on the internet, digital media, and social media are associated with worse mental health outcomes, social outcomes, and cognition. Unfortunately, the average time spent online by adolescents is quite high. There is also a growing body of research on the subject of social media addiction, which may further escalate some of the negative effects discussed above, particularly those associated with time spent on social media.

Social Media Addiction

Social media addiction, while not in the DSM-5, is when a person feels compelled to use social media excessively, and is a form of internet addiction. Smartphone addiction may also be involved in social media addiction. Social networking site addictions can have symptoms and results similar to those suffering from substance-related addictions (Kuss & Griffiths, 2017). It should be noted that much of the research on social media addiction also uses the term social networking site addiction interchangeably. However, some research distinguishes between the two, explaining that social media is broader than social networking, which includes only the more cooperative interactions online. Social media, on the other hand, can include online celebrities or influencers that create one-sided interactions.

Along with symptoms and consequences similar to substance addictions, a study by He et al. (2017) found that the brains of those addicted to social networking sites and the brains of those addicted to other things like substances or gambling show similar brain anatomy changes. Kuss and Griffiths (2017) suggest that social networking addiction may be related to things like fear of missing out and fear of being without one's smartphone. Also, though the research is not conclusive, it seems as though girls aged 14-16 have a high prevalence of internet or social networking site addictions (Kuss & Griffiths, 2017). Combined with previous studies' findings about the risks of high social media use, this higher risk of addiction is particularly concerning for girls like Jane.

Conclusions

Although there are some social and psychological benefits associated with social media use, most of the benefits turn negative if time spent online is too high. Additionally, many of the benefits apply to specific groups, such as those dealing with mental health conditions. The negative outcomes associated with social media use are numerous. There are concerns relating to mental health, social well-being, and even cognition. Additionally, as was seen in the benefits section, the more time one spends on social media, the worse the associated outcomes are. This makes social media addiction more worrying, as it is characterized by high amounts of time spent online and has been found to be more prevalent in adolescent girls. Given the numbers about how many adolescents use social media and for how long, it seems likely that adolescents

rely more on their perceived benefits than worry about associated negative consequences when using social media.

Before moving on to the philosophical discussion, I would like to note that from this point forward, I am assuming that there is an important relationship, not merely correlative, between the use of social media and mental health outcomes, both positive and negative. This is done in order to make the philosophical discussion more clear and to discuss the implications more easily.

A Philosophical Examination

Just as many psychologists are studying the effects of social media use on adolescents, philosophers are exploring ideas surrounding internet use. In this paper, I am particularly concerned with questions of reality and ethical questions about how adolescent social media use should be handled and if excessive social media use is morally objectionable. For this philosophical section, I begin by explaining what reality is using and distinguishing between what I refer to as internal and external reality. Then, I compare social media usage to the idea of a simulated reality, such as that presented in the thought experiment of the experience machine, and determine what it means if they are or are not similar. Based on the findings of this comparisons, I attempt to answer the question of what we should do about adolescent social media use, if anything.

Social Media and Reality

As noted in the psychological research, human brains can have trouble distinguishing between social media and reality. Perhaps this makes sense, as interactions online can have real world impacts. People can form genuine relationships. Sharing a secret with someone online means that they know it in the real world as well. A picture of you at a concert could be seen by your employer in the real world. What happens online is not confined to the digital world where it is posted.

It is worth mentioning that conversations that do not take place face to face are nothing new. People have long conversed through letters, phone calls, and other messages. These conversations can even have long pauses between replies, yet they still impact the real world. A lie can also impact the real world; it can change how one interacts with others, but a lie is not inherently reflective of the real world. Communication does not have to be true, whether online or offline.

In letters, face to face conversations, or even online conversations, people are capable of lying. People can pretend to be others online, editing their pictures and personalities. It is easy to lie online. A picture posted today was not necessarily taken today, and could be edited or even completely fictionalized. The online world is certainly capable of impacting the real world, but aspects of social media can also be real. So, if the online world can impact the real world, is it not reality? The distinction may be more clearly made with a better understanding of what reality is.

What is Reality?

There are multiple ways of thinking about what reality is, and I focus primarily on the metaphysical and ontological senses. Metaphysically, reality is all that exists. While this definition of reality seems simple, it is complicated by the fact that we do not necessarily know what exists. An ontological look at reality asks the question “What does exist?” Between the two, there is a separation between what exists and what we know exists.

There is also a social reality. The things that people believe are also a part of reality whether they are true or false. Additionally, social interactions exist. Even false claims that are widely accepted are part of reality. They may not accurately reflect the real world, but they are part of the social reality. For example, imagine a situation in which someone tells you that astronauts found a new planet in our solar system, but there is no new planet in our solar system. Metaphysically, no new planet exists, so, in reality, there is no new planet. However, if you believe the person who tells you there is a new planet, according to your knowledge, there is a new planet. In your mind, there is a new planet. The fact that you believe there is a new planet is a part of the metaphysical reality, but the planet itself is not. Regardless, in the reality you are living and aware of, an internal reality, there is a new planet. Furthermore, you may make decisions or otherwise act based on the belief that there is a new planet. You may buy a new telescope, causing a real world consequence despite there not really being a new planet in the solar system.

This discussion focuses on how social media impacts internal reality, the aspects of reality that are mental. It is important to acknowledge that one's internal reality can be and is

influenced by almost anything--whether it is social media or not. These influences can be by word of mouth, reading a book, one's own observations, and more. An internal reality can correspond to the external reality, or it can be different. For example, if one believes Earth has one moon, their internal reality of Earth having one moon and the external reality that Earth has one moon are the same. If Jane believes that Earth has two moons, it would be different from external reality. However, it would be true in the external reality that Jane believes Earth has two moons.

At one point in history, many people believed the earth was flat. This was part of their internal reality. To them, the earth was flat; that was their reality. It was not actually reality, but it was what they believed and how their world operated. Although there can be a distinction between what actually exists and what people think exists, both are important and impactful. For the following discussion, metaphysical reality will be referred to as external reality, and the individual or collective beliefs that people have that are not also metaphysically true, will be referred to as internal reality. Internal reality includes not only what people believe, but also what they feel or experience internally.

If one considers only internal reality to be important, then solipsism may as well be true. However, it seems that there are features of reality beyond the social features, that people can make contact with the features beyond social, and that people should make contact with the features beyond the social ones. If this is true rather than solipsism, then there may be something wrong about ignoring external reality.

“The Emperor’s New Clothes”

An old folktale written by Hans Christian Andersen is a good starting place for the discussion of reality. The story revolves around an emperor who loved new clothes and spent a lot of money and time on having good clothing. Eventually, two people claiming to be weavers come to the emperor and offer him some new garments. They say that they are the finest clothes and would be invisible to any person who was not fit for their job or who was not smart enough. The emperor thought this would be helpful, so he paid them the money. The story notes that the two weavers set up their looms and began to fake their work. They asked for expensive and fine materials, but did not use them.

After some time, the emperor wanted to know of the weavers’ progress. He sent someone he believed to be wise to check on the progress. When the wise man checks on the looms, he sees nothing. However, he worries that it is just because he is not capable. Rather than admit this, he decides to lie and say that the garment looks beautiful. All of the following individuals who go to see the cloth report that it is very beautiful, not wanting to seem incompetent. When the emperor himself finally goes to see the clothes, he sees nothing. Like the others, he does not wish to seem incompetent, so he pretends to see the clothes. He lets the weavers “dress” him in the invisible cloth and goes out to a parade among his people. The people all believe the emperor to be wearing clothing that they cannot see, but, like others in the story, they do not wish to be thought of as incompetent because they cannot see the clothing. The townspeople all believe that others can see the clothes. However, as the emperor walks, a child yells out that the emperor is wearing no clothes, and everyone realizes that the child is correct.

Social reality refers to the idea that there are certain things or ideas that are real because people agree to them. There are facts that exist and are true, but would not be true without humans agreeing to them. For example, it is true that it is illegal to steal in the United States. If someone is caught stealing and found guilty in court, they will be punished for stealing. The fact that stealing is illegal is something that was implemented by humans. If every human suddenly disappeared forever, stealing would not still be illegal. The fact that stealing is illegal also does not apply universally. If an animal steals from another, they do not face legal consequences. This is similar to internal realities, but it is shared among a group of people. The belief would exist in multiple people's minds, not just one.

Philosophers also sometimes use the terms dependent and independent in the context of discussing reality. Some things, like dreams, exist but are dependent on humans or other living beings. Without humans or living beings to dream, dreams would not exist. Conversely, a rock exists whether living beings are present. Rocks exist independently of humans and other living beings. Both dreams and rocks are part of reality, but dreams are real because of people. It is not decided upon by the people, but the existence of dreams is dependent on the existence of humans in a similar way to social agreements like the law.

The reality of the situation was that the weavers made no cloth. They scammed everyone by convincing them that they created a cloth, but there was in fact none. There may also be an argument that there was a social reality, an internal reality, in which the emperor was wearing clothes. In the minds of those who believed what was told by the weavers, the emperor was wearing clothes and they simply could not see them. Although there is a kind of internal reality

created in which the people believe that the emperor is wearing clothes and they simply do not see them, the truth is that he is not wearing clothes. No clothing exists; it is an imaginary garment in the story. To the people, though, the emperor was wearing clothes; everyone agreed that he was wearing clothes. If the child did not speak out and break the agreement everyone seemingly had, the people likely would have told others of the day the emperor wore the most beautiful clothes. Saying otherwise could have had a major impact on their lives, getting them fired from their jobs for being incompetent or having others look down on them for not being smart or capable enough to see the clothing that was never there. On social media and other online interactions, there are real world consequences of social realities.

“The Emperor’s New Clothes” depicts the internal reality that is seemingly created online and using social media. Many people believe things to be true based on what they see online. It may or may not be true in the external reality, but it is true for many individuals’ internal realities. Social media’s ability to contribute significantly to so many people’s internal realities is a feature that makes it very interesting philosophically, and perhaps comparable to a famous thought experiment about a simulated reality.

The Experience Machine

In 1974, Robert Nozick proposed a hypothetical situation involving a simulated reality machine. In the thought experiment, the subject is presented with an opportunity to enter a simulated reality.

“Suppose there were an experience machine that would give you any experience that you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life's experiences? If you are worried about missing out on desirable experiences, we can suppose that business enterprises have researched thoroughly the lives of many others. You can pick and choose from their large library or smorgasbord of such experiences, selecting your life's experiences for, say, the next two years. After two years have passed, you will have ten minutes or ten hours out of the tank, to select the experiences of your next two years. Of course, while in the tank you won't know that you're there; you'll think it's all actually happening. Others can also plug in to have the experiences they want, so there's no need to stay unplugged to serve them. (Ignore problems such as who will service the machines if everyone plugs in.)”

In other words, the thought experiment attempts to pit reality and pleasure against one another to see the extent to which people value reality. Is it more important to live in the real world and have real experiences, or is it more important to have good experiences regardless of how real the experiences are? In this thought experiment, people would have to give up the opportunity to have real relationships, experiences, and interactions, but they would gain the feelings of completing these things.

Nozick believes that people will ultimately choose not to enter the experience machine, showing that humans value reality or something about it because they choose it over guaranteed pleasurable experiences. According to Nozick, “We learn that something matters to us in addition to experience by imagining an experience machine and then realizing that we would not use it” (Nozick). He believes that the rejection of the machine is ultimately due to humans valuing reality on some deeper level, at least on a deeper level than pleasure. While Nozick’s thought experiment and argument can be used to argue against hedonism, it is also interesting to consider the value of reality. Based on this, it matters that we do X, not just have the simulated experience of doing a given activity. In fact, Nozick argues that we only want the experience of doing a given activity because we first want to do the activity itself (Nozick).

It also matters that we truly are Y, not just that we have the *experience* of being Y. Nozick writes, “We want to *be* a certain way, to be a certain sort of person. Someone floating in a tank is an indeterminate blob. There is no answer to the question of what a person is like who has been long in the tank” (Nozick). A person in an experience machine tank for some time does not possess any traits. Their traits do not contribute to their experiences, so their traits do not matter. Whether a person in the experience machine is hard-working or not, they will get the success (or any other outcome) they selected when entering the tank.

Finally, Nozick believes that entering an experience machine removes the potential for a more significant, deeper meaning of the world and one’s life. The experience machine is limiting in that it is made by humans. It mimics the real world as best as possible in the thought experiment, but it prevents people from having the ability to potentially access the external

reality. Ultimately, for these reasons, Nozick believes that people would not enter the experiment machine.

Would vs Should

Beyond Nozick's reasons for what one *would* decide, there is the matter of what one *should* decide. Suppose a student is taking a test and has an opportunity to cheat with a guarantee not to be caught. What the student *would* choose to do and what the student *should* choose to do may be different. Similarly, people value many things that they arguably should not, such as excessive material possessions. Just because a person values having a room full of expensive clothing does not mean that the person should value it. Even if people value reality, perhaps that value is misplaced.

However, in the case of reality, it does seem worth valuing. As Nozick describes, it matters not only that we experience helping someone, but that we actually do help someone. It matters not only that we feel like we are a good person, it matters that we are a good person. If one cares about doing good things and being a good person, doing these things and being a good person in external reality is the only way to achieve them. In a simulated world in which no one benefits from the charity of the user, is the user helping anyone? Is the user being charitable? It seems not. Though the user may donate money or spend time to try to help others in the simulation, they are not helping others. The user believes they are being helpful and good, but, according to Nozick, they are merely experiencing being good. When the alternative is actually being good, the choice to enter the experience machine seems morally unacceptable.

The claim is that, all other things being equal, a life that makes contact with external reality is better than one that does not. Given normal circumstances, one should choose to engage more with external reality. In terms of the previously established external and internal realities, the experience machine thought experiment suggests that people value external reality more than internal reality. Rather than believe something exists that does not, people want to know and experience the external truth. What is real matters more than what we think is real. This claim about the importance of reality, if true, has interesting implications when examining the current use of social media, particularly if social media is closer to an internal reality than external reality.

Potential Flaws of the Experience Machine Argument

Nozick's argument proposes that reality outweighs one's hedonistic desires for pleasure, but some believe that there are flaws with the experience machine thought experiment that prevent Nozick's argument for the value of reality from being true, changing intuitions about whether or not one would or should plug into the machine. Perhaps the most relevant potential counterargument is that which suggests that something besides reality is being lost by entering the experience machine because if this is the case, it may show that people do not value reality. The additional loss may be their loss of spontaneity, relationships with others, or a general kind of fear of the unknown.

First, one may think that the experience machine involves a loss of spontaneity, and that the loss of spontaneity, not reality, contributes to one's decision. Based on the description of the

machine, people preprogram their simulated life experiences. Nothing in the simulation would be spontaneous because it would have been previously planned by the person entering the machine, or it would be programmed in by someone outside of the machine. Inside the machine, any event may seem spontaneous to the individual because they have no knowledge of what is planned for them. In this sense, one is not losing spontaneity by entering the machine. Of course, if determinism is true, then spontaneity is unimportant in both cases, as it would be missing from both the machine and the outside world.

It is difficult to determine exactly what spontaneity in the situation entails, but it seems that the preprogrammed nature of events in the machine removes the spontaneity. Someone in the machine may still feel spontaneity, but it is something the machine user would be giving up. Experiences would be spontaneous to their internal realities, but there would not truly be a spontaneous event. If the event was planned by someone outside of the machine, it would still be premeditated by someone, differentiating it from the spontaneity that happens in the real world with external reality. If the experience machine had a method of randomly and spontaneously generating events for the user, there may be an element of spontaneity. However, this seemingly begins to disrupt part of the thought experiment. Regardless, it seems that a user in the machine could still *feel* spontaneity, but the spontaneity would not be real. Thus, an individual worried about losing spontaneity may actually be worried about losing real spontaneity, a feature of reality.

One may also argue that the experience machine disrupts one's relationships with others or that it involves neglecting the other people in one's life or that a person cares about other

people and things that do not contribute to the individual's independent experiences and that this disruption, not the loss of reality, contributes to the decision. Again, this is tied closely to the point of the experience machine thought experiment itself. The thought experiment involves giving up real relationships with people for artificial ones that the user merely thinks are real in the experience machine. If one's concern is more related to the well-being of others, it may help to assume that they, too, will enter an experience machine by choice. Or, it may be more helpful to suggest that they will be well taken care of throughout their life in the real world. As it is a thought experiment, simply assume that anyone the potential user would worry about will be fine without the user's presence.

Ultimately, the goal of the experiment is to see if potential users would trade their real relationships with people for guaranteed happiness or other experiences in the machine and to assess if people *should* make this trade. Having relationships that are externally real rather than internally real is part of why one may value reality. Like Nozick argues, it is actually having a relationship with someone that matters, not just having the experience of closeness or friendship or other aspects of a relationship with someone. This objection is particularly relevant to a comparison with social media, however, because while using social media, people can have real interactions with others. The other people are not simply programmed in. Though, it is possible for artificial intelligence to fake presences on social media (Leaver & Berryman, 2022).

One may think that the reason potential users turn down the experiment machine is a fear of the unknown. Despite the ability to plan the experience machine, it is a change from the norm, which tends to be more difficult to persuade others to pursue. This seems to be an argument

about why a person would choose one way or the other, but does not address what a person should choose to do. Nozick could have proposed his thought experiment by having everyone already part of a simulated reality be asked if they would like to leave and enter the real world. This would first disrupt the purpose of his experiment by not allowing the subjects to choose hedonism over reality. Additionally, it would create the same issue of those in the machine being less likely to leave the machine. People simply seem to be less willing to leave their current situation for one they know less about. The experience machine attempts to beat this by allowing the users to choose and plan their experiences. The thought experiment also tries to address concerns about the machine failing. In the fictional world of the thought experiment, it can be a part of the world that the machine will never fail. While this is difficult for people to fully comprehend when presented with the thought experiment, it seems to be the best and only option to account for this.

After considering these potential objections about other explanations for one's moral intuition regarding the experience machine to fail, none seem strong enough to suggest that reality is not valuable or to rule out reality as a factor. So, reality is a reasonable explanation for the moral intuition in this case.

Perhaps more important than what people would choose, however, is the matter of what they should choose. The reasons Nozick gives for why a person would refuse to enter the experience machine are related to the reasons why people should refuse to enter the machine. Experience is not our only value; it is not the only thing that is important. Reality matters and

plays a role in making life meaningful for people. Therefore, people should not give up everything in order to have a pleasurable experience in the machine.

Like the experience machine, social media use involves stepping away from reality. The user makes a choice to leave external reality to interact with an internal reality, a reality found on social media. There are many differences between the experience machine as presented by Nozick and the way in which social media is used today, but it is worth considering these similarities and differences.

Social Media and the Experience Machine Similarities

There are obvious differences between social media and the experience machine, such as people at least partly understanding that the internet is not fully real, and the ability to leave at any time, there are some similarities that might make them comparable. If social media and the idea of living in a simulated reality are comparable, then perhaps Nozick's belief and argument that people value external reality is merely his own internal reality- not actually true.

The first similarity is that both the experience machine and social media can create a distorted view of reality. In the experience machine, users believe that their experiences are real. They have no knowledge of the fact that they are in a simulation and not the real world. So, when an experience machine user writes a book and becomes a world famous author, that is how they view reality. They see reality as the experience machine presents it to them. Similarly, the way in which one sees reality after using social media is different. Edited images may make a

user believe that most people look different than they really do. Users may see an edited beach and believe that the water is bright blue, when it is really not. Importantly, these are false realities. When one reads a book on a subject they know little of, their view of reality may change. If the information in the book is true, then their view is more clear, not more distorted. If the book's information is false, then the reader's view of reality will be more distorted. Social media and the experience machine both distort reality, bringing the user further away from the external reality.

Furthermore, brains have trouble distinguishing parts of social media from reality. Perhaps reading a fictional book leads one further from reality, but this is not permanent, particularly if the reader knows and understands that the book is fiction. People are immersed while reading a book or watching a show or movie, but most people do not believe that magic is real after reading a fantasy book or seeing it on television. The experience machine and social media both present the users with information as if it is reality, which distorts the user's understanding of the world.

Exposure to internal realities that do not align with external reality can make users more disconnected from external reality. It can be difficult for users to distinguish between the external reality and their internal reality based on what they see on social media. Users may not even try to distinguish between the two. The users may not want to or may not know that it might be better for them to try to make this distinction. Many people post images of their lives online, sharing small moments and snippets of their realities. These moments form a portrayal of their lives that others interpret, but these moments always lack proper context. These brief moments

work together to create a seemingly complete picture of someone's life, but it is not a realistic representation. Even if the images are not edited, people curate their social media posts so that they post good moments. Even when people post bad news on their social media, it is something that the poster chooses to share with everyone. By giving incomplete information like this distorts the internal reality of the user further from external reality. Similarly, things like humor can get lost in translation, distorting reality unintentionally.

Not only do the experience machine and social media deceive the user, they also allow the user to participate in the deception. In the experience machine, the user can decide what they want their life to be. Then, they enter the machine. By entering, they are making the choice to trick themselves. The users can do fake things, such as writing a bestselling novel, but they do no such thing in the external reality. Social media certainly allows one to deceive others into believing things.

Returning to Jane, for example, a social media user could edit photos to make others believe they went on a beach vacation when they never even left their room. Suppose Jane is bored over a break from school. Her classmates are all going away on vacations over the break, but Jane is not. She decides to edit photos to make it seem as though she and her family also went on a vacation, and she posts these pictures online for her classmates to see. Her classmates, assuming that Jane's photo editing skills are passable, now believe that Jane went on vacation.

The experience machine user does not know that they are doing something fake while they are in the machine, but the social media user would be aware that they are doing something fake in such a situation. However, they are able to do something that is not real, or that does not

actually happen in the external reality. The ability to do fake actions and the ability to be convinced that these false actions or the false actions of others are real are an important part of the experience machine and social media. The overall similarity here is that in both the experience machine and social media use, the user is disconnected from reality.

In addition, social media users and social media algorithms work together to create a world that the user wishes to see. Much like experience machine users tailor their false life to suit their wants for happiness, so can social media users choose what they see online to some extent. A person who wants to travel can watch others do so, seeing places they might not otherwise and even seeing people interact with those places. A person who wants a dog can scroll through dog images and videos all day. People who primarily like funny videos will mostly be shown funny videos by algorithms; the experience of social media is tailored to the user by the user, just as it is in the case of the experience machine.

One of the most important similarities, but also a potential difference, between the experience machine and social media use may be time. The amount of time people, particularly adolescents, are spending online and on social media has increased tremendously. When a person enters the experience machine, they spend their lifetime inside. While this is not true of social media, a number of adolescents spend the majority of their waking hours online. They could theoretically choose to leave social media at any time, but many have virtual friends, so social time is spent online. They may even have classes online. Some adolescents may also suffer from some form of social media addiction that prevents them from logging off. In any case, the

amount of time that adolescents spend online may, in fact, be comparable to the experience machine even if they can take breaks.

While there can be real world consequences from social media, it is still a place where people see content that informs their internal realities. High social media screen times and the individual, non-external world experiences make it worth comparing social media use to Nozick's experience machine. If social media is comparable to the experience machine, does that suggest that Nozick is wrong in practice because people are voluntarily entering something comparable to the experience machine? Or, are there enough differences to continue to support Nozick's argument?

Social Media and the Experience Machine Differences

Even in discussing the similarities between social media and the experience machine, some important differences had to be noted. Most importantly, users know that they are online when using social media, while those in the experience machine do not, and social media has real world consequences, even if it is virtual and fake in certain ways.

Knowing that one is in a fake reality to some extent is an important factor in the comparison of the experience machine and social media. If one knows that what they are using or doing is not real, it changes their use. As a very basic example, when playing a video game, a person may have their character jump into water from a high cliff. This is not something the person would do in the real world because of the danger, but knowing that it is fake allows them

to act differently. In the experience machine, users live their lives as though it is entirely real. They have no indication that what they are doing is the external reality. The ways they treat others, the things they do, and the things they see are all entirely real to them, making up their whole perceivable world. On social media, people are aware to some extent that what they see can be false, though, as discussed in Section 3, our brains are not quite as good at distinguishing as one might hope. It does seem that social media users have a propensity to be immersed in social media and forget to look for indicators that what they see is false. Perhaps if people completely understood that social media was not real, individuals would not compare themselves and their lives to the lives of others as portrayed on social media. It is difficult to say conclusively the extent to which people recognize that social media use is not entirely real. Regardless, the potential to know that it is not the real world still serves as a difference between it and the experience machine.

Another significant difference between the two is the potential for real world consequences. This is the most clear difference and one of the most important. In the experience machine, a person has no real world impact. Nozick describes the machine as being a stimulation of the brain that creates the sensation of having certain experiences, so everything occurs exclusively in the brain of the user and nowhere else. The user's actions in the machine impact no one else, and there is no way for them to impact anyone else because the user is alone. Further preventing real world consequences, users are in the experience machine for their entire lives, and they are unable to leave. They cannot exit the machine and rewrite the novel they wrote in the machine; they cannot exit the machine and tell others of their relationships with others or any accomplishments. This is very different from social media. First, anything on social media can

reach a number of people. Each person who sees a message on social media will interpret the message and it can impact their lives. For example, a fake headline or article about the health benefits of eating more cookies may appear on many people's social media feeds or timelines. People who read the headline may then buy more cookies next time they are at the store. They may even tell their friends or family members about how great it is to eat more cookies the next time they gather in person. In this way, even a person who never uses social media may be impacted by others' use of it. This is different from the experience machine, which involves only the individual user, whose actions only impact themselves. In the experience machine, though they feel like they are with others, they are plugged in alone, and no one else is impacted by their use of the machine.

Another meaningful way in which social media impacts the real world ties back to a similarity between the experience machine and social media; both distort users' views of reality. In the experience machine, this distortion does not affect others, and, arguably, it has less of an impact because it does not change the way that the user and environment interact with one another. The distortion of reality for social media users, on the other hand, is very impactful. It changes the way the user sees, interprets, and treats the real world. Even voting in politics can be affected by social media use. Many people acting based on distorted internal realities in the real world is very interesting and a major difference between social media users and experience machine users. In the experience machine, users act based entirely on their internal reality, but they also act only upon their internal reality. Their actions in the machine do not affect the outside world.

It is also important to reemphasize the notion that social media users could log off at any given time. Experience machine users cannot leave the machine for their entire lifetime in most iterations of the thought experiment because the purpose of the thought experiment is to determine whether people would trade reality for a guaranteed good life. Social media users, especially the adolescent population of interest, have the rest of their lives to decide to leave. If adolescents chose to stop using social media one day, they could live the rest of their lives in the external reality world. Even if a social media user chose to log off for one day, they would have external reality experiences. Their perception of such experiences may be distorted by previous social media use, but social media users still retain the ability to leave the social media world because it is not all-encompassing in the way that the experience machine is.

Is Social Media Comparable to the Experience Machine?

In some ways, yes, social media and the experience machine are comparable. In other ways, the two are vastly different. The similarities do reveal some harms of social media though. Finding that it is preferable to be closer to external reality, the reality distorting effects of both social media and the experience machine are a harm to the user. Just as the experience machine pulls people away from the external reality, so does social media. Particularly when an adolescent is spending a large amount of time, like multiple hours per day, on social media or even online, they are spending a significant chunk of their time engaging away from external reality. Away from external reality, their internal reality gets distorted by the ability for online deception. If external reality is important as it seems it should be, then the harm from social

media that is a result of significant time spent distorting reality is comparable to the experience machine. This also means that, just as Nozick argues people should refuse to enter the experience machine, people should not participate in excessive social media use. Following the classical claim that it is fundamentally proper and morally good for human beings to make contact with external reality, the way in which social media limits that contact makes excessive social media use morally objectionable. Though, some contact with external reality is better than none, making social media use morally preferable to the experience machine under normal circumstances.

Despite the worrisome psychological research and the philosophical importance of engaging with external reality, evidence shows that people are choosing to engage in internal rather than external reality to some extent. This brings about the question of why people choose to engage with social media when Nozick predicted that people would not want to enter the experience machine. This question seems best answered by considering the benefits of social media use discussed in Section 2, particularly the benefits that teenagers report feeling. Additionally, it helps to look at the differences between social media and the experience machine. In theory, social media users can exit an app or website at any time, while the experience machine requires a user to exit reality permanently. Social media also allows users to stay more connected to external reality than the experience machine allows. Social media impacts the real world, and users are also somewhat more aware of the potential for things they see online to be false. Overall, the similarities do suggest that people should not use social media excessively because it reduces their contact with external reality and is associated with negative psychological outcomes.

As mentioned when discussing the experience machine, the matter of what one should do is different than what one would do. People would and do use social media, but it seems that they should not be so willing to spend excessive amounts of time on such platforms. Despite this, the temptation to spend even more time online continues to grow as better algorithms and new platforms are developed. One such platform that is quite different from previous forms of social media, is that of the Metaverse.

Facebook Metaverse

In October of 2021, Facebook's parent company changed its name to Meta and introduced a new project: the Metaverse. The Metaverse is an ambitious use of augmented and virtual reality that allows users access to a virtual world. It highlights socializing, learning, and collaborating, and playing, with the keynote video showing people doing a variety of activities online. There is a woman exercising on a stationary bike in her living room while using smart glasses connected to the Metaverse that show her cycling with others' virtual avatars. There are virtual offices and virtual ski trips. There are even virtual homes that the user can decorate to their liking. While not actually legal, a couple even had their wedding ceremony in the Metaverse (Kurutz, 2021). Essentially, the Metaverse, even if not advanced enough yet, presents the possibility of a virtual world one could live in. Covering hobbies, socializing, and work, the Metaverse provides much of what people desire from the world.

While it does not seem likely that people will jump into the Metaverse and actually begin living there, the possibilities are interesting. Reactions to the Metaverse are also interesting.

Similar to what Nozick expected with the experience machine, many people are not enticed by the idea of living in a fully virtual world. As the internet reacts to many things, the response to Facebook Metaverse was rather negative by individuals. In a survey of 1,001 U.S. adults, most were either uninterested, concerned, or suspicious of the Metaverse, though concerns about privacy likely play a role given Facebook's history.

Given the psychological and philosophical connections with social media use and the way in which social media continues to grow in areas like virtual reality used in the Metaverse, discussions regarding what, if anything, ought to be done about social media use, particularly for adolescents.

Limiting Social Media Use

Combining the discussed psychology and philosophy, should we limit our social media use? Should someone like Jane? What about Jane's parents? Should the government be involved in limiting social media use? Should social media companies themselves be involved? Based on the findings, though limited, it seems as though individuals, at least, should monitor their social media use in order to avoid potential consequences psychologically and morally. However, questions remain about who else ought to be involved in regulating social media use.

At the individual level, the psychological research presented in Section 3 suggests that a very limited amount of time spent online may be beneficial for some individuals with special circumstances. However, beyond that limited amount of time, social media use is associated with

negative mental health, social, and cognitive outcomes. By limiting social media use, one may avoid these associations. For someone like Jane, the associations between social media and positive outcomes are not as likely to occur, so it may be in Jane's best interest to never or almost never use social media. Additionally, because more contact with external reality is preferable, people under normal circumstances should limit their time engaging in internal realities presented by social media use. The less social media one uses, the closer to external reality they will be. If one agrees that external reality matters, then that person ought to limit their social media use.

It is also worth considering actions beyond that of the individual, such as the roles, if any, that companies and even the government should play in social media regulation. Companies that manufacture phones, like Apple, can include options for limiting social media use and screen time. Options for parental control that allow parents to set time limits for apps on devices, prevent their children from clicking on links to other websites, and stop children from downloading new apps without parental permission can be helpful in limiting what children are able to do online and on social media. There is an additional question of whether companies should implement measures like these, and whether they have an obligation to do so. These questions will not be addressed in depth in this paper, but, assuming that the actions of companies have the intended effect, it seems to be worth it.

A major worry when it comes to companies being involved in limiting use of smartphones and similar products is that the companies are overstepping and controlling the users' actions. However, simply adding options that allow parents to better monitor and manage

their children's social media and even allow individuals to monitor and manage their own use will not control how the users can use their devices. More options simply give a better opportunity for managing social media and smartphone use to those who want that option. There are, of course, other factors involved in companies' involvement, but it seems companies should add more of these features so long as they are optional.

For social media companies, similar options could be implemented. Social media apps could add simple measures like optional timers and manual filters that override algorithms for what content is shown to the user. Instagram also has a feature that flags social media posts containing certain content. In the United States, any content that mentions the COVID-19 pandemic is flagged with a statement about how to find correct information and a link to the CDC. The responsibilities of these social media platforms are also interesting to consider because the level of responsibility is difficult to determine. Users choose to download an app and use it, but social media addiction and algorithms designed to capture users' attention for as long as possible complicate this. Someone may make the choice to join a social media platform but not be fully aware of the potential risks of spending too much time online, especially because social media use is so commonplace. Adolescents are a separate but somewhat similar consideration as well because their capabilities for understanding are not always fully evolved. On the companies' side, the goal of these social media platforms is to have high engagement from users. The companies want as many users on their websites for as long as possible, so these limits are not necessarily within their interests. Regardless, it seems that social media platforms should also have some method for users to attempt to manage their own use.

Another interesting group to examine is that of the content creators, or those who post on social media. Should social media influencers and even average posters be responsible for contributing to the website? Are posters responsible for contributing to distorting others' internal realities by posting a picture with a filter on it? Social media posters use the platforms as they are designed to be used, but that does not necessarily mean that the use is okay. Again, these questions are beyond the scope of this paper, but they are interesting nonetheless. For this paper, it does seem worthwhile to discuss a near self-regulatory function of social media. When an online post is deemed negative, wrong, or inappropriate by a group of people online, that group of people works to get the person cancelled. This involves spreading word about the poster doing something wrong and getting others to band together and demand an apology or retribution from the poster for their action. Without getting into discussion about whether cancel culture like this is right or wrong, cancel culture is a method the social media uses to regulate itself against creators it deems bad, which is incredibly interesting.

At the governmental level, intervention becomes even more complex. The government can issue recommendations for screen time and time spent on social media targeted at various age groups, but the government can also regulate companies more directly. While government decisions regarding social media are also beyond the scope of this paper, all of these potential limits or recommendations for limits are important to note because the internet is so expansive and unpredictable. It is unclear how social media use will change over time, but discussions of how to limit it are important based on previous findings.

So, should we limit our social media use? Yes, it seems we should. Smartphones and social media are still new and we are still refining their designs as well as how they should be used. There is much we still do not know about the effects of social media use, yet people currently spend hours per day online. More research is needed to know for certain what the effects are, how much time adolescents should spend online, and more. Although it is not clear how social media ought to be limited, based on current information, it seems reasonable to limit social media use as much as possible.

Conclusion

Based on psychological research and the value of reality, it seems as though excessive social media use is wrong and should be limited. Despite consequences associated with social media, individuals, especially adolescents who are at a pivotal developmental time, continue to spend hours per day online. They choose to engage in internal realities rather than external reality, and a philosophical examination suggests that this should not be the case because contact with external reality is important to life. Generally, however, emphasis should be placed on the excessive use of social media. Some connection with external reality is better than none, and, as it currently stands, social media use is not all or nothing. Smartphones are heavily relied upon but also can theoretically be used and avoided under normal circumstances.

The research presented in this paper is limited by scope and the constantly evolving nature of the subject. The internet is constantly developing along with the ways in which it is

used. Therefore, more research must be done on psychological impacts of and associations with the internet and social media.

Philosophically, research on potential positive implications of increased social media use would be interesting, as this was not something discussed in this paper. Just as there can be positive psychological associations, there may also be philosophical reasons for engaging more with social media.

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