Investigation of Specific Social Media Features that Unethically Exacerbate User Engagement

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Advisor

Kathryn A. Neeley, Associate Professor of STS, Department of Engineering and Society

Introduction

Social media use is popular among teens and young people. A Pew Research Center survey conducted among teens aged thirteen to seventeen years old indicated that "45% are online almost constantly and 97% use [some sort of] social media platform, such as YouTube, Facebook, Instagram or Snapchat" (Mayo Clinic, 2022 para. 1). The abundance of young people using social media is especially concerning when considering the ethics of the companies that run these platforms. Shown below in Figure 1 is a bar graph representation of Big Village survey results from users of various social media platforms. Participants were simply asked if they viewed a certain social media company as ethical or unethical overall.

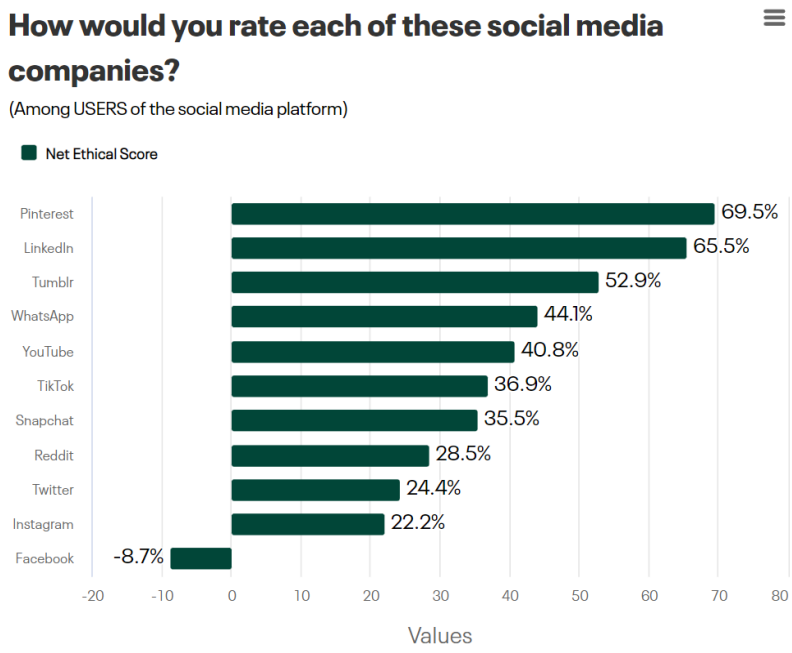

Figure 1. Survey data of social media users regarding that specific company's ethicality. The percentage of votes for "unethical" were subtracted from the "ethical" votes so that a positive score indicated ethicality and a higher score meant a more ethical company. (Kelley, 2021).

Ethics are subjective by nature and people will never have identical values; however, actions are typically considered unethical if they are intentionally harmful, neglectful, or

deceptive. The survey results indicate that many social media users believe that the companies which manage their favorite platforms are often less ethical than desired, with Facebook being the only platform rated as unethical by its own users (Kelley, 2021).

Most criticism about social media is typically in regards to social media as a whole, or at most a specific platform. Many people, especially parents of social media users, are quick to raise concerns about the effects of social media use on psychological characteristics such as sociability and attention span; however, people rarely connect these psychological issues back to specific features of social media platforms. Researchers for the *International Journal for Environmental Research and Public Health* claim that "associations between anxiety disorder, depression, and problematic use of the smartphone have been observed (underlining the sincerity of this topic), but the causal relationship of effects between the constructs is still unclear" (Montag et. al., 2019, sec. 1.1, para. 1). I begin this analysis by identifying and discussing specific common social media features as well as their potential for harmful effects. The research is not limited to any one social media platform, but much of the analysis is regarding Facebook. I then utilize Actor Network Theory to identify relevant actors and analyze their motivations for making certain decisions. Finally, I will explain the significance behind social media companies taking advantage of users' ignorance by purposefully implementing unethical features into their platforms.

Supporting Argument I: Social Media Companies Deliberately Implement Harmful Features

There exists a significant disconnect between the reasons people use social media and the motivations behind the companies that produce and manage that platform. For users, social media is a means to "share information… make connections… communicate with friends and

family, learn new things, develop your interests, and be entertained" (USF, para. 3). For companies, social media is a means of gathering personal data for targeted marketing. Companies such as Meta (which owns Facebook and Instagram) do not sell personal information directly; instead, "based on the information [gathered by Facebook], advertisers and other partners pay [Facebook] to show [users] personalized ads" (Facebook, para. 1). This means that the longer a user spends on a particular platform, the more information can be gathered about that individual. Therefore, social media companies are incentivized to influence the habits of their users without them even knowing. Being manipulated like this is often harmful to the user as they likely won't notice the changes in their behavior. This habit forming design is evident in several common features that are implemented across multiple social media platforms.

Identification of Features

In the research article "Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories," researchers focus on "six prominent psychological/economic mechanisms [built into] social media apps and/or Freemium games" (Montag et. al., 2019, sec. 3, para. 1). These six features are listed below in Figure 2, along with examples and a brief discussion of the significance of each. Only two of the six features—"endless scrolling/streaming" and "show users of an app what they like"—will be discussed in this research paper because they are tangible and passive aspects of social media platforms. The "endowment/mere-exposure" and "Zeĭgarnik/Ovsiankina" effects are not tangible features themselves, but psychological side effects caused by outside events. "Social pressure" and "social comparison and social reward" do discuss tangible features, but these mechanisms rely on the user performing specific actions rather than being truly passive.

Psychological Mechanisms Built-in Social Media/Messenger Apps and/or Freemium Games	Example/Illustration
Endless scrolling/streaming	As soon as one video is at the end on a website such as YouTube, the next video begins with either a similar content or the second episode of a TV show and so forth. By this, viewers get more and more absorbed, which makes it hard to stop watching.
Endowment effect/ mere-exposure effect	Every time players visit the app platform and invest more time in the construction of the virtual world, it will get harder for them to detach from the game or even delete the app. The endowment effect might be both explained by ownership and loss aversion. Also, of importance is the mere exposure effect describing that the more often you are exposed to a certain (neutral) thing or application (here a game), the more you like it.
Social pressure	Illustration from a WhatsApp feature: If a user sends a message to a friend, the sender is presented with two gray ticks, which means that the message has successfully arrived at the recipient's phone. If the recipient reads the message, the grey ticks turn blue. As both sides know about these rules, social pressure emerges. Both parties likely expect a fast answer, above all, if the message apparently has been read.
Show users of an app what they like	Facebook has a great interest in studying the behavior of each person at perfection and in much detail, so that at best only such information is presented in the 'Newsfeed' which is most interesting for the user. Otherwise, people could get bored and close the browser window.
Social comparison and social reward	Perhaps one of the most prominent features of social reward mechanisms in social media is the iconic 'thumbs up'. A 'thumbs up' ('Like') demonstrates either positive social feedback on one's own post or gives another person such a feedback.
Zeĭgarnik effect/ Ovsiankina effect	The Zeigarnik effect refers to better remembering of tasks, where a person has been interrupted. Rickers-Ovsiankina then showed that such interrupted tasks are more likely to be finished later on (even if one is not forced to do this). Illustration: Some levels in Freemium games are very hard to solve and in case of Candy Crush Saga it is even mentioned that a "super hard level" is coming up. As some of these levels are "super hard" to solve (rumor has it that it is even impossible at first try), players easily loose several of those free lives ending up with no energy to finish this "super hard level". Being now really attracted by the game, this results in emotional strain which consequently provokes people to spend extra money to buy additional lives/gaming energy, because the next level is only a couple of minutes away.

Figure 2. Six addictive features of social media platforms/Freemium games. (Montag et. al., 2019, sec. 3, para. 1)

The first feature, "endless scrolling/streaming," exists in many different forms. Endless streaming in services such as Netflix or YouTube is often called "AutoPlay" and involves automatically queueing and playing a video as soon as the current video ends. This is similar to traditional television in the sense that as soon as a particular scheduled program ends, there is another that automatically follows; however, the following program is already determined by the television network and has nothing to do with the viewer. Since streaming services are available via the internet, developers can employ algorithms that analyze individual user data to automatically select content that the user might enjoy. Endless scrolling is slightly different; it allows a user to continuously browse through content without ever reaching an endpoint or having to click a "next page" button. YouTube and Snapchat both employ endless scroll in a way

that allows the user to infinitely scroll through content until they find something to click on. TikTok pioneered a version of the endless scroll that removes the user's need to browse through content. Upon launching the app, TikTok opens onto its "For You Page" which instantly starts playing a short video. Once this video is done the user can scroll down to move on to another short video that has been automatically selected for them. TikTok's massive success has led to other platforms implementing nearly identical features, such as YouTube Shorts and Instagram Reels.

Erin Rupp (2022) likened the effects of infinite scrolling to human eating tendencies. She references a study in which participants were presented with a bowl of candy and a large scooper, then were told they could eat as much candy as they wanted using the provided scoop. The experiment was repeated several times with different sized scoopers, and it was found that participants would eat far more candy when provided with a larger spoon (Geier, 2006). The size of the spoon provided participants with a visual cue of when they should stop eating. When viewing content online, reaching the end of a page elicits a similar reaction to stop consuming; however, the implementation of infinite scrolling removes this cue, leading users to spend much more time on the platform than they intended (Rupp, 2022).

While algorithms play a big role in making the endless streaming/scrolling features work, Montag et. al. (2019) discuss them as a type of feature on their own, paying particular attention to Facebook's "NewsFeed." The purpose of these algorithms is to gather as much data about a person as possible in order to cater content to their interests; most users are aware of this to some degree, but few truly understand the depth of the information collected. The collected data includes demographic, behavioral, and social information, among other things, "so that at best only such information is presented in the 'Newsfeed' which is most interesting for the user"

(Montag et. al., 2019, sec. 3.4, para. 2). In addition to tracking what posts its users award "thumbs up" to, Facebook also records how long users spend looking at individual posts; Facebook even uses "sentiment analysis… to understand not only what is interesting for their users but also in what mood they are" (Montag et. al, 2019, sec. 3.4, para. 1). This extreme catering of content not only affects the amount of time that a user spends on the platform, it stokes confirmation bias and can alter a person's beliefs and values as well.

In a study conducted by Texas A&M's Dr. Michael Workman on the effect of social media on biases, Workman found that people who are steadfast in their opinions are more likely to seek information that aligns with their current beliefs. However, when a person is not 100% certain, they are much more likely to change their opinions based on social media commentary (SEHD Communications, 2019). Social media algorithms can take advantage of both of these groups; the more certain user might be placed in an "echo chamber" filled with confirmatory opinions, while the user with less confident opinions might be exposed to—and more inclined to believe in—radicalizing information. This phenomenon of altering beliefs based on catered content is largely evident with controversial issues such as religion and politics, especially in the United States.

It is widely understood by users and researchers alike that social media can be addictive, and that social media companies strive to gather as much information about their users as possible. The current business model surrounding social media relies on users engaging with the product as much as possible in order to provide the company with personal information for targeted advertisements. What is not so well understood is the reason why this business model is so common. Are there no ways in which a social media company can make money while its users interact with its product in a healthier manner? The following section explores this idea by

identifying relevant actors and investigating the incentives they might have to conduct business in the way they do.

Supporting Argument II: Actor Network Theory Applied to the System of Social Media

In "Using Actor-Network Theory to Analyze E-Government Implementation in Developing Countries," Carolyne Stanforth (2007) discusses the use of information and communication technology (ICT) in government. The article begins with the author explaining concepts such as "public sector reform, good governance, and ICT," (p. 2) along with examples of successful and failed attempts at e-government implementation. The author then draws from work by Michel Callon and John Law to explain actor network theory and the roles played by the local and global networks in the implementation of e-government.

The global network consists of higher level actors who might sponsor the goal, while the local network concerns the actors which work directly to implement that goal. Stanforth (2007) emphasizes that successfully meeting the goals of a project requires "the active and mobilized support of both networks" (p. 18). To ensure the cohesion between actors of the global and local networks, Stanforth recognizes that the existence of an "obligatory point of passage" (OPP) between the two is necessary. Below in Figure 3 is an example that Stanforth included from work by Micheal Callon to demonstrate the importance of the OPP. Callon's work concerns a successful project to save the declining scallop population in Saint Brieuc Bay, France. All of the actors depicted in Figure 3 are of the local network; the three researchers served as the connection point between the local actors (fishermen, scientific colleagues, and scallops) and the global network actors that sponsored the project.

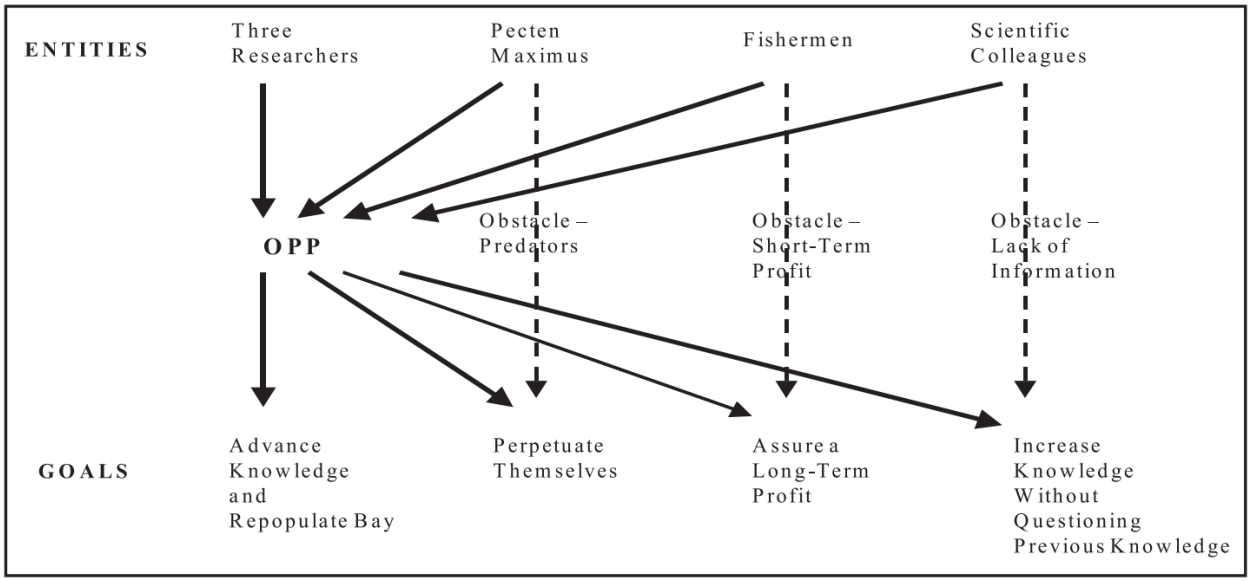

Figure 3. Power in translation (Callon 1986). This model shows successful implementation of an obligatory point of passage between the local and global networks.

In her own analysis, Stanforth uses Callon's power in translation model to demonstrate how the lack of an OPP negatively affected the implementation of e-government in Sri Lanka. Figure 4 below shows the obstacles and goals associated with actors within both the global and local networks. Since there is no explicit connection between the two networks, the goals are not aligned and problems arise. In my own analysis I plan to use ANT in a similar manner. However, there is a key difference between my investigation of social media features and Stanforth's e-government scenario; the overarching goal of establishing an integrated financial management information system (IFMIS) is more apparent than the goals of social media companies. In my investigation of social media features there is a broad variety of actors which have many different goals and responsibilities relating to the system. While this distinction presents challenges to porting Stanforth's and Callon's models into this analysis, the main reasons for choosing actor network theory still remain.

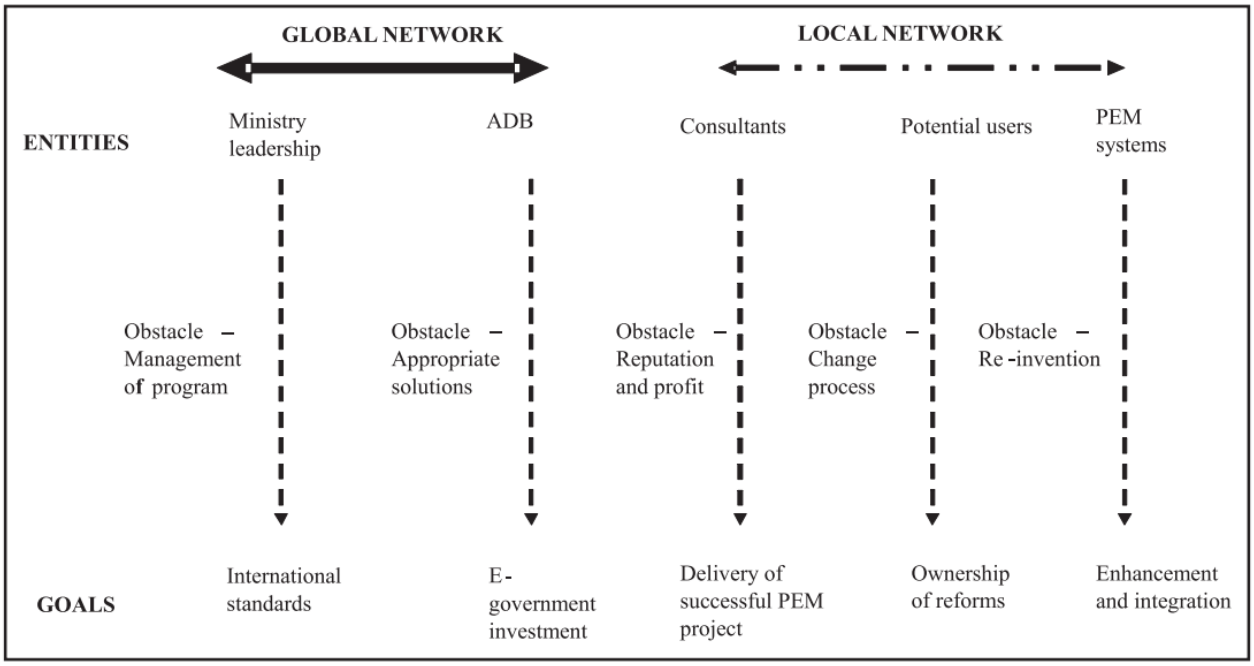

Figure 4. Power in translation model relating to implementation of e-government. In this model, the lack of an obligatory point of passage causes issues with workflow and common goals. (Stanforth 2007, adapted from Callon 1986).

Stanforth chose actor network theory for three main reasons. The first two reasons are similar; it is well established and is relatively stable. She claims that "there is an important hinterland of work explaining, critiquing, developing, and applying the theory" and that rather than going through many changes over time, "later presentations [of ANT are] building on the original theory" (Stanforth, 2007 p. 4). The third reason may be the most important for this situation; it eliminates biases about the relationship between technology and society by not jumping to any conclusions. ANT "overcomes some important limitations of the technologically deterministic 'ICT as an enabler' perspective taken by some management literature" (Stanforth, p. 4).

It is often difficult to avoid jumping to an obvious conclusion. Especially in large systems where certain groups are being disparaged, it is easy to assign blame to a specific group of people or even an individual person. It is typically the people who are regarded as having power

who are most likely to be placed at fault. This is in large part because humans are capable of performing actions at will; a machine or an ideology cannot act on their own, so there must exist some level of human involvement. However, this does not mean non-human—or even non-tangible—entities cannot have large influence over a system. ANT is excellent for not only avoiding assumptions about the system, but for considering the importance of non-human actors as well. It's easy to claim that billionaires like Mark Zuckerberg are out of touch and perpetuating many of the issues, or that a hyper focus on the economy is to blame; however, it is imperative to consider the situations surrounding these actors. I will attempt to avoid biases by following specific steps in my analysis. First I will simply identify relevant actors to determine the scope of my research. Then I will categorize those actors into global and local networks and, if one exists, identify the OPP. Only after analyzing the relationships between the global and local networks, as well as between the actors within those networks, will I speculate on the goals and obstacles associated with each actor.

Supporting Argument III: Using ANT to Identify Influential Actors Involved With Social Media Technology to Better Understand the Business Model

The system of social media as a whole is very haphazard. As mentioned before, the analysis of the e-government scenario was based on the overarching goal of establishing an IFMIS. However, the goal of implementing these specific features into social media is unknown; achieving a better understanding of these features as well as the social media business model is the purpose of this analysis. In addition to not having a straightforward goal, there does not exist an explicit OPP; rather, the global and local networks operate almost independently, and the concern for the user's psyche is lost in the disconnect. Figure 5 below is a power in translation model of actors involved in social media from the perspective that social media is intended to foster communication via the internet in a manner that is profitable yet transparent and ethical.

Similar to Figure 4, this model shows the issues that arise in a system when there is not an OPP, including inefficiency and opposing goals. Based on these discrepancies, I have arrived at two central claims.

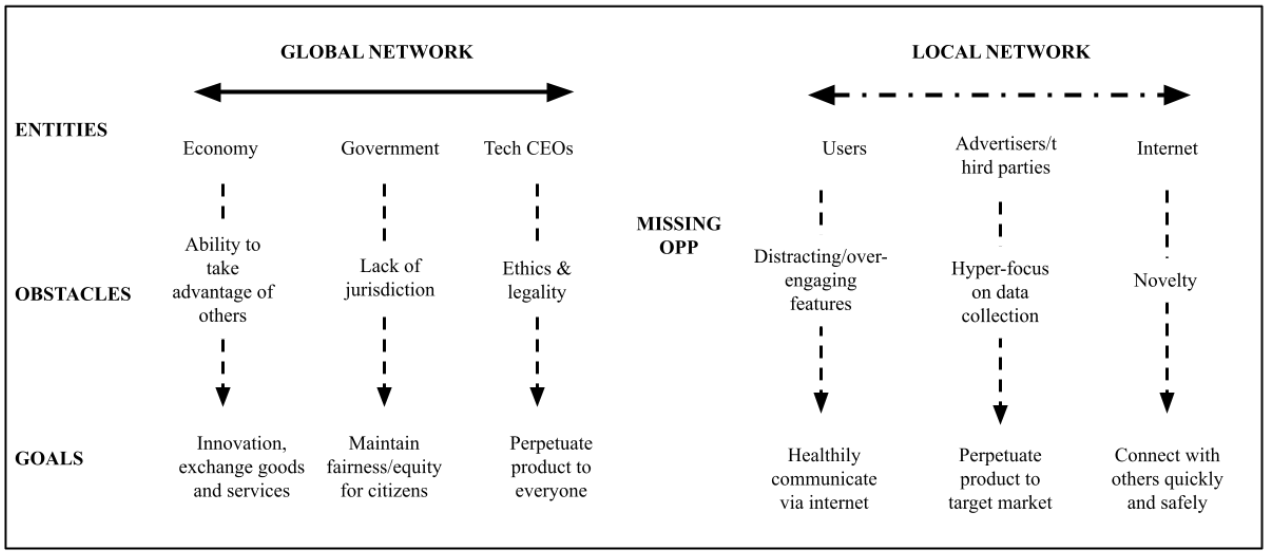

Figure 5. Power in translation applied to social media. (Dixon 2022, adapted from Callon 1986).

1. *There do not exist strong enough economic incentives for social media companies to change their business practices.*

The following quote is a statement from Illinois Democrat Robin Kelly—directed at CEOs Mark Zuckerberg (Meta), Jack Dorsey (Twitter), and Sundar Pichai (Alphabet)—from a congressional hearing titled "Disinformation Nation: Social Media's Role In Promoting Extremism And Misinformation." The focus of this research is on specific features included in social media platforms, not on content or moderation. This quote, however, sets up the idea that social media companies may deliberately engage in unethical activity against the best interest of their users.

> "The business model for your platforms is quite simple: keep users engaged. The more time people spend on social media, the more data harvested and targeted ads sold…Algorithms on the platforms can actively funnel users from the mainstream to the fringe, subjecting users to more extreme content, all to maintain user engagement…And your companies' insatiable desire to maintain user engagement

> will continue to give such content a safe haven if doing so improves your bottom line" (Edelman, 2021 para. 4).

Capitalism, economic output, or money in general are all often cited as root causes for many of the situations reviewed in STS. For instance, two of The Boeing Company's 737 MAX aircraft crashed while carrying passengers due to faults in the maneuvering characteristics augmentation system (MCAS). Pilots of the aircraft were unaware of the MCAS protocols because Boeing only expanded upon the training for the 737 NG line of aircraft rather than providing completely separate training for the 737 MAX. This lack of training saved Boeing millions of dollars in the short term, but after two crashes and 346 deaths they were forced to pay a $2.5 billion settlement (Voa News, 2022 para. 1-2).

The systems of commercial air travel and social media are similar in that they are relatively recent yet very large, well-developed systems that, while they are privately run and owned, play large roles in society and government. These systems are large enough that in many situations they are able to essentially throw money at any legal issue until it goes away. For example, although Facebook (now Meta) has not been held directly accountable for any deaths, the company paid a $5 billion settlement to the Federal Trade Commision (FTC) in 2019. According to Forbes, the FTC allegedly could have fined Facebook ~$107 million for "failing to protect users' data from being collected by Cambridge Analytica"; however, since Mark Zurkerberg was going to be held personally liable, Facebook paid nearly fifty times that amount to protect him from liability (Forbes, 2021 para. 2-3). A tech CEO like Mark Zuckerberg is not just the owner of a social media company; he is the company's public image, and tarnishing that image would likely be more detrimental to Facebook's business than losing the $5 billion.

Although Facebook received a penalty from the FTC, social media in general is not governed by a regulating body. According to the FTC website, "the FTC enforces federal

consumer protection laws that prevent fraud, deception and unfair business practices" (FTC, para. 1). Hence the fine was concerning their business practices, not the content of their platform. If there were to be any government regulation of the platform's content, that would likely be the responsibility of the Federal Communications Commision (FCC). However, "the FCC does not regulate online content," generally only "over-the-air broadcasts by local TV and radio stations are subject to certain speech restraints" (FCC, 2022 para. 5). Even if Facebook and other social media companies were subject to regulation by the FCC, it's possible that they could exercise their influence to avoid having to fully comply. This happened in the Boeing 737 MAX incident; documentation shows that Boeing actively covered up the issues with the MCAS and misled the Federal Aviation Administration (FAA) to get the 737 MAX to pass certification (Voa News, 2022 para. 7).

Facebook makes the vast majority of its revenue through advertising, and it follows that the more time a person spends looking at ads, the more money the platform and the advertisers make. However, according to Zuckerberg, "it's a common misconception that [Facebook] teams even have goals of trying to increase the amount of time that people spend," (Edelman, 2021 para. 7). Social media is said to be an attention economy where, since the service is monetarily free, the user literally pays with their attention and information. While it is true that both Facebook as an entity as well as its users could take actions to curtail the effects of social media's attention economy, it is often overlooked that there are thousands of companies which pay Facebook for access to its users.

2. *Social media is such an emergent mode of communication that users aren't sure what practices are acceptable.*

To better understand why people might use social media, it is important to consider the nature of human communication. Communication is undoubtedly one of humanity's most

valuable characteristics; it is what makes the propagation of knowledge and ideas possible. According to Mark Pagel (2017), it is quite possible that "language has played a more important role in [humanity's] recent (circa last 200,000 years) evolution than… genes [have]" ("Abstract" section, para. 1). The importance of the ability to communicate can be better understood by considering its evolution. In the earliest humans, body language and symbolic drawings could be used for the transfer of basic ideas. The development of spoken language allowed humans to share more specific and complex concepts between individuals and small groups and could be passed down through generations. Written language greatly exacerbated the transfer of ideas, allowing them to be spread across the world and through generations without adulteration due to human biases. Finally, in the modern age, social media has allowed for the transfer of ideas to nearly any location on the planet almost instantly.

Communicating with one another is something that humans have evolved to do, and until recently the available methods of communication only allowed for the transfer of a very limited amount of information. Compared to people who only communicate through speech and writing, users of social media have very little prior knowledge of conventions and customs to go off of. The novelty of this system makes users vulnerable to becoming addicted.

There are many actors, both human and non-human, that affect the way social media is created and used. Capitalism, user personal data, and the CEO themselves are all relevant actors in the relationship between social media platforms and the economy, and more actors exist outside of the economy. While it is not yet clear how the business model surrounding social media and the economy of attention can be improved, this research demonstrates that there is a need for reform.

Conclusion

Despite the level of immersion and connection that social media is purported to bring to its users, the system of social media as a whole is very disconnected. Actors within the global and local networks do not interact enough and their goals are very misaligned, leading to detrimental outcomes such as a product that is addictive and harmful to its users. More specifically, the lack of connection between not only the local and global networks, but actors within each of these networks as well, has led to the implementation of features that keep users engaged more often and for longer periods of time than the user intends. These features include endless scrolling, autoplay, and tailoring algorithms that passively entrap the user. While people can only speculate the true intentions behind these features, it is certain that the companies are not transparent with these practices, and as a result social media addiction is not uncommon. It is the responsibility of the social media company to ensure that its users understand the potential impact extended use may have on their health. If users do not become more aware of the mental effects these features can have, then they will continue to be sucked in and taken advantage of by the platforms that they praise. While it may be tempting to place unilateral blame on the company—possibly even rightfully so—it is still important to consider the roles of other relevant actors as well as the situation surrounding the system in question. ANT is excellent in this regard, as it forces researchers to broaden their scope. However, this advantage of breadth also makes it difficult to perform an in-depth analysis; therefore this research is very high-level. Regardless, for a system of this nature it is imperative to consider both human and non-human actors.

REFERENCES

Agence France-Presse. (2022, May 3). Families of Crash Victims Challenge Boeing Settlement in US court. VOA News. https://www.voanews.com/a/families-of-crash-victims-challenge-boeing-settlement-in-us-court/6556276.html

Callon, M. (1986). "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay." In Power, Action and Belief: A New Sociology of Knowledge? ed. J. Law, 196–233. London: Routledge & Kegan Paul.

Dangor, G. (2021, September 21). Facebook overpaid FTC fine by billions to protect Zuckerberg, lawsuits say. Forbes. https://www.forbes.com/sites/graisondangor/2021/09/21/facebook-overpaid-ftc-fine-by-billions-to-protect-zuckerberg-lawsuits-say/?sh=520a431e352e

Duffy, C. (2021, October 25). The Facebook Papers may be the biggest crisis in the company's history. CNN Business. https://www.cnn.com/2021/10/25/tech/facebook-papers/index.html

Edelman, G. (2021, March 25). Social media CEOs can't defend their business model. Wired. https://www.wired.com/story/social-media-ceo-hearing-cant-defend-business-model/#:~:text=%22The%20business%20model%20for%20your,amplify%20content%20that%20gets%20attention.

Facebook. (n.d.). Does Facebook sell my information? https://www.facebook.com/help/152637448140583

Federal Communications Commission. (2022, August 31). The FCC and speech. https://www.fcc.gov/consumers/guides/fcc-and-speech#:~:text=Over%2Dthe%2Dair%20broadcasts%20by,restraints%20and%20obligations%20on%20broadcasters.

Federal Trade Commission. (n.d.). Enforcement. https://www.ftc.gov/enforcement

Geier, A. B., Rozin, P., & Doros, G. (2006). Unit Bias: A New Heuristic That Helps Explain the Effect of Portion Size on Food Intake. *Psychological Science, 17*(6), 521–525. Retrieved from https://doi.org/10.1111/j.1467-9280.2006.01738.x

Kelley, J. How ethical are social media companies? Big Village. https://engine-insights.com/blog/how-ethical-are-social-media-companies/#:~:text=The%20average%20net%20ethical%20score,and%20Baby%20Boomers%20(%2D30)

Mayo Clinic Staff. (2022, February 26). Teens and social media use: What's the impact? Mayo Clinic. https://www.mayoclinic.org/healthy-lifestyle/tween-and-teen-health/in-depth/teens-and-social-media-use/art-20474437#:~:text=Social%20media%20is%20a%20big,%2C%20Facebook%2C%20Instagram%20or%20Snapchat

Montag, C., Lachmann, B., Herrlich, M., & Zweig, K. (2019). Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories. *International Journal of Environmental Research and Public Health, 16*(14), 2612. MDPI AG. Retrieved from http://dx.doi.org/10.3390/ijerph16142612

Pagel, M. Q&A: What is human language, when did it evolve and why should we care? BMC Biol 15, 64 (2017). https://doi.org/10.1186/s12915-017-0405-3

Rupp, E. (2022, February 28). The infinite scroll: Why it's so addictive and how to break free. Freedom. https://freedom.to/blog/infinite-scroll/

SEHD Communications. (2019, February 25). Can social media change our opinions? Texas A&M School of Education and Human Development. https://education.tamu.edu/can-social-media-change-our-opinions/

Stanforth, C. (2007). Using Actor-Network Theory to analyze e-government implementation in developing countries. *Information Technologies and International Development,* 3(3), 35-60.

University of South Florida. (n.d.). Introduction to social media. https://www.usf.edu/ucm/marketing/intro-social-media.aspx#:~:text=Billions%20of%20people%20around%20the,your%20interests%2C%20and%20be%20entertained