Infinite Scrolling Steals Social Media Users’ Time and Attention

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Introduction to Infinite Scrolling

Most social media platforms have an almost imperceptible feature: infinite scrolling. This feature allows users to scroll endlessly down the page on their smartphones with no end to the content being loaded on the screen. Whether it is loading more posts, images, comments, or videos, the infinite scroll never reaches the bottom of the page. Infinite scrolling leads to excessive amounts of time wasted on social media because it is specifically designed to capture users’ attention and keep them on the app. Social media companies and designers of these apps should be ethical and not purposely implement features that are meant to be addictive. Because there is a seemingly infinite amount of information that is displayed as users scroll on these apps, they do not realize how much media they are consuming and can lose track of time, often spending hours scrolling until they remember their original task.

The purpose of this paper is to show how infinite scrolling creates issues for social media users without them fully being aware of it, especially as it relates to psychology and ethics, and to offer potential solutions for the regulation of this addictive feature and the awareness of it by consumers so they can be more conscious of companies’ tactics to get them to use an app for as long as possible. I provide overviews of how infinite scrolling poses a problem to social media users as well as the root causes of these matters based on psychology, business strategy, and design ethics. I will highlight the Uses and Gratifications theory and attention economy throughout as they relate to this issue. Finally, I end by proposing solutions for both social media companies and consumers to change the infinite scrolling feature so users think of a plan for how long they will use the app and have less of a passive role as they scroll, and I propose that social media designers create an alternative that requires a conscious choice by users for an app to load more content as they are scrolling on it.
Literature Review

As of 2019, about “2.71 billion humans use a smartphone worldwide” (Montag et al., 2019). Many of these smartphone users have a social media account on one or more platforms and spend time using social media each day. Some of the many social media apps that use infinite scrolling are YouTube, Pinterest, Instagram, Twitter, Facebook, and LinkedIn (Neyman, 2017). Infinite scrolling is defined as “the practice of automatically loading content once a user gets close to the bottom of the screen” (Springer, 2015). In theory, the content never runs out no matter what site a user is on because there is no real end to the page. This works extremely well on mobile smartphones because the screens are small and the grid layout of the content on apps is well-suited for scrolling through multiple times (Eyal, 2012). To run infinite scroll on an app, all that is needed is a short JavaScript code (Springer, 2015).

However, infinite scrolling is “designed to make users prolong their usage” on social media apps because it “lacks any stopping cues” (Noë et al., 2019). In other words, “[s]crolling is a continuation; clicking is a decision” (Bhanot, 2019). This is what makes scrolling through social media so addictive. The uncertainty about what will show up in the next post creates an element of surprise and causes a release of dopamine that makes a user feel good and want to keep scrolling (Eyal, 2012). The process is self-reinforcing and the cycle continues daily as the social media user continuously scrolls through the feed.

On apps that have a typical scroll bar on the side, people can use it as an estimate of how much content they will be receiving on a page. But infinite scrolling “breaks that implicit contract between publisher and user” because the user expected a certain amount of information but in reality received hundreds of pages more in a vertical format (Springer, 2015). When using social media, people are “vulnerable to consuming much more than [they] would normally
without realizing it” (Neyman, 2017). As a result, users spend much more time on social media apps than intended.

Social media pages are purposely “designed to auto-refill with reasons to keep you scrolling, and purposely eliminate any reason for you to pause, reconsider or leave” (Harris, 2016). Every feature on apps such as Facebook, Instagram, and Pinterest has carefully been selected and refined to decrease the amount of thinking capacity required to perform tasks and use the applications. There is not a conscious choice to be made when scrolling through social media, as seen with infinite scrolling, because the longer that companies can keep you on their app, the better it is for them. Social media companies do this primarily to get funding (Andersson, 2018). Andersson (2018) also explains how as more time is spent on an app, the more the stock price goes up, and the more money the company makes. From a business standpoint, infinite scrolling is akin to autoplay on videos (Springer, 2015). The next video or episode begins playing after a short countdown and the user does not even have to click a button because it is automatic. Like autoplay, infinite scrolling involves little effort and is, therefore, the preferred choice when using social media.

As seen from the psychological field, infinite scrolling can play tricks with people’s minds without them being aware of it. Our brains are trained to make good decisions about what we know is likely to happen in the future, and “nothing holds our attention better than the unknown” (Eyal, 2012). It is precisely because we are anxiously anticipating the content that comes as we continuously scroll that we keep scrolling. This is the basis for the attention economy: gain and retain people’s attention. Constantly scrolling “doesn’t give your brain time to catch up with your impulses” (Andersson, 2018). To make matters easier for users, all that is required to keep the content coming on a screen is a simple swipe up with the finger. By
endlessly scrolling, the “user is getting more and more immersed” and occasionally finds something rewarding like a funny or interesting post or video, so this “intermittent conditioning” continues (Montag et al, 2019). It becomes harder and harder to stop scrolling and get off once a user is absorbed in the media being presented.

There is a commonly cited study about visual cues and consumption conducted by Wansink et al. (2012). This study, called the Bottomless Bowl, was focused on the effect of removing visual cues to see how it affected the amount of soup people ate, but it can be applied to social media and infinite scrolling using the same principles. Some participants were given soup in a self-refilling bowl without the person knowing, and these people ate more soup than those who ate from a normal bowl. With the self-refilling bowls, 73% more soup was eaten, but those who ate from it underestimated how much they consumed by 140 calories. These participants did not believe that they ate as much as they did because they said they were not full; this is because the visual cue of an empty bowl was removed, so even though they kept eating, they thought they were not as sated. This study emphasizes the importance of visual cues in consumption because without them, we keep consuming. Similarly, infinite scrolling is like a bottomless bowl of soup: there are no visual cues on a phone screen that indicate a user is seeing more content as they scroll, and because there is no need to click a button to reveal more posts and images, users will continue to consume what is on the feed of the app and not feel full from all the scrolling.

Method

Collecting Information

I collected information for this argument by first reviewing the literature about infinite scrolling in academic journals and online articles. There have not been many studies conducted
about infinite scrolling in the academic databases I looked at, which is surprising, but I did find several other areas that relate directly to this prominent social media feature. The four main branches that correspond with infinite scrolling are business, computer science, psychology, and behavioral science. For business, social media companies use infinite scrolling to keep people on their apps for as long as possible so they make more money. The business and profit cycle drives this aspect of infinite scrolling. From a computer science viewpoint, social media and web designers use infinite scrolling because it looks better on mobile devices and keeps the phone screen uncluttered because there are not pages to click through. Psychology and behavioral sciences explain why social media can become addictive and why people spend vast amounts of time scrolling. Specifically, because humans are more prone to notice how much they consume through visual cues, rather than their body or mind telling them they are full, infinite scrolling bypasses the brain’s monitoring systems and people keep scrolling on social media.

**Convenience as the Root Cause of the Problem**

As I was gathering information, I realized that the main reason infinite scrolling has become a problem for social media users is that for the companies and designers that create these apps, infinite scrolling is a convenience rather than a necessity. That is to say, it is easier to get people to keep an app open and have them scroll through the almost endless content to serve the needs of business leaders and designers instead of the users themselves. Uses and Gratifications theory relates to this because people use social media for certain purposes, such as to establish their identity, cultivate relationships, and to be entertained and have their attention diverted from daily life. It is easy to get on social media for these purposes and have the media act as a diversion, but through infinite scrolling, companies continue that diversion for as long as possible, sometimes for hours at a time.
Infinite scrolling offers a simple solution to attract people’s attention and keep them wanting more as they scroll, all without them ever being fully conscious of how many hours they are wasting. Those at the head of social media companies want only quantity time, not quality time, from those who use their apps, so they will do whatever is most convenient to suit their needs. Such is the attention economy, because people’s attention is a scarce resource, so the more of it business can get, the better off they are. This comes at a cost to the user, however, in time wasted scrolling when it could be spent on productive activities instead of mindlessly surfing their Facebook or Instagram feed.

The fact that companies are exploiting social media users’ psyches should cause concern among such users, but infinite scrolling remains largely unnoticed by those who use it every day. This is because scrolling on a phone is effortless, and the new content that loads is enticing, so social media users have become accustomed to viewing posts and feeds in this format. They do not realize that one of the main reasons they are unable to get off an app after opening it to “just check posts” is because of the power of infinite scrolling. As a result, users often end up spending much more time than they realize on social media. An extra minute of scrolling can quickly turn into half an hour because users lose track of time. Again, it is not necessarily the users’ fault that they spend so much time on social media; rather, it is how the entire system is designed specifically to target the attention and time of users that is the true root of this trouble.

**Example Case of How Much a User Scrolls**

I wanted to know how far the typical social media user scrolls in a day and over a year. I was unable to find any exact measurements, although I did find a thought experiment on a blog by data scientist Leo Qin about how many miles someone scrolls on their phone (Qin, n.d.). Using the same principles, I estimated how far I scroll in a year. To do this, I opened the
Pinterest app on my phone to the main feed. I set a timer for two minutes and began scrolling through the pins, going through them and reading them at a typical speed. In my other hand, I had another phone with a clicker app. Each time I scrolled down on the Pinterest feed, I tapped the clicker screen. At the end of the two minutes, I had recorded 31 scrolls.

Next, I determined the average length of my swipes when scrolling. I did this by turning my phone off, putting my thumb where I normally swipe, swiping up, and recording the distance with a ruler. The average length of my swipes was 1.5 inches. That means each time I scroll on my phone, my thumb moves 1.5 inches. So in two minutes, my thumb scrolled about 46.5 inches or 3.875 feet. That is a lot of scrolling for just two minutes, but then I continued my thought experiment. If I use Pinterest for 30 minutes each day, I scroll 58.125 feet in a day, and 406.875 feet in one week. Over one year, if I continue my trend of using Pinterest for a half-hour each day, that results in 21,157.5 feet or just over four miles scrolled. These four miles may not seem like much, but these are conservative usages of social media apps. Based on my roommates’ and friends’ use of social media, who can sometimes average about three to four hours a day, the scrolling distance increases significantly, adding miles and miles scrolled per year.

While it is interesting to figure out the average distance someone scrolls on social media each year, what is more important is the time that is wasted on these apps because of infinite scrolling. In my experience, it is easy to get lost in scrolling and realize 20 minutes later that you have not been doing anything productive, so you feel guilty. This scene can play out several times a day, leading to more wasted time. It is difficult to break this cycle because of the way infinite scrolling is designed. Therefore, there need to be alternatives to infinite scrolling so social media users have a choice as to whether they are fed pre-loaded content with each swipe.

Solutions for Both Users and Social Media Companies and Designers
I will now propose several solutions to curb the addictive features of infinite scrolling and offer choices that will empower social media users and not the companies that profit from these features. The best solution is one that involves both changes in the way social media companies design features on apps and how users can be more conscious of the amount of media they are consuming by using metacognition. A better understanding between companies and the public will allow users to recognize the ways that social media is intended to occupy their attention and time so they have more say in how social media apps are created.

One solution is to have an icon that pops up on the bottom of the screen once a user has scrolled a certain number of times on social media. This icon could say, “May we suggest other topics?” Or there could be a button on the screen that requires users to click an advance arrow to see the next set of posts. Although these are simple suggestions, people will be required to pause a moment and think before opting to receive more content. This small pause could be enough for a user to reconsider how much time they have spent on the app and leave, rather than not having the icon or button and scrolling for hours on end. This solution provides a way to discourage users from continuously engaging with social media so it does not become so addictive.

Additionally, the technology designers of social media should be required to not harm social media users, including using features that make it easy for addictions to begin. Just as many physicians take the Hippocratic Oath to act in the best interests of patients, social media companies should have a similar requirement to act in the best interests of users and not knowingly use features that are made to fool the mind (National Library of Medicine, 2002). This could entail reverting to a pagination style for loading content so users must click through individual pages, and though it would take some adjusting, it allows users to have more choice in the amount of media they can receive. Instead of being able to infinitely scroll, there would be a
short scrolling limit and then the next content would pull up after clicking to go to the subsequent page.

Above all, users need to be more aware of the tactics social media uses to attract and retain their attention. This is called metacognition, which is the “aspect of cognitive processing being responsible for the monitoring, evaluation, interpretation and regulation of the content of cognitions” (Dragan & Dragan, 2014). Users should have a specific purpose in mind when opening a social media app and set a time limit so they do not spend more time than they need to. They should also know what they are doing on the app so they have less chance of becoming distracted from their original goal. For example, someone could plan to look through their feed on Instagram for ten minutes and message two people through the app, set a timer, and then quit the app once the time is up. This would prevent wasting time on the app because having a plan causes your brain to think rationally when confronted with options that could distract. Actively engaging in the thought process for using an app will lead to less time spent scrolling through posts which would normally be reinforced with infinite scrolling. In this way, metacognition can combat the enticing pull of infinite scrolling and ensure that users do not go on autopilot when using social media.

Conclusion

I have discussed the development and use of infinite scrolling by technology and social media companies so they can command the attention economy and keep users on their apps for large amounts of time, thus increasing their companies’ profits. I have also covered how infinite scrolling tricks the mind because of the absence of visual cues that alert of users how much media they have consumed. Infinite scrolling leads to excessive wastes of time and mindless scrolling until users are brought back to reality and feel guilty for how much time they wasted.
This topic is important because it affects all ages, from children to teens to adults. Anyone who owns a smartphone has been exposed to infinite scrolling, and social media sites utilize this key feature to ploy users.

Many improvements can be made by both social media companies and consumers to have more choices and be more conscious, leading to less time spent overall on social media and decreasing the likelihood of addiction to social media. Society must recognize that infinite scrolling is a problem before any action can be taken, but small adjustments will make all the difference. Whether it is the design of scrolling itself that changes to pagination or if it is a shift to icons that ask the user if more content should be loaded or if users simply become more aware of the strategies being used on them, a change is needed in how infinite scrolling is used so people can waste less time scrolling through content and not have to be at the mercy of unethical designs used by technology companies. Infinite scrolling does not have to demand infinite time from social media users—ideally, infinite scrolling will become scrolling with a purpose.
References


Bhanot, A. (2019, January 9). *Infinite scroll addiction: How Instagram just showed us they may be seeking to solve this trap*. Medium. https://medium.com/@anishbhanot24/infinite-scroll-addiction-how-instagram-just-showed-us-they-may-be-seeking-to-solve-this-trap-776ef75981b7


https://digitalcommons.calpoly.edu/cscsp/111/


Qin, L. (n.d.) *How many miles will you scroll?* https://www.leozqin.me/how-many-miles-will-you-scroll/
