SOCIAL MEDIA AND THE FLASHBACKED SELF: HOW MEMORY FEATURES ON SOCIAL MEDIA IMPACT USERS DURING THE COVID-19 PANDEMIC

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Abstract

Social media memory features — the evolving array of features that have emerged across social media platforms that notify or otherwise remind users about their past actions, engagements, and content on that social media platform from the same day in previous years — have existed for over a decade, but much is still unknown about their impacts on users. For this project, I explored how the memory features on Facebook, Instagram, and Snapchat affect users emotionally during the COVID-19 pandemic and how this compares to users' pre-pandemic experiences of these features by conducting an anonymous online survey with fifteen respondents. My results indicate that memory features can heighten feelings of nostalgia and can contribute to worsened body image during the pandemic, and can also remind users of their personal development independent of the pandemic. User complacency with social media memory features and their lack of control over them is also discussed. Ultimately, my research suggests that the impacts of memory features can vary widely, and that these impacts changed for some users during the pandemic, which might also be the case in future crises. I assert that social media users should be given more settings to control their experiences with memory features in order to allow them to meet their potentially changing emotional needs and to best support user well-being.

Keywords

Social media, Facebook, Instagram, Snapchat, memory features, Flashbacks, On This Day, Memories, memory, emotions, COVID-19 pandemic, emotional well-being, online survey

Content Note

This paper touches upon topics like grief and loss associated with the COVID-19 pandemic, as well as body image. Please take care when reading.

Introduction

When I woke up on the morning of April 30, 2021, I began my day the way I wish I never did, but always do: by checking my social media accounts on my phone. I tapped the little blue Facebook icon on my home screen first. When the app loaded, my screen was filled with a photo of my family's dog, Bryn, who was attempting to escape from my family's laundry room sink where she was tragically forced to have a bath. Puppy shampoo and soap bottles, knocked over from her attempts to scramble out of the sink, lined the sink ledge. Her shining brown eyes pleaded with my mother, whose body was out of the frame but whose hands were cupping Bryn's face in an attempt to soothe her, to let her out of the sink and away from the monster that is the hose we used to rinse her.



Figure 1. A screenshot of the Facebook Memories notification I received on Facebook's mobile app.

"Happy 7th birthday Bryn <3 She's kinda cute I guess," I had captioned the image.

(Fifteen-year-old me had thought that the understatement in this caption was hilarious.)

"Your Memories on Facebook," Facebook's words above the photo read. "Erica, we care about you and the memories you share here. We thought you'd like to look back on this post from 8 years ago."

In some ways, they were right — seeing this photo brought me a moment of joy and nostalgia. But that moment was followed by a wave of grief. Bryn passed away in my arms several months ago, over the October Reading Week. She had been my best friend, and an unofficial support animal to me for fourteen and a half years through mental illness, the usual highs and lows of adolescent and young adult life, and, for the eight months prior to her passing, the COVID-19 pandemic. The loss was especially hard since, due to the pandemic, I had spent almost every minute of my day at home and had gotten accustomed to seeing her sleeping in one room or another or coming to visit me while I worked in my bedroom, and to hearing the little *tip tip tip tip tip* of her paws walking across our tile floors. The house is quieter now. Emptier.

I closed Facebook without scrolling further, and opened Snapchat. After opening the messages I received overnight, I swiped to see the 'Flashbacks' I had for the day. I tapped through photos of Buckingham Palace, a massive case of fancy desserts at Harrods, and a not-so-subtle selfie I took at a high tea shoppe in order to capture a picture of the woman and her Instagram-famous dog who were having complimentary 'doggy high tea' at the table behind me, as well as a video of a man playing Justin Bieber's "Let Me Love You" on the saxophone on the streets of London.

"4 Years Ago Today," Snapchat tells me.

4 years ago. I took that trip to London with my older sister to celebrate the end of her undergraduate studies. For us both, it was the first time we had left North America, and between finishing one degree and starting another, having insufficient funds, and being in an intermittent state of lockdown for over a year, I had not left Canada since. I had not even

ventured outside of my town in months. But these 'Flashbacks' made me smile. Knowing that I would not be able to travel for the foreseeable future made reliving travel experiences through photos and videos a much-needed break from my everyday reality.

Both during and before the COVID-19 pandemic, I have noticed myself having strong emotional reactions like these to the memories that social media platforms have shown me — from joy, to nostalgia, to grief, to embarrassment and 'cringe,' to bitterness and resentment. Observing these reactions within myself led me to wonder about how others experience these memory features. Does the average social media user even engage with or take note of these features? Are the emotions they experience because of these features primarily enjoyable, unpleasant, or ambivalent? Has their emotional experience of memory features changed in light of the COVID-19 pandemic, which has resulted in major losses for some people — of loved ones, of jobs, of experiences — and has altered many aspects of our everyday lives, which could have the potential to make seeing and reflecting on memories of the past more emotionally fraught? And finally, what other research have media scholars conducted on these features, seeking to address these or similar questions?

Background

When I use the umbrella term 'social media memory features,' I am referring to the evolving array of features that have emerged across social media platforms that notify or otherwise remind users about their past actions, engagements, and content on that social media platform from the same day in previous years. In my research, I am focusing on the social media memory features that currently exist on Facebook, Instagram, and Snapchat. I selected these social media platforms based on their enduring and widespread popularity — Facebook was created in 2004, Instagram was created in 2010, and Snapchat was created in

2011¹ (seventeen, eleven, and ten years prior to the time of writing respectively), and one 2021 survey indicates that Facebook currently has 2.74 billion active users, Instagram has over 1.22 billion, and Snapchat has about 498 million.² Because these platforms have each existed for a decade or longer and continue to be popular today as these high numbers of active users indicate, the average social media user might be likely to have more 'memories' on these than other platforms, and may have more frequently encountered these platforms' memory features than those on other platforms. As such, Facebook, Instagram, and Snapchat's memory features have the potential to be most impactful on the average social media user. Throughout the remainder of this section, I will explain and explore each platform's memory features in the forms that they existed at the time of writing, as well as the degree of control that users of each platform have over these features.

Facebook: 'Memories'

Facebook's memory feature is called 'Memories.' *Memories* includes four subfeatures: 'On This Day,' which "show[s] [users'] past posts and major life events from this date"; 'Friends Made On This Day,' which consists of "a list of friends you made on this date in the past, including special videos or collages that celebrate your friendversaries"; 'Recaps of Memories,' which are "seasonal or monthly recaps of memories that have been bundled into a message or short video"; and 'Memories You May Have Missed,' which includes *Memories* "posts that [users] might have missed from the past week." Users can access *Memories* by clicking on the feature in the main Facebook menu or by clicking on a

^{1.} Maryville University, "The Evolution of Social Media: How Did It Begin, and Where Could It Go Next?," accessed July 10, 2021, https://online.maryville.edu/blog/evolution-social-media/.

^{2.} Statista, "Most popular social networks worldwide as of January 2021, ranked by number of active users," *Statista*, accessed May 2021, https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/.

^{3.} Oren Hod, "All of Your Facebook Memories Are Now in One Place," *About Facebook*, June 11, 2018, https://about.fb.com/news/2018/06/all-of-your-facebook-memories-are-now-in-one-place/.

Memories notification, and they may also be presented with *Memories* content in their Newsfeed.

Facebook does not explicitly disclose the algorithms that determine what past content users are shown through *Memories*. However, these algorithms exist, and reportedly favour 'shareable' and 'enjoyable' content.⁴ This focus on resurfacing posts that are more likely to be shared is telling, because 'shareable' memories are not necessarily the most or only valuable content for users to see through *Memories*. Memories may be valuable for users in a personal way that might not result in sharing with others, but rather in private reflection or reminiscence. However, shareability benefits Facebook — when users share more content on the platform, Facebook stays relevant for users to engage with⁵ — so this suggests that Facebook's intentions behind their *Memories* algorithms are at least partially self-serving, and genuine care for users may not be their primary focus.

Memories settings and user control

When evaluating the impacts of a social media memory feature, it is important to consider how much agency users have regarding their experience with the feature. If a user is given control over how or whether they encounter the feature, they have more agency regarding its impact on them. Facebook provides users some control over *Memories*, but this is limited. Facebook states, "You can't turn off Memories, but you can control what you see in Memories," including "hiding people or dates you don't want to be reminded of." 6

^{4.} Artie Konrad, "Facebook memories: The research behind the products that connect you with your past," *Prototypr.io*, August 25, 2017, https://blog.prototypr.io/facebook-memories-the-research-behind-the-products-that-connect-you-with-your-past-f9a1d8a49a43.

^{5.} Abby Ohlheiser, "Facebook is trying to get its users to share more about their personal lives," *The Washington Post*, April 8, 2016, https://www.washingtonpost.com/news/the-intersect/wp/2016/04/08/facebook-is-trying-to-get-its-users-to-share-more-about-their-personal-lives/.

^{6.} Facebook, "Memories," *Facebook*, accessed May 11, 2021, https://www.facebook.com/help/1056848067697293/?helpref=hc fnav.

While I, as a long-term social media user and someone who studies social media, find navigating to the *Memories* settings page to be an intuitive process, it might be challenging for less active or less tech-savvy users. To do so, users must select "Memories" from the main menu within Facebook or click on a *Memories* notification; enter the settings there; click on either "Hide People" or "Hide Dates;" and enter the users' names or a range of dates they wish to hide (there are some differences between the mobile app and desktop presentations of *Memories*; see Figures 2 through 7). Notably, on Facebook's mobile app, Memories settings are not visible to users on the main Memories page; they must click on a gear icon on that page to access them (see Figure 2), and consequently may not know that these settings exist. Alternatively, users who access *Memories* via a browser on their laptop or desktop see the settings listed on the side of the main *Memories* page, and thus can more easily see what control options are available for them (see figures 4-7). This decreased Memories settings visibility on the mobile app is especially significant considering that 81% of Facebook users access Facebook exclusively through their mobile phone.⁷ In addition, Facebook provides users with the choice to turn on, reduce the frequency of, or turn off their notifications about *Memories* (see Figure 3), but say that users "may still see some memories in [their] Newsfeed" even if they turn the notifications off. Thus, Facebook provides users with the illusion of control over *Memories*, while still subjecting them to encountering *Memories* regardless of the user's preference.

^{7.} Simon Kemp, "Digital 2021 April Global Statshot Report," published by *DataReportal*, we are social and *Hootsuite*, April 21, 2021, https://datareportal.com/reports/digital-2021-april-global-statshot.

^{8.} Facebook, "Memories."

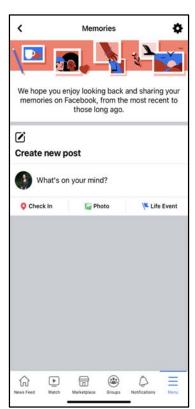


Figure 2: My *Memories* page on the Facebook mobile app. On this particular day, I did not have any memories to view, but they would normally appear above the "Create new post" area. To access *Memories* Settings, users must click on the gear icon in the top right-hand corner.

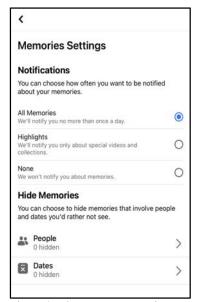


Figure 3: The *Memories* Settings page on the Facebook mobile app.

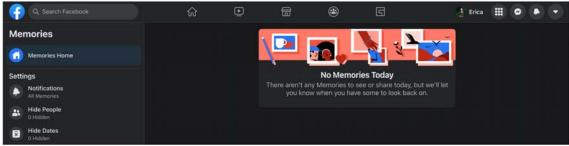


Figure 4: My *Memories* page on Facebook accessed through my web browser. I had no 'memories' available on this day, but they would typically appear where the "No Memories Today" message appears. The *Memories* settings bar is visible on the left-hand side of the screen, providing users with a preview of the kinds of control they are able to take over their experience with *Memories*. Note that I use 'dark mode' on Facebook web.

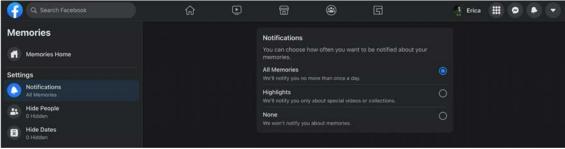


Figure 5: The 'Notifications' settings within Memories, on Facebook accessed through my web browser.

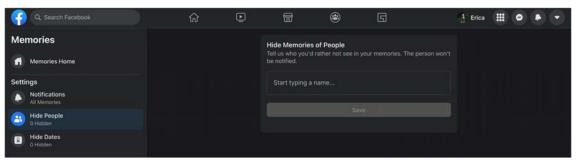


Figure 6: The 'Hide People' settings within *Memories* on Facebook accessed through my web browser. Users can click on the words "Start typing a name..." and enter the name of the user they do not want to appear in their *Memories*.

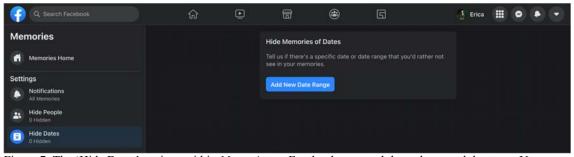


Figure 7: The 'Hide Dates' settings within *Memories* on Facebook accessed through my web browser. Users can click on "Add New Date Range" and indicate the time period they do not want to appear in their *Memories*.

Instagram: 'On This Day'

The Instagram memory feature I focused on in this project is called 'On This Day,' which exists as part of Instagram's 'Create' mode within Instagram Stories. On This Day presents users with the feed and story posts (posts that will stay on their profile until the user removes them, and twenty-four hour posts, respectively) they posted to Instagram on that day in previous years, and/or accounts the user began following that also followed them back on that date in previous years. Users can share these memories to their Stories. 10

This feature emerged several months after Instagram launched *Memories*, ¹¹ a memory feature with two parts: an 'On This Day' feature located within users' Archives which presents users with the content they posted to Instagram on that day in the past (see Figure 8), ¹² and direct in-app notifications about their past feed posts ¹³ (see Figure 9). It is unclear if these direct *Memories* notifications continue to be delivered to users, ¹⁴ but 'On This Day' continues to exist in users' Archives. However, this feature is difficult to locate, so *On This Day* was likely added to Create mode to make it easier to find and thus to increase engagement with the feature. ¹⁵ Overall, when I refer to Instagram's memory features, I am primarily referring to *On This Day* as it appears within Create mode, and secondarily to the

^{9.} Josh Constine, "Instagram launches Create mode with On This Day throwbacks," *TechCrunch*, October 8, 2019, https://techcrunch.com/2019/10/08/instagram-create-mode/.

^{10.} Constine, "Instagram launches Create mode."

^{11.} Jagruti Verma, "Select Instagram users surprised with Instagram Memories," *Social Samosa*, January 21, 2019, https://www.socialsamosa.com/2019/01/instagram-memories-update/.

^{12.} Constine, "Instagram launches Create mode."

^{13.} Verma, "Select Instagram users surprised."

^{14.} I last received one of these notifications in March of this year. I have not been able to locate any information about these notifications being stopped, but conversations with my friends revealed that the vast majority of them did not remember receiving a memory-based direct notification from Instagram in several months.

^{15.} Constine, "Instagram launches Create mode"; Jeff Yeung, "Instagram Launches "On This Day" Function to Bring Back Your Favorite Memories," *Hypebeast*, October 10, 2019, https://hypebeast.com/2019/10/instagram-create-on-this-day-launch.

memory-based direct notifications whose continued existence is unclear, and the difficult-to-locate *Memories* 'On This Day' feature in users' Archives.



Figure 8: My 'Stories Archive' on Instagram. To access this page, users must (on the mobile app) go to their profile, click the menu icon in the top right corner, and click 'Archive.' The top half of this figure shows an archive of Stories I have posted recently, and *Memories* is in the bottom half, where I have an 'On This Day' memory of a past Instagram story presented to me.



Figure 9: A cropped screenshot of the in-app *Memories* notification I received from Instagram in March 2021.

'On This Day' settings and user control

At this time, there is no evident way for users to disable the *On This Day* feature within Create mode, nor the direct notifications about their past posts. However, users have

the option to stop their future Stories from being saved to their Archive, which would supposedly prevent them from appearing in future *On This Day* memories. Notably, it would not prevent any Stories that they previously posted from appearing in *On This Day*.

Unlike on Facebook, users cannot hide memories of specific people or time frames from *On This Day*. However, Instagram's memory features require the most effort from users to locate, which makes them easier for users to avoid, which itself is a kind of control. While users are not able to opt out of or disable Create mode, they can avoid using it while maintaining the ability to post Stories, or can avoid *On This Day* in particular while using other aspects of Create mode (see Figures 10 and 11). To summarize, while users are offered minimal control over Instagram's memory features, these features are more difficult to access and thus require more intentional access on the user's behalf. This makes it easier for users to control the impact of these features on them; they can engage with them only when they are emotionally prepared to do so.



Figure 10: This is the screen that presently appears for me when I go to create a new Story on Instagram's mobile app. The camera is on, and the image you are seeing is my wall. I can access 'Create' mode by clicking on 'Create' or the 'Aa' icon next to it on the left side of the screen.



Figure 11: On This Day within Instagram's 'Create' mode, as seen from my account. The row of icons along the bottom of the image each represent a different feature within 'Create' mode. On This Day is one of the options.

Snapchat: 'Flashbacks'

Snapchat's memory feature is called 'Flashbacks.' Flashbacks exists within

Snapchat's 'Memories' feature, which enables users to save their photo- and video-based
'snaps' to an archive within the app, which they can search or scroll through at any time.

Users can only save their own snaps to Memories, not those created by or sent to them from another user. Flashbacks are a slideshow of all the snaps a user saved to Memories on that day in previous years. Users are notified about their Flashbacks for that day through the appearance of a red circle over the Memories icon on their main camera screen (see Figure 12). They can view, edit, and share these Flashbacks with others, or remove any snaps from that Flashback while keeping it in their Memories; users cannot presently permanently delete

^{16.} Casey Newton, "Snapchat introduces Memories: a searchable, shareable archive of your snaps," *The Verge*, July 6, 2016, https://www.theverge.com/2016/7/6/12102294/snapchat-memories-private-snap-archive.

a snap from within *Flashbacks* (although snaps can be deleted from *Memories*). Overall, *Flashbacks* is easy for users to either engage with or avoid.

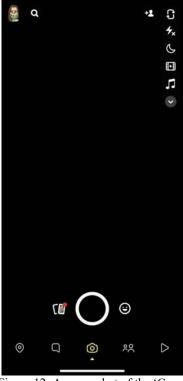


Figure 12: A screenshot of the 'Camera' screen within Snapchat. The icon with two overlapping rectangles next to the large circle at the bottom of the screen is the *Memories* icon. The red circle over the rectangle on the right side means the user has a *Flashback* to view. Users can also swipe up while on this Camera screen to access *Memories*, and any available *Flashbacks* will appear at the top.

Flashbacks settings and user control

Users are able to completely opt out of *Flashbacks* at any time with relative ease while still maintaining access to the *Memories* feature. They can do so within the app, under the "Memories" portion of the Settings section of the app (see Figure 13). Under the "Notifications" portion of a user's Snapchat settings, Snapchat also offers users the option to receive "occasional notifications about [their] Memories," which a user can turn on or off (see Figure 14). Thus, if a user turned both of these settings off, they would presumably not receive any memory-based notifications from Snapchat. However, users have no ability to restrict or customize the types of memories that are shown to them within *Flashbacks*.

Overall, this user control is 'all-or-nothing,' and thus some users might keep *Flashbacks*

enabled so they can see the *Flashbacks* they enjoy, even if other *Flashbacks* evoke negative emotions.

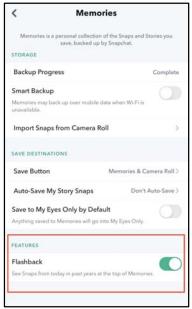


Figure 13: A screenshot of the *Memories*-related settings within Snapchat, taken on my account. Users can turn *Flashbacks* on or off in the area marked with the red rectangle while still maintaining full access to *Memories*.



Figure 14: A screenshot of the Notifications settings available to users within Snapchat, taken on my account. As outlined by the red rectangle, users are given the option here to enable or disable "occasional notifications about [their] Memories."

Summary of Memory Features

TABLE 1: Review of platforms and their memory features

Platform	Selected memory features	Level of user control over the feature(s)
Facebook	Memories	Moderate: Users can reduce or turn off notifications, and can prevent memories of specific people or time periods from appearing, but cannot entirely disable <i>Memories</i> and prevent memories from being shown to them elsewhere on the platform
Instagram	Primary: <i>On This Day</i> Secondary: <i>Memories</i> within users' Archives and in-app direct notifications	Low: Users have no ability to restrict or disable any of these features. Their only ability is to disable the archiving of their Stories posts, which would prevent their Stories from appearing in future memories on the platform
Snapchat	Flashbacks	Moderate: Users have the ability to enable or entirely disable <i>Flashbacks</i> while still being able to save their snaps to <i>Memories</i> , and also have the ability to enable or disable other notifications about their <i>Memories</i> . However, they have no ability to limit the memories that appear in <i>Flashbacks</i> to avoid specific people or periods of time

To summarize, Facebook's *Memories* is comprised of several memory subfeatures and offers users the most customizable settings but does not give them the ability to turn off *Memories* entirely; Instagram's *On This Day* exists within Create mode and thus is relatively easy to avoid, but users have no ability to restrict or disable it; Snapchat's *Flashbacks* exists within Snapchat's *Memories*, and its user control is all-or-nothing. This imperfect control across all three features means that users do not have complete agency over their encounters with social media memory features, and thus do not have complete agency over how these features impact them and their experiences on social media.¹⁷

Literature Review

^{17.} The central function of social media memory features — surfacing a user's past content and engagements on that platform — has remained consistent over time. However, these features are continually evolving. Thus, many users, and readers of this paper, will have encountered these memory features in different forms than I have described here, and may consequently have different perceptions of and experiences with them.

New memory-related technologies should be useful to their users, but this is not always their creators' primary focus. Indeed, writing in 2008 — two years before the release of the first social media memory feature — Nancy Van House and Elizabeth F. Churchill asserted that "while [developments in digital memory capture, storage and retrieval] are significant for memory studies research, even more important is the need for memory studies to remind and inspire designers of what is possible and useful, and help expand the understanding of human memory on which these systems are based" (emphasis added). However, some social media companies have been accused of valuing what is possible and innovative or profitable instead, de-centring the impacts of the technologies on their actual users. This is perhaps made most clear when one considers Facebook's infamous internal motto, used until 2014: "Move fast and break things." As Mark Zuckerberg, Facebook's founder, stated in a letter to prospective Facebook investors:

Moving fast enables us to build more things and learn faster. However, as most companies grow, they slow down too much because they're more afraid of making mistakes than they are of losing opportunities by moving too slowly. We have a saying: 'Move fast and break things.' The idea is that if you never break anything, you're probably not moving fast enough.²¹

This quotation demonstrates that Facebook is more afraid of 'losing opportunities' than 'making mistakes' or 'breaking' things, de-centring the impact of their technologies on users.

^{18.} Nancy Van House and Elizabeth F. Churchill, "Technologies of memory: Key issues and critical perspectives," *Memory Studies* 1, no. 3 (2008): 295, https://www.doi.org/10.1177/1750698008093795.

^{19.} Joseph Holt, "Facebook has 5 'core values.' Guess where 'protect users' ranks," *The Chicago Tribune*, December 20, 2018, https://www.chicagotribune.com/opinion/commentary/ct-perspec-facebook-privacy-zuckerberg-microsoft-amazon-1221-20181220-story.html.

^{20.} Hemant Taneja, "The Era of "Move Fast and Break Things" Is Over," *Harvard Business Review*, January 22, 2019, https://hbr.org/2019/01/the-era-of-move-fast-and-break-things-is-over; Holt, "Facebook has 5 'core values'"; "Move fast and break things," *Wikipedia*, last modified May 6, 2021, https://en.wikipedia.org/wiki/Move fast and break things.

^{21.} WIRED staff, "Mark Zuckerberg's Letter to Investors: 'The Hacker Way'," WIRED, February 1, 2012, https://www.wired.com/2012/02/zuck-letter/.

This raises questions about whether users see social media memory features like Facebook's as useful, or if these features' designers have prioritized innovation and profit over care.

Social Media and the Importance of Forgetting

Scholars have also noted that social media can prevent users from forgetting when they wish. For example, Van House and Churchill state, "Sometimes forgetting is desirable and useful. But the new memory technologies and institutional structures can make some kinds of forgetting impossible, or at least uncertain. Forgetting may be impossible when the record is outside of one's control..." much like is true in the case of social media memory features, which are largely within the control of social media companies, feature designers, and their algorithms. If memory features prevent users from forgetting that which they do not want to remember (e.g., traumatic events), this could have negative emotional repercussions which are important to learn about to understand how to protect users' well-being.

Social Media as Archives of Users' Pasts/Memories

Social media platforms — and the profiles or personas users build on them — serve as personal archives of users' lives and relationships.²³ Demonstrating this, a study by Zhao et al. found that "Almost all [of their] participants noted that Facebook has significant personal value, serving as a 'personal locker' on the Internet that archives their personal and social memories," (emphasis in original) and that "participants found this archival space to be

^{22.} Van House and Churchill, "Technologies of memory," 305-306.

^{23.} Katie Day Good, "From scrapbook to Facebook: A history of personal media assemblage and archives," new media & society 15, no. 4 (2013): 557-573, https://doi.org/10.1177/1461444812458432; Donell Holloway and Lelia Green, "Mediated memory making: The virtual family photograph album," Communications 42, no. 3 (2017): 351-368, https://doi.org/10.1515/commun-2017-0033; Bente Jensen, "Have Social Media Become the New Archives of Digital Photography?," Collecting Social Photography, March 19, 2019, http://collectingsocialphoto.nordiskamuseet.se/have-social-media-become-the-new-archives-of-digital-photography/; Kathleen Richardson and Sue Hessey, "Archiving the self? Facebook as biography of social and relational memory," Journal of Information, Communication and Ethics in Society 7, no. 1 (2009): 25-38, https://doi.org/10.1108/14779960910938070.

reassuring" in that their memories were preserved for them.²⁴ This area of research prompts questions about how users are affected emotionally when they are confronted with their archived lives on social media, like they are via social media memory features.

Emotional Impacts of Memory Features

Numerous scholars at the intersection of new/digital media and memory studies, as well as casual bloggers, have found that social media memory features can affect users personally and emotionally. For instance, Robards explored Facebook's 2014 'Look Back' videos — minute-long videos that were "crafted through an algorithmic selection of critical moments in the user's life (as shared on the site) to tell that user's story." Robards argues that these videos demonstrate how Facebook profiles function as archives of users' online personas, and mentions that these videos craft a personal narrative for users, inducing nostalgia and self-reflection. Others have echoed this comment on nostalgia, even theorizing that Facebook uses 'On This Day' to spark nostalgia in order to bring users to share more personal content on the platform.

Others have discussed how memory features can have more harmful emotional impacts. Jacobsen and Dzieza each highlight the potential of Facebook's memory features to cause harm to users by reminding them of friends or family members who have passed away,

^{24.} Xuan Zhao et al., "The Many Faces of Facebook: Experiencing Social Media as Performance, Exhibition, and Personal Archive," in *CHI '13: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, (New York, NY: Association for Computing Machinery, 2013), 5-6, https://doi.org/10.1145/2470654.2470656.

^{25.} Brady Robards, "Digital Traces of the Persona through Ten Years of Facebook," *M/C Journal* 17, no. 3 (2014), https://doi.org/10.5204/mcj.818.

^{26.} Robards, "Digital Traces of the Persona."

^{27.} Richa D, "The Impact of Facebook's "On This Day" Feature," *Medium*, May 15, 2017, https://medium.com/social-media-stories/the-impact-of-facebooks-on-this-day-feature-52d789840405.

relationships that have dissolved, and other traumatic or upsetting events.²⁸ Relatedly,
Lambert, Nansen, and Arnold have explored 'algorithmic memorial videos' like Facebook's
'Look Back' and 'Year In Review' videos featuring people who are deceased, and how these
can cause emotional harm.²⁹ The authors state that algorithmic memorial videos "efface [the]
ethical standards and practices [of funeral slideshow creators], provoking negative memories
and emotions,"³⁰ and argue that to be more ethical, the algorithms behind these videos should
"be attentive to the emotions of the bereaved, [...] not circulate artefacts indiscriminately and
[...] offer appropriate formatting, delivery and exhibition options."³¹ Overall, these works
demonstrate that the emotional impacts of social media memory features have the potential to
range widely and cause psychological harm to users, and thus are worthy of further study.

Memory Features and Major Life/World Events

One such emotional impact is that users may feel taunted by memory features after major life or world changes, particularly when the memories these features present to them are preferable over the user's current situation. For example, Hopper wrote about how her perspective on Facebook's 'On This Day' feature changed following the 2016 United States presidential election in which Donald Trump was elected — an outcome contrary to Hopper's

^{28.} Benjamin N. Jacobsen, "Sculpting digital voids: The politics of forgetting on Facebook," *Convergence: The International Journal of Research into New Media Technologies* 27, no. 2 (2020): 357-370, https://doi.org/10.1177/1354856520907390; Josh Dzieza, "Facebook's new nostalgia feature is already bringing up painful memories," *The Verge*, April 2, 2015, https://www.theverge.com/2015/4/2/8315897/facebook-on-this-day-nostalgia-app-bringing-back-painful-memories.

^{29.} Alex Lambert, Bjorn Nansen, and Michael Arnold, "Algorithmic memorial videos: Contextualising automated curation," *Memory Studies* 11, no. 2 (2018): 156-171, https://doi.org/10.1177/1750698016679221.

^{30.} Lambert, Nansen, and Arnold, "Algorithmic memorial videos," 157.

^{31.} Lambert, Nansen, and Arnold, "Algorithmic memorial videos," 167.

preference.³² As Hopper describes, "In the aftermath of November 8th, I couldn't bear to be reminded of a time before Trump won. Post-election, my On This Day posts seemed like mocking portents: The algorithm taunted me with a November 2015 picture of a friend cheerfully posing with one of those named Coke cans that said 'Hillary'..."³³ These descriptions of how her social media memories became 'mocking' and 'taunting' exemplify how a major life-altering event can "[change one's] relationship to time" and thus can influence how one is emotionally impacted by being confronted with social media memories.³⁴ This suggests that users might also feel mocked by memories of pre-pandemic life during the COVID-19 pandemic, as it brought major change to many people's lives. Memories might trigger discomfort, pain, or even distress, which is important to explore through research.

Memory Features and the COVID-19 Pandemic

While there are little to no published scholarly works that discuss social media memory features and the COVID-19 pandemic in particular as of yet, this has been the topic of several pieces of journalism and personal journalism over the past year and a half. These journalistic pieces provide interesting critical insights that can inform and help frame unfolding scholarly research. For instance, some claim that memory features have unique, and often negative, emotional impacts on users during the pandemic. For example, Kraus asserts that notifications from Instagram's *On This Day* during the pandemic have "taken on a different function: to remind us of just how different the world is right now. And how we

^{32.} Briallen Hopper, "On This Day," *Columbia: A Journal of Literature and Art*, no. 55 (2017): 38-43, https://www.jstor.org/stable/45151776.

^{33.} Hopper, 40-41.

^{34.} Hopper, 40.

never saw this coming."³⁵ Kraus summarizes the emotional impacts these features can have, saying, "Joy, bitterness, sadness, guilt ... I got all that from an Instagram notification."³⁶

Other journalists explored the negative emotional effects of social media memory features on users one year into the COVID-19 pandemic in particular. In March 2021, for example, Watercutter wrote:

Yesterday, the world marked the one-year anniversary of the World Health Organization declaring Covid-19 [sic] a global pandemic. But the entire week was marked by remembrances of the Lasts: the last time someone went to a basketball game, a movie, a restaurant. The last day in the office, the last time they hugged their mom or went outside without a face covering.³⁷

Watercutter describes how social media memory features reminded users of these 'lasts,' creating for people an "aching for what's been lost, but also for what might have been." Similarly, an article from The Associated Press outlined some of the mixed emotions that social media users felt as memory features reminded them of the COVID-19 pandemic anniversary. Some users and psychological experts shared their strategies for engaging with social media and memory features as we receive memories from earlier in the pandemic: deleting apps with those features; "skip[ping] [apps with memory features] altogether on days when [one's] grief feels especially sharp or [one] doesn't have mental or emotional space for what they might serve up"; or "disengag[ing] and distract[ing] yourself with an activity that

^{35.} Rachel Kraus, "Instagram's 'On This Day' notifications are a jarring reminder of life before coronavirus," *Mashable SE Asia*, April 2, 2020, https://sea.mashable.com/tech/9874/instagrams-on-this-day-notifications-are-a-jarring-reminder-of-life-before-coronavirus.

^{36.} Kraus, "Instagram's 'On This Day."

^{37.} Angela Watercutter, "Social Media Reminds Us of the Year That Wasn't," *WIRED*, March 12, 2021, https://www.wired.com/story/covid-19-pandemic-nostalgia-memories-social-media/.

^{38.} Watercutter, "Social Media Reminds Us."

^{39.} The Associated Press, "COVID memories pop up on social media as pandemic rolls on," *Nexstar Media Wire*, May 6, 2021, https://www.nxsttv.com/nmw/news/covid-memories-pop-up-on-social-media-as-pandemic-rolls-on/.

helps replenish you."⁴⁰ These pieces showed that while social media memory features may have negative emotional effects on users throughout the pandemic, there are strategies users can employ to mitigate these effects. This indicates the need for formal research on whether users actually engage in any of these — or other — mitigating strategies when interacting with memory features during the COVID-19 pandemic, and why they do or do not.

Research Focus

While research on the impacts of social media memory features on users during the COVID-19 pandemic is limited, users could be experiencing significant emotional harms — or benefits. To explore this, in this project I inquire into: 1) the ways social media memory features affect users' emotional well-being during the COVID-19 pandemic; 2) how this differs from these features' effects prior to the pandemic; and, 3) the practices users engaged in during the pandemic to reduce the potential negative emotional effects of these features (e.g., reminders of trauma and loss).

Methodology

I created an anonymous online survey using LimeSurvey to collect data about people's experiences with, and opinions of, social media memory features. Questions asked about respondents' general social media use, perspectives on memory features before and during the pandemic, whether they would want to disable or limit these features, and how they think they will be affected by memory features after the pandemic (see Appendix A for a full copy of the survey). Excluding the consent, withdrawal, and eligibility questions, this survey consisted of twenty-one questions. Some were open-response, asking respondents to type their own answers; others were multiple choice, asking them to select the response(s) that matched their opinions or experiences, or to provide a quantitative rating. The multiple-choice questions allowed respondents to share their opinions quickly with less cognitive and

^{40.} The Associated Press, "COVID memories pop up."

emotional labour, while the open-response questions allowed them to provide details about their experiences and nuances in their opinions. I have included some quotations from respondents' responses to the open-response questions in the Results section below. These have been edited for grammar and spelling errors to ensure readability.

I set three eligibility criteria. First, respondents had to be eighteen to twenty-four years old. I selected this age range because it is generally a period of significant life change, so memories from just one year ago may represent a radically different stage in these people's lives (beyond considerations of COVID-19). Furthermore, this age group represents 25.2% of all social media users,⁴¹ so it is important to learn from them when studying social media phenomena like memory features. In addition, many people within this age group have grown up with social media, and thus may have social media memories that span a significant percentage of their lifetime. Respondents also needed to have used Facebook, Instagram, and/or Snapchat for at least two years, and to have engaged with — by seeing, clicking on, reflecting upon, and/or sharing — a memory feature at least once before and once during the COVID-19 pandemic. These criteria ensured that respondents would be able to answer comparative questions about their experiences during the two time periods.

After receiving ethics clearance from the McMaster University Research Ethics Board, I recruited respondents in June 2021 through my personal social media accounts and the McMaster Communication Studies and Multimedia department (three faculty members forwarded my recruitment message to their undergraduate classes from the previous semester). I selected these two recruitment channels because I was striving to learn from both those who might be interested in social media and curious about memory features (e.g.,

^{41.} Simon Kemp, "Digital 2021: Global Overview Report," published by *DataReportal*, we are social and *Hootsuite*, January 27, 2021, https://datareportal.com/reports/digital-2021-global-overview-report.

Communication Studies and Multimedia students), as well as from those who may not study this field but have had personal experiences that they were eager to share. In total, I received fifteen completed responses from eligible respondents.

Ethical Considerations

My methodology selection was guided by many ethical considerations. First, I selected an online survey rather than an in-person method to ensure my respondents' safety, as this study took place during the COVID-19 pandemic. In addition, I made the survey anonymous to maximize respondents' comfort and eliminate any conflicts of interest.

Furthermore, aside from the consent and eligibility questions, no questions were mandatory. While this meant that respondents did not always respond to every question, it allowed them to share within their comfort and capacity. I also provided a list of counselling and support resources at the end of my survey. Lastly, the asynchronous nature of my survey also promoted respondents' comfort, as many questions asked for self-reflection and reminiscence which could have felt uncomfortable to do with a researcher waiting for their response. It also reduced the risk that respondents would perceive social pressure or judgement from me as the researcher, because I did not synchronously react to their responses.

Engaging in Reflexivity

Because I have significant personal experience with memory features, I took a reflexive approach to this study to examine how my own feelings and beliefs about memory features might influence my analysis of my survey respondents' answers. Reflexivity is the process "where researchers engage in explicit self-aware meta-analysis," and can more plainly be described as "the project of examining how the researcher and intersubjective elements impinge on, and even transform, research." I engaged in what Linda Finlay calls

^{42.} Linda Finlay, "Negotiating the swamp: the opportunity and challenge of reflexivity in research practice," *Qualitative Research* 2, no. 2, (2002): 209-210, https://doi.org/10.1177/146879410200200205.

"reflexivity as introspection" in which "researchers' own reflecting, intuiting and thinking are used as primary evidence." Specifically, I completed my survey myself (see my full response in Appendix B) and then compared my responses to the trends and ranges of responses my respondents provided. I will outline some of the ways my responses aligned and differed from my respondents' after the Results section to contextualize my analysis and provide some personal insights.

Data Analysis Methods

My analysis of the survey results was both qualitative and quantitative. The qualitative portion of my analysis involved thematic emergent coding of the responses to the open-response survey questions. For open-response questions that asked respondents to explain their previous multiple-choice answer(s), I grouped the explanations from respondents who had selected the same previous answer and looked for trends amongst them. Basic quantitative analysis was needed for the multiple-choice and rating questions. This included simple numerical analyses and calculations like determining the ranges and averages of the responses to understand the trends and variety in respondents' opinions, as well as the percentages of respondents who selected a given response to understand the distributions of responses. Overall, the quantitative analysis provided insight into my respondents' general opinions and experiences, which helped me navigate the nuanced information from the qualitative portion of the analysis.

Results

Background Information on the Respondents

While no personal identifying information (names, specific ages, races, genders, etc.) was collected, all self-identified as being between eighteen and twenty-four years of age. In

^{43.} Finlay, 213.

addition, information was collected about their social media use and perceptions of social media's impact on them to provide context for the rest of the data and the analysis.

Social media platforms used & lengths of time as a user

TABLE 2: Social media platforms used by survey respondents

Platform	# of respondents	% of respondents	Average # of years as a user of that platform
Facebook	15	100	10.6*
Instagram	15	100	7.7
Snapchat	11	73.3	6.7*

^{*} Respondents who did not provide specific years, time periods, or numbers were omitted from these averages. Note: All averages and percentages are rounded to the nearest one decimal point.

All of the survey respondents (n=15) used both Facebook and Instagram, and about three quarters of them (n=11) also used Snapchat. Facebook was the platform that the respondents had used for the longest (average of 10.6 years); Instagram was second (average of 7.7 years); and Snapchat had been used for the shortest time (average of 6.7 years).

Reasons for using social media

TABLE 3: Respondents' primary reasons for using social media

Reason	# of respondents	% of respondents
Social connection	15	100
Creative expression	7	46.6
Professional / business purposes	5	33.3
To document their life and preserve memories of it	12	80
To stay up to date on current events / news	9	60
To communicate with others	12	80
Because it's a social norm	8	53.3
To look back on memories from their life	8	53.3
For fun / amusement	13	86.7
To build a following / fans	2	13.3

Their main reasons for using social media were social connection (100%), for fun/amusement (86.7%), to communicate with others (80%), and to document their life and preserve memories of it (80%). This last response contrasts with the fact that only 53.3% of respondents said that one of their main reasons for using social media is to look back on memories from their life.

Perceived impacts of social media on self-confidence and emotional well-being

Five-point Likert scales were employed to gauge respondents' feelings regarding how social media impacts their self-confidence and emotional well-being (1 was 'very negatively,' 3 was 'none/neutral' and 5 was 'very positively.') Averages were 2.7 (range of 2-4) and 2.9 (range of 2-4) respectively, and no respondents selected ratings of 1 or 5. These averages indicate a slightly negative perception of social media's impact on their self-confidence and emotional well-being.

Opinions of Memory Features

Respondents were then asked about their opinions of, and experiences with, social media memory features. This included general questions as well as questions that asked them to compare their opinions and experiences before and during the COVID-19 pandemic.

Overall opinions of memory features

TABLE 4: Respondents' overall opinions of social media memory features

Opinion	% of respondents
Likes memory features	73.3
Has mixed feelings	20
Dislikes memory features	0
Unsure	6.7

The vast majority of respondents stated that they like memory features, while 20% had mixed feelings, and one respondent wrote in their own answer which also indicated mixed feelings. None of the respondents indicated that they dislike memory features.

Changes in opinions of memory features during COVID-19

TABLE 5: Changes in respondents' opinions of social media memory features during the pandemic

Opinion	% of respondents	
	_	
Liked them more during the pandemic than before	6.7	
Liked them as much during the pandemic as before	53.3	
Liked them less during the pandemic than before	33.3	
Unsure	6.7	

Only one respondent liked memory features more during the pandemic than before.

About half indicated that they liked them as much as before the pandemic, while one third liked them less than before the pandemic, and the remaining respondent was unsure. As a follow-up, respondents were asked to explain their opinions of social media memory features, and why they have changed or not in light of COVID-19.

Missing pre-pandemic social interactions: Several respondents explained that the COVID-19 pandemic prevented them from having the kinds of social and life experiences that appeared in their social media memories. One respondent who liked memory features less during the pandemic than before wrote, "I like seeing previous moments in my life, but during the pandemic it can be depressing given that we can't do things like that anymore. Memories are things worth saving, like going out with your friends, which isn't possible now." Another wrote that their memories "are reminders of activities or situations that are either unlikely to happen again or are impossible due to social distancing and self-isolation," specifically social activities, and that "Before COVID, I would be excited to see these

memories because I knew there were more opportunities to make memories like that in the future." A third explained, "I used to like the features because they brought back nice pictures and memories of happy times with friends and family. Now, during the pandemic, I like them less than before because they make me miss people who I haven't seen in a while due to the pandemic." The respondent who liked memory features more during the pandemic than before explained, "I am a very sentimental person and social media memories allow me to relive the 'good times' in my life. It reminds me of the person I was that year and who the most important people were in that phase of my life. I barely saw most of my friends in person during COVID and because of that, I treasured social media memories more because it gave more value to that moment that we shared in each other's physical presence back then." The respondent who was unsure how their opinion of memory features changed during the pandemic wrote, "COVID-19 has caused me to reminisce more about 'normal' times when I was able to travel, meet with people, etc. I am unsure if I like being shown what I was able to do before the pandemic or if I'm resentful about the time lost to be able to continue these activities." These responses all demonstrate a common value of social experiences, and a similar problem (being unable to see others because of the pandemic), but the respondents reported different changes to their opinions of memory features as a result.

Body image: Two respondents liked memory features less during the pandemic than before due to worsened body image and self-esteem arising from viewing social media memories during the pandemic. As one respondent reflected, "I have gained some weight over the pandemic due to the gyms being closed and a lack of motivation so seeing my memories and having to reflect back on when I started to gain the weight is hard sometimes." Another noted that memory features "make me feel shitty about myself because the way I look now (during the pandemic) is worse than pre-pandemic. In the memories, I was dressed

up more, thinner, wearing clothes I liked. Now I lounge around in sweatpants and don't put in any effort for my looks, so I feel like seeing my 'old/more attractive' self is just depressing."

User complacency and distrust: One respondent who liked memory features as much during the pandemic as before expressed a unique sentiment that centred on user complacency despite distrust of social media companies. The respondent wrote, "I think COVID-19 has not really impacted my feelings towards the memories features. There's good and bad to it, and my slight distrust yet complacency with social media apps has remained the same. [....] Then there is the weirdness of a social media app filtering your own life into a form of highlight reels, allowing technology (and potentially corporate interests) to organize almost a cleaner version of my life. Very odd, I don't trust what they are using my data for, and I think it disconnects a person from even their own reality a bit but I still participate. I think the flaws are greater within the apps themselves, their intentions, the buried clauses to sell data, and the lack of regulations controlling what the apps can do, rather than the single feature."

Personal development: One respondent who had mixed feelings about memory features both before and during the COVID-19 pandemic discussed how social media memories draw their attention to their personal and identity development. This respondent wrote, "Sometimes it's fun to look back on what happened and things I'd forgotten about but other times it's a reminder of who I was then and who I am now, and I don't always like the discrepancy between the two. This hasn't really changed due to COVID."

Impact of memory features on feelings about their past self

TABLE 6: How social media memories make respondents feel about their past selves

Feeling	% of respondents	
Proud	60	
Embarrassed/'cringe'	73.3	

Neutral	33.3	
Nostalgic	100	

All respondents indicated that seeing memories from their past on social media makes them feel nostalgic about their past self.

Comparing engagement with memory features before and during the COVID-19 pandemic

Five-point Likert scales were employed to gauge the frequency of respondents' engagement with social media memory features both before and during the pandemic (1 was 'never,' 3 was 'sometimes' and 5 was 'every time I see them'). The average of the responses for before the pandemic was 3.7 (range of responses was 2-5), while the average of the responses for during the pandemic was 4 (range of responses was also 2-5). 73.3% of respondents provided the same response for each time period, while the remaining 26.7% rated their frequency one point higher on the five-point scale during than before the pandemic; thus, while some reported a marked change in their engagement between the two time periods, no respondents reported drastic changes (e.g., more than a one-point change).

Amongst the respondents who reported that they engage with memory features more during the COVID-19 pandemic than before it, a common theme in their explanations was that they had less to do or post about because of the pandemic, so they turned to memory features more often. As one expressed, "I am an avid sharer of new experiences and events in my life. Since there wasn't an abundance of that during the pandemic, reposting 'memories' enabled me to relive those moments and remind my friends that they're still 'in my life' somehow despite the physical distance."

One explanation from a respondent who engages with their social media memories every time they see them (selected '5' each time) was also noteworthy; they stated, "I always

open them on each platform. Partly because I want to clear notifications, but I also generally like seeing the memories even if it was a harsh reality check."⁴⁴

Comparing the impact of memory features on users' emotional state before and during the COVID-19 pandemic

A 10-point Likert scale was employed to evaluate how receiving notifications from memory features impacts respondents' emotional state both before and during the COVID-19 pandemic (1 was 'very negatively,' 5 was 'neither positively or negatively,' and 10 was 'very positively.') The average of the responses for before the pandemic was 6.4 (mode was 5, selected by 40% of respondents, and was also the lowest response), while the average for during the pandemic was 6 (mode was also 5, selected by 40% of respondents including 5 of the same respondents as previously, while the lowest response was 4). Out of all of the responses, 33.3% stayed the same across both time periods, 26.7% of respondents evaluated their emotional state as being impacted 2 points more negatively by memory features during the pandemic than before, 13.3% evaluated their emotional state as being impacted 1 point more negatively during the pandemic than before, and the remaining 26.7% evaluated their emotional state as being impacted 1 point more positively during the pandemic than before. Overall, while the averages indicate that memory features impact users' moods slightly more positively than negatively, 40% of respondents indicated that receiving notifications from memory features impacted their emotional state more negatively during the pandemic than before it, and more than half (53.3%) indicated that receiving these notifications impacted their emotional state neutrally or slightly negatively during the pandemic.

Nostalgia for pre-pandemic life: Amongst respondents who indicated that their emotional state was impacted more negatively during the pandemic than before it, missing

^{44.} The desire to 'clear' notifications — clicking on them to make the notification icon disappear — may be one of a range of reasons why social media users might check their memory notifications regardless of how they actually feel about the memories they are shown.

pre-pandemic life or feeling anxious about 'the new normal' post-pandemic were common themes. As one respondent stated, "Because of limited social activity during the pandemic, seeing these notifications could almost be viewed as a mocking or teasing in a way because it reminded me of things I could've been doing." This nostalgia was also a theme amongst respondents who indicated that their emotional state was impacted more positively during the pandemic than before. As one respondent explained, "I enjoyed seeing [social media memories] before COVID, but now they just incite more positive nostalgia for that specific time in my life." This comment about positive nostalgia connects to a comment from a respondent who indicated that the impact of memory feature notifications on their emotional state was the same during the pandemic as before. While the most common response amongst that group of respondents was that memory features simply do not strongly affect their emotions, this respondent said, "I think I feel pretty neutral about these overall. Sometimes I feel nostalgic, but I wouldn't say it's a very positive or negative feeling." Thus, from each response type — that memory feature notifications more negatively, equally, or more positively impacted users during the pandemic compared to before — nostalgia for pre- or non-pandemic life was a shared feeling.

Strong emotional reactions to memory features

I asked respondents if they had any strong emotional reactions to their social media memories that they would like to share. Responses covered a range of themes.

Missing out on experiences: One common theme was the inability to do certain activities because of the pandemic. One respondent described having "Mostly strong emotional reactions to past moments that I could've taken for granted simply assuming that I'd be experiencing the captured events again, not knowing the pandemic would put them to a halt. For example, being reminded about my favourite vacation spots — I'd be reflecting that a year ago I was there but now I'm at home with no change in scenery for the past 18

months." Another expressed the mixed emotions they experience because of this phenomenon: "It makes me a bit sad sometimes to see the travel experiences we had that are not possible now, but excited for the future and the return to those types of experiences."

Varied emotional responses: Multiple respondents mentioned that they have had both positive and negative strong emotional reactions to their social media memories. As one described, "My memories range, some are happy and joyful like working at my camp two years ago which couldn't run last year due to the pandemic or sledding on my birthday with my boyfriend. They make me happy and grateful. And then sometimes I have sad memories that also pop up where I was anxious over school, a job that treated me terribly or a breakup with a past significant other. Sometimes the sad memories just add to the already hard emotions I am feeling but usually they just make me laugh and maybe even grateful that at least I am not in that position anymore."

Personal Growth: One respondent described a positive emotional experience centring their personal growth: "Sometimes I would spend an hour on my Instagram stories archive just scrolling through what happened in my life throughout the years. Birthdays, celebrations, or little food adventures always bring back a positive sense of nostalgia. Life is filled with little events like this, and I believe if I don't document and post it, it's easy to lose sight of the value of the time I spent with loved ones, the beauty of a foreign place or the joy of a new experience. I believe 'memories' tangibly piece together little events in our life so we can appreciate it in the grand scheme of things. Whether it was a good or bad phase in my life, I can see my growth as a person. Social media memories allow me to feel grateful for the life I lived and the life I am living... the person I was and the person I am becoming."

Body Image: One respondent who had previously mentioned how memory features negatively impact their body image returned to this: "I think the biggest emotional reaction is in regard to the way I look. It upsets me to see how I've changed over time, whether it's

weight gain, or just general lack of putting in effort. I see the memory and I wonder, 'why don't I look like that anymore? Why isn't my skin as clear? Or my hair as smooth? Why does my face look fatter now than it did back then?' This makes me feel: insecure, ugly, old..."

Future Engagement with Memory Features

To conclude the survey, I asked respondents about aspects of their future engagement with social media memory features.

Hiding memories of specific dates and/or people

TABLE 7: Respondents' perspectives on using settings to hide memories of specific people or dates

Opinion	% of respondents
Would hide specific people/dates	20
Maybe/Unsure	46.7
Would not hide specific people/dates	33.3

Respondents' opinions were highly divided as to whether they would want to use settings that enable them to hide memories of specific dates or people. Those who said that they would use them explained that they would do so to hide people that they no longer were close with (e.g., ex-partners) or events they did not remember fondly. Amongst those who said they were unsure or might use them, the most common reasoning was that they would do so if necessary, despite not having needed them to date. One respondent said, "If I have a breakup, or want to forget a traumatic period of my life, this would be helpful to use." Lastly, amongst those who said that they would not use these settings, some indicated that they were simply fine with seeing this kind of content or had nothing they would want to hide, while others indicated that their social media memories — even of people or times they no longer identified with — showed important parts of their personal journeys. One respondent wrote, "For me, it feels strange to almost erase the presence of a person from how I portray my life digitally, so I don't think I'd ever think of this." Another reflected that they would not use

these settings "Because I appreciate my past experiences and I would still want to see them even if that part of my life is now over."

Deactivating social media memory notifications

TABLE 8: Respondents' perspectives on deactivating notifications from social media memory features

Opinion	% of respondents
Would deactivate memory feature notifications	0
Maybe/Unsure	33.3
Would not deactivate memory feature notifications	66.7

No respondents said that they would want to deactivate social media memory notifications, 33.3% said they were unsure or might, and 66.7% said that they would not. This aligned with the high percentage of respondents who expressed favourable opinions of memory features earlier in the survey.

In their explanations, several respondents stated that they like memory features or "don't take them seriously enough" and thus would not want to deactivate them. One respondent who stated that they would not deactivate their memory feature notifications framed this in terms of personal and identity development, saying, "Whether it was a 'bad' or 'cringe' phase in my life, I still think it contributes to my growth as a person and because of it, I am who I am now." Two respondents mentioned curiosity about their past or what memory features might show them in their explanations of why they would not deactivate them. One stated, "Despite how bad [memory features] may make me feel, the curiosity will always get the best of me."

Memories of the COVID-19 pandemic

TABLE 9: Predicted emotional impacts of pandemic-related social media memories after COVID-19

Em	otional Impact	# of respondents who selected this response	% of respondents who selected this response

Gratitude: It will make me feel grateful that the pandemic is over	13	86.7
Grief: It will remind me of people I lost or other negative experiences I had during that time and will make me feel sad	8	53.3
Fear: It will make me feel afraid about the potential of a future pandemic	0	0
Pride: It will make me feel proud of myself for persevering through a difficult time	6	40

The vast majority (86.7%) of respondents thought that seeing memories of the COVID-19 pandemic through social media memory features after the pandemic will make them feel gratitude that the pandemic is over. This response was chosen significantly more frequently than 'negative' emotions like grief for lost loved ones and negative experiences, and fear for a future pandemic was not selected by any respondents.⁴⁵ One respondent also provided their own response, and wrote, "I will either laugh or cringe at the dumb jokes I made about social distancing/lockdowns."⁴⁶

Reflexivity

My background and opinions of memory features

I have been a social media user for over a decade, having used Facebook for eleven years, Instagram for six years, and Snapchat for seven years. I use social media for social connection, to communicate with others, for professional purposes (i.e., for observing trends and changes in social media in support of my Master's studies), to stay up to date on current events and news, and because it is a social norm. While I am highly critical of social media

^{45.} My survey did not ask respondents to declare the nature of the traumas or discomforts they experienced during the COVID-19 pandemic, including whether they had lost loved ones. Thus, it is possible that some did not experience any losses, or major events during the pandemic that might make them feel anxious about future pandemics, which could impact the results of this question.

^{46.} While humorous, this response raises an interesting point for consideration: many people have turned to humour as they navigated and coped with the COVID-19 pandemic, including making humorous posts on social media about the present situation. The question remains as to how that humour will make people feel in the future when it is re-presented to them via memory features.

companies and platforms, I acknowledge that social media benefits many people — myself included — in significant ways (i.e., connecting people across distance).

On Facebook, Instagram, and Snapchat, my social media memories remind me of who I have been, which in many cases is not the person I am or want to be today. Because I am invested in my own personal development and am always striving to improve myself to have a more positive impact on the world, this can be an emotional experience. It can evoke discomfort and embarrassment, but also feelings of satisfaction as my discomfort with my past self shows that I have changed.

Opinions of memory features during COVID-19

For the first year of the COVID-19 pandemic, I liked memory features significantly less than before the pandemic. My social media memories highlighted things I could no longer do and the people I could no longer see. However, around the one-year anniversary of the pandemic, I had become adjusted to living in a pandemic and vaccine distribution was becoming more widespread in Canada. At this time, I became more optimistic and found that seeing my social media memories was not as painful. Instead, I saw them as showing things I would soon be able to do and people I would soon be able to see again. That said, it is important for me to be aware that my shift to optimism was not universal.

Strong reaction to the respondents' comments

I had a strong reaction to the comments about how memory features have contributed to some respondents' worsened body image and feelings of dissatisfaction with their physical appearances during the COVID-19 pandemic. As someone who has experienced body dysmorphia and an eating disorder, I empathized with these comments and felt saddened by them. While I had not previously been aware of memory features' impact on my body image, after reading about their experiences, I realized that I make comparisons similar to those my respondents described. Because I have included these comments as a topic in my analysis, it

is important to note that my personal experiences may have led me to observe them as a common thread in the data, and may have increased the importance that I felt they held.

Difference in opinion from the majority of respondents

Unlike the majority of my respondents, I would (and plan to, after the completion of this research project) deactivate some of my social media memory notifications — specifically those from Facebook *Memories*. *Memories* evokes more discomfort than joy for me, and in my opinion, users should adjust their memory features' settings in ways that best serve their well-being (when possible). That said, while analyzing my respondents' responses, I had to keep in mind that some users genuinely enjoy *Memories*, so it would not be in *everyone's* best interests to adjust these settings and deactivate these notifications.

Reflexive Analysis

Gaining these insights into my relationship with social media memory features enabled me to approach my respondents' data with mindfulness of my biases. This prevented me from dismissing perspectives that differed from my own, as well as from overvaluing perspectives that aligned with mine, and generally enabled me to better see and discuss the range in opinions of and experiences with memory features that users might have.

Discussion and Analysis

Four key findings emerged from my study: 1) Memory features can evoke feelings of nostalgia for pre- or non-pandemic life in users; 2) Memory features can negatively impact users' body image and levels of satisfaction with their appearance during the pandemic, particularly following perceived changes to their appearance; 3) Memory features can remind users of their personal growth and development, which is primarily perceived as a benefit of memory features; and 4) Users may be complacent with the negative emotional effects of social media memory features, as well as with their lack of control over their experiences with memory features. Below, I will discuss each of these findings in more depth.

Nostalgia

Nostalgia was a recurrent theme throughout the results of my survey, which aligns with the fact that social media memory features remind users of their past social media content and thus the memories that were preserved by that content. The main nostalgia-centred finding was that during the pandemic, memory features can make users feel nostalgic for pre- or non-pandemic life. Interestingly, respondents described their experience of this nostalgia in different ways: as positive, neutral, or negative emotional experiences. One respondent described feeling 'mocked' and 'teased' by the social media memories that depicted actions that had become impossible during the pandemic, mirroring Hopper's statement that she felt 'mocked' and 'taunted' by memory notifications after Trump's election, as outlined in my literature review. ⁴⁷ However, others described this nostalgia as 'positive' and something that they 'enjoy,' while another said that it was not 'a very positive or negative feeling.'

These differing perceptions of nostalgia supported previous research on the varying affective impacts of nostalgia. One example is the work of Turner and Stanley, psychology scholars whose study on nostalgia found that "the experience of nostalgia was associated with significant heterogeneity in positive and negative affect," and that "Approximately 72% of [their study's] participants experienced an increase in positive affect, and 51% experienced an increase in negative affect." The researchers explained that this means nostalgia can have differing affective impacts, including within the same person. ⁴⁹ Connecting Turner and Stanley's findings to my study, my respondents' comments suggest that engaging in nostalgia

^{47.} Hopper, "On This Day," 40-41.

^{48.} Jennifer R. Turner and Jennifer Tehan Stanley, "Holding on to Pieces of the Past: Daily Reports of Nostalgia in a Life-Span Sample," *Emotion* (March 29, 2021): 1, https://doi.org/10.1037/emo0000980.

^{49.} Turner and Stanley, 7.

via memory features can have differing affective impacts on different users, or even on the same user at different times or when different memories are presented to them. These varied impacts raise questions about how social media users should navigate their engagement with memory features to best support their emotional well-being and mood.

Loneliness and missing social experiences

Several respondents indicated that during the COVID-19 pandemic, their social media memories reminded them of seeing their friends and family and/or engaging in social activities pre-pandemic, which they were unable to do during the pandemic. Their responses indicated that this produced nostalgia and feelings of loneliness and missing out. Generally, these respondents' sentiments support the many recent journalistic and scholarly works that have labelled young adults — the age demographic of my survey respondents — as at significant risk of loneliness during the pandemic, ⁵⁰ and that have discussed how many young adults' lives, including their social lives, have been halted by the pandemic. ⁵¹ As one article explained, many "young adults don't have large groups of friends in their areas to make a 'social bubble' with. Instead, they're on their own, locked in their apartments, avoiding people. All of which is a recipe for loneliness." ⁵²

^{50.} Leah Campbell, "Adults Under 24: The Loneliest Age Group During COVID-19 Restrictions," *Healthline*, November 23, 2020, https://www.healthline.com/health-news/adults-under-24-the-loneliest-age-group-during-covid-19-restrictions; Colleen Walsh, "Young adults hardest hit by loneliness during pandemic," *The Harvard Gazette*, February 17, 2021, https://news.harvard.edu/gazette/story/2021/02/young-adults-teens-loneliness-mental-health-coronavirus-covid-pandemic/; Christine M. Lee, Jennifer M. Cadigan, and Isaac C. Rhew, "Increases in Loneliness Among Young Adults During the COVID-19 Pandemic and Association With Increases in Mental Health Problems," *Journal of Adolescent Health* 67, no. 5 (2020): 714-717, https://doi.org/10.1016/j.jadohealth.2020.08.009.

^{51.} Campbell, "Adults Under 24"; Hillary Johnstone, "Living our best lives? Hardly, say young people feeling trapped by pandemic," *CBC News*, October 26, 2020, https://www.cbc.ca/news/canada/ottawa/young-adults-missing-pivotal-life-stage-covid-19-pandemic-1.5771234; Alexandra Villarreal, "I wanted more memories": young people reflect on a year lost to Covid," *The Guardian*, July 20, 2021, https://www.theguardian.com/lifeandstyle/2021/jul/20/covid-young-people-year-lost.

^{52.} Campbell, "Adults Under 24."

One respondent described seeing social media memories of loved ones they were unable to see during the pandemic in positive terms, explaining, "I am a very sentimental person and social media memories allow me to relive the 'good times' in my life. [...] I barely saw most of my friends in person during COVID and because of that, I treasured social media memories more because it gave more value to that moment that we shared in each other's physical presence back then." Thus, they valued social media memories of their friends more highly when they were unable to see them during the pandemic. In response to another question, the same respondent wrote, "I am an avid sharer of new experiences and events in my life. Since there wasn't an abundance of that during the pandemic, reposting 'memories' enabled me to relive those moments and remind my friends that they're still 'in my life' somehow despite the physical distance." This explanation implies that 'reliving' — or engaging in nostalgic remembering — and reposting their memories made them feel more connected to friends they were unable to see during the pandemic. This aligns with Zhou et al., who understand that nostalgia "magnifies perceptions of social support and, in so doing, thwarts the effect of loneliness."53 Zhou et al. also suggest that people could consciously use nostalgia to manage their loneliness "when actual social support is lacking or is perceived as lacking."⁵⁴ Considering this in combination with my respondent's comments raises questions about whether engaging in nostalgic remembering of past social experiences through social media memory features might be an effective way for young people to reduce their feelings of loneliness during the pandemic.

However, other respondents described being presented with these same kinds of memories during the pandemic and consequently feeling lonely or like they were missing out

^{53.} Zhou et al., "Counteracting Loneliness: On the Restorative Function of Nostalgia," *Psychological Science* 19, no. 10 (2008): 1028. https://doi.org/10.1111/j.1467-9280.2008.02194.x.

^{54.} Zhou et al., 1028.

on social activities as a very negative experience. For example, one respondent described how their enjoyment of memory features decreased during the pandemic "because the memories are reminders of activities or situations that are either unlikely to happen again or are impossible due to social distancing and self-isolation. Some examples include concerts, international travel, sharing food with friends, house parties with 10+ people indoors. Before COVID, I would be excited to see these memories because I knew there were more opportunities to make memories like that in the future." This last sentence in the respondent's comment implies that during the pandemic, they no longer felt certain (or even hopeful) that they would have social experiences in the future. Another respondent commented directly on missing loved ones, explaining that this was a key part of the reason why they liked memory features less during the pandemic, while another explained, "I like seeing previous moments in my life, but during the pandemic it can be depressing given that we can't do things like that anymore. Memories are things worth saving, like going out with your friends, which isn't possible now."

These comments suggest that for some users, engaging in nostalgic remembering of past social interactions is a negative and even 'depressing' experience, and does not reduce their feelings of loneliness, contrary to Zhou et al. However, this aligns with a 2018 study from music psychology scholar Sandra Garrido, which "suggest[ed] that for people with tendencies to depression or maladaptive coping styles, nostalgic remembering may result in negative affective outcomes," and ultimately "that nostalgia can represent part of both adaptive and maladaptive coping strategies, depending on the personality and coping style of the individual." Thus, in the context of Zhou et al. and Garrido's studies, my respondents'

^{55.} Sandra Garrido, "The influence of personality and coping style on the affective outcomes of nostalgia: Is nostalgia a healthy coping mechanism or rumination?," *Personality and Individual Differences* 120 (2018): 259, https://doi.org/10.1016/j.paid.2016.07.021.

comments suggest that seeing memories of past social interactions during the pandemic may reduce feelings of loneliness for some social media users, while evoking negative emotions in other users. This leads to a question about whether becoming more self-aware of how they, personally, are impacted by nostalgia might help users make more informed decisions about when to engage or disengage with memory features during the pandemic, to best support their emotional well-being and navigate their loneliness.

Body Image and Satisfaction with Appearance

In response to general questions about their overall opinions of social media memory features and how this has changed during the pandemic, and/or about strong emotional reactions they have had to their memories from memory features, two respondents to my survey provided responses that indicated that memory features contributed to their worsened body image and levels of satisfaction with their appearance during the pandemic.

Specifically, they shared how seeing photos of themselves from before the pandemic through memory features reminded them of the weight they have gained or other changes in their physical appearance that occurred during the pandemic that they perceived as negative. They linked being reminded by memory features about these physical changes with negative emotions; one respondent outlined that observing these changes in themselves through memory features was "just depressing" and made them feel "insecure, ugly, old," while the other described being reminded by memory features of when they started to gain weight during the pandemic as "hard." While the fact that only two out of the fifteen respondents to my survey mentioned negative feelings about their body as a result of their interactions with memory features might make this result seem insignificant, it is important to note that the

^{56.} I would like to clarify that I believe increases in body weight, including in body fat, are not inherently a positive or negative phenomenon. My intention in this section is to discuss my respondents' self-reported negative feelings about their weight gain.

respondents volunteered these experiences without any specific prompting from the survey about body image or physical appearance. This suggests that they felt particularly strongly about these experiences, or that these experiences had a marked impact on them emotionally.

In addition, recent research has indicated that my two survey respondents were far from alone in their experience of worsened body image during the pandemic.⁵⁷ For instance, one study by Robertson et al. found that "Just under half [of the study participants] agreed that they had been more concerned about their appearance during lockdown," and that "younger people (i.e. those aged <30 years) were more likely [than older people] to report thinking more about exercise and also having increasing concerns about their appearance during lockdown." These 'concerns about appearance' were the researchers' chosen phrasing for asking their participants about body image⁵⁹ (i.e. greater 'concern about appearance' means 'worsened body image'). Considering my respondents' comments in light of the aforementioned study raises questions about whether memory features exacerbated other young adults' worsening body image as well. Robertson et al. also reported that "perceived increases in being preoccupied with food, thoughts about exercise and appearance concerns were greater in [their study participants] with eating disorders." This finding, again in light of my respondents' comments, raises questions regarding the impact memory features could have on people with eating disorders in particular, and how seeing images of

^{57.} Robertson et al., "Exploring changes in body image, eating and exercise during the COVID-19 lockdown: A UK survey," *Appetite* 159 (2021): 1-5, https://doi.org/10.1016/j.appet.2020.105062; Czepczor-Bernat et al., "COVID-19-Related Stress and Anxiety, Body Mass Index, Eating Disorder Symptomatology, and Body Image in Women from Poland: A Cluster Analysis Approach," *Nutrients* 13, no. 4 (April 20, 2021): 1-12, https://doi.org/10.3390/nu13041384; Buckley et al., "Disordered eating & body image of current and former athletes in a pandemic; a convergent mixed methods study - *What can we learn from COVID-19 to support athletes through transitions?*," *Journal of Eating Disorders* 9, no. 73 (2021): 1-16, https://doi.org/10.1186/s40337-021-00427-3.

^{58.} Robertson et al., 3-5.

^{59.} Robertson et al., 3.

^{60.} Robertson et al., 5.

their past self through memory features might trigger comparisons to their perceived present self and could contribute to any body dissatisfaction they experience.

That said, it remains unknown whether social media memory features would have had the same negative impact on my respondents' body image and appearance satisfaction had they experienced these changes in their physical appearances before or after the pandemic instead of during it. In other words, it is unclear if this impact is exclusive to the pandemic, or if memory features could have the potential to negatively affect users' body image at any time. Future research should ask users about the impact of memory features on their body image specifically, and might benefit from comparing pandemic and non-pandemic times.

Personal and Identity Development

The theme of personal and identity development appeared recurrently throughout the survey results. Specifically, multiple respondents mentioned how engaging with social media memory features and seeing memories from their past reminds them of how they have developed as people, or of difficult periods they have persevered through. Respondents primarily spoke of this as a positive experience. In addition to the responses I included throughout the Results section, one respondent provided a comment on this topic at the end of the survey, where I asked respondents to share any final thoughts they had on social media memory features. This respondent wrote:

The greatest benefit of the memories feature (which is enough to outweigh any negatives) is reflecting on periods of my life and seeing how much I have changed and grown into a much better human being, and how some anxiety and fear of the future expressed then, eventually turned out okay. Myself from the past would never imagine succeeding to what I am now. Reflecting back on my old self's fear reassures me I am on the right path in my life.

The comment that this aspect of their engagement with memory features outweighs any negatives signifies that this is key to their opinion of, and experience with, memory features.

One might understand why these memories' ability to remind respondents of their personal development was perceived as so positive for some respondents by considering a

study by psychology scholars Hallford and Mellor. 61 The authors conducted a study with young adult participants where they examined the effects of reminiscing on well-being.⁶² Different participants were asked to reminisce on different kinds of memories, including "problem-solving," where they reminisced about "a time in [their] past when [they] successfully coped with a challenge in [their] life," and "identity," where they reminisced about "an event or experience in [their] past that was meaningful and helped shape how [they] became the person that [they] are."63 They found that "Self-esteem, meaning in life, and self-efficacy were all found to increase in the problem-solving and identity conditions, while positive affect increased only in the identity condition and negative affect decreased only in the problem-solving condition."64 As I interpret them, these results indicate that reminiscing on times when one persevered through a difficult challenge or experienced personal development can have a range of positive impacts on young adults' well-being, from higher self-esteem to a more positive (or less negative) emotional state. 65 Considered with my respondents' comments, this suggests that for young adult social media users, reminiscing on social media memories that remind them of their personal development or perseverance through difficult periods may have a significant positive impact on their well-being. This would not be a universal benefit of memory features, as not all social media memories will remind users of their personal development or perseverance, but it raises questions about

^{61.} David John Hallford and David Mellor, "Brief reminiscence activities improve state well-being and self-concept in young adults: a randomised controlled experiment," *Memory* 24, no. 10 (2016): 1311-1320, https://doi.org/10.1080/09658211.2015.1103875.

^{62.} Hallford and Mellor, 1311.

^{63.} Hallford and Mellor, 1314.

^{64.} Hallford and Mellor, 1316.

^{65.} Hallford and Mellor, 1316.

whether selectively engaging more deeply with specific kinds of social media memories might improve young adult social media users' well-being.

Oppositely, one of my survey respondents wrote that for them, social media memories serve as "a reminder of who I was then and who I am now" and stated that they "don't always like the discrepancy between the two." As previously mentioned, I have, at times, shared this perspective. Because I have been using social media since I was almost thirteen years old — for nearly half of my life — memory features present me with memories of my life as early as elementary school. Through my teen years and into early adulthood, almost every aspect of my life has changed, from my fashion sense, to my partner, to my priorities in life and some of my core personal values. Being reminded of who I was in the past, how I acted, and what I valued via memory features can bring about feelings of embarrassment and discomfort, even if this indicates that I have developed as a person since the memory. The fact that 73.3% of my respondents indicated that seeing memories from their past on social media makes them feel 'embarrassed/cringe' about their past self suggests that this sentiment may be common for people in this age group, although it is perhaps more salient or predominant for some.

So, what is at stake when memory features prevent young adults who grew up documenting their lives on social media from moving beyond past versions of themselves? One important work on youth, social media, and forgetting is culture and media scholar Kate Eichhorn's 2019 book, "The End of Forgetting: Growing Up with Social Media," which was reviewed in *The New Yorker* by Nausicaa Renner. In this review, Renner outlines Eichhorn's discussion of how while "New technology—especially the smartphone—allows us to produce a narrative of our lives, to choose what to remember and what to contribute to

^{66.} Nausicaa Renner, "How Social Media Shapes Our Identity," *The New Yorker*, August 8, 2019, https://www.newyorker.com/books/under-review/how-social-media-shapes-our-identity.

our own mythos" it also "can prevent those who wish to break with their past from doing so cleanly." Specifically, "Growing up online [...] might impede our ability to edit memories, cull what needs to be culled, and move on." While users can delete their old content from social media platforms that they do not feel represents them — or can 'untag' themselves from others' posts on Facebook or Instagram — which would prevent this content from resurfacing via memory features, this may be challenging, time-consuming, or emotionally taxing for users to do. Furthermore, users might forget that such content exists until a memory feature presents it to them, at which point the emotional harm has already occurred.

Thus, I argue that robust control settings are needed for social media memory features, including controls that allow users to filter out all unwanted memories before they are presented with those memories by an algorithm, in order to better protect the emotional well-being of users. As previously outlined, Facebook's *Memories* settings offer the most customization, allowing users to filter out specific people or dates. However, the effectiveness of these settings is limited. The success of the people-filtering setting relies on those a user wishes to hide 1) having Facebook accounts, and 2) being tagged in all the photos they appear in with the user, which may not be the case. Additionally, the time period-based settings rely on a user knowing the dates when content about an event or period of their life that they wish to hide *was posted to Facebook*, rather than when it occurred, which may be challenging. On Instagram and Snapchat, no customizing settings presently exist. I will continue this discussion of user control in the next subsection.

User Complacency and Lack of Control

^{67.} Renner, "How Social Media Shapes Our Identity."

^{68.} Renner, "How Social Media Shapes Our Identity."

While many of my respondents indicated that social media memory features have had some negative impacts on their well-being during the pandemic — like worsening their body image or sparking feelings of loneliness — the results of my survey suggest that users are not engaging in practices to circumvent or reduce these impacts. As outlined in the literature, some sources have suggested that users delete apps with memory features or disengage with those features when their experience becomes negative or beyond their emotional capacity. However, my survey found that while one third of respondents liked social media memory features less during the pandemic than before it, and 40% indicated that receiving notifications from memory features impacted their emotional state more negatively during the pandemic than it did before the pandemic, all users reported engaging with memory features during the pandemic as much as or more than they did before the pandemic. In addition, my respondents were largely opposed to the idea of deactivating their social media memory notifications, and while they were more open to using the settings that enable users to hide memories of specific dates or people, this interest was less enthusiastic than I had anticipated.

It is important to acknowledge that not all respondents reported negative emotional impacts of memory features; some indicated that they enjoy engaging with these features, including during the pandemic, while others indicated that they do not feel positively or negatively emotionally affected by them. However, further exploration is needed into those who did report adverse effects but did not adapt their engagement as a result, and/or were largely unenthusiastic about using settings that could provide them with more control. In other words, why are some social media users complacent about the negative experiences they have with memory features, and with their lack of control over them?

One possible explanation is that while users may have some negative experiences with memory features, and may want more control over them, they believe that the benefits

^{69.} The Associated Press, "COVID memories pop up."

of engaging with these features outweigh the negative effects. This is plausible when one considers that the vast majority of my respondents reported having favourable opinions of memory features. In addition, as quoted in the previous subsection, one respondent described one of the aspects of memory features that they find beneficial as "enough to outweigh any negatives." Another expressed that they "generally like seeing the memories even if it was a harsh reality check." These respondents' statements suggest that they have completed costbenefit analyses of memory features, and suggest that they may, in fact, be making the best choice for their well-being by continuing or increasing their engagement with memory features during the pandemic. However, the validity of these analyses relies on users being sufficiently self-aware of how engaging with these features impacts their well-being.

This connects to a study from Bednar and Spiekermann on users of information and communication technologies (ICTs) and their awareness of the impacts of their ICT use on aspects of their life that they value, as well as their perceived control over their ICT use. Their study found that "users of ICTs are aware of [the] negative effects, but lack the control to change their own behavior." and that while their participants "expressed the wish to stop, reduce, or change their use, [...] they do not feel in control of their own behavior." These findings suggest that my respondents may indeed be sufficiently self-aware of the effects that engaging with memory features have on them, but they raise deeper questions about user control (both self-control and control over features). Might some users' engagement with memory features have become habitual, or something they are adjusted to, which could alter

^{70.} Kathrin Bednar and Sarah Spiekermann, "Aware but not in Control: A Qualitative Value Analysis of the Effects of New Technologies," in *This Changes Everything – ICT and Climate Change: What Can We Do?*, ed. David Kreps, Charles Ess, Louise Leenen, and Kai Kimppa (Poznan, Poland: Springer Nature Switzerland AG, 2018), 202–218, https://doi.org/10.1007/978-3-319-99605-9 15.

^{71.} Bednar and Spiekermann, 202.

^{72.} Bednar and Spiekermann, 215.

how they perceive it? Or, might the fact that users cannot completely deactivate Facebook's *Memories* or Instagram's *On This Day* influence their perception of these features' impact on them? If one has no ability to control a social media feature, might ignoring or minimizing the negative aspects of it make your experience of that platform more positive?

Importantly, some of my respondents demonstrated awareness of their complacency. One expressed this directly, commenting on how their "slight distrust yet complacency with social media apps has remained the same" during and before the COVID-19 pandemic, and noting that they perceive "the weirdness of a social media app filtering your own life into a form of highlight reels, allowing technology (and potentially corporate interests) to organize almost a cleaner version of my life. Very odd, I don't trust what they are using my data for and I think it disconnects a person from even their own reality a bit *but I still participate*" (emphasis added). Others implied awareness of their complacency indirectly, commenting on how mere 'curiosity' draws them to memory features. As one respondent stated, "Despite how bad it may make me feel, the curiosity will always get the best of me." So, why would a user who distrusts social media platforms and expresses their discomfort with memory features continue to engage with them? How is 'curiosity' strong enough to overpower the negative effects of memory features?

As alluded to in the previous paragraph, one explanation might be that their complacency stems from habit or normalization. Others have echoed this hypothesis, albeit when speaking about social media use at large, not memory features in particular. For instance, in a 2019 article for *TIME*, Roger McNamee, a technology investor and former mentor to Mark Zuckerberg wrote:

You would think that Facebook's users would be outraged by the way the platform has been used to undermine democracy, human rights, privacy, public health and innovation. Some are, but nearly 1.5 billion people use Facebook every day. They use it to stay in touch with distant relatives and friends. They like to share their photos and

their thoughts. They do not want to believe that the same platform that has become a powerful habit is also responsible for so much harm.⁷³

User complacency with memory features may also stem from their lack of control over these features, which could make them feel powerlessness, resulting in inaction. One piece that provides insight into this is by culture reporter Nicole Gallucci, who expressed her frustrations with Facebook's *On This Day (Memories)* and her desire for more control over it as a user. Facebook's *On This Day* (Memories) and her desire for more control over it as a user. Facebook are gallucci explains that the fact that old content she created or is tagged in might appear in the *On This Day* memories of other users who were also involved in that content "sparks anxiety" and other intense, negative emotional effects. Facebook and other intense, negative emotional effects. Facebook and other intense, negative emotional effects. Facebook are gallucci describes wanting more control, rather than to simply stop using the feature:

I'm aware that I can disable the Memories feature for myself, but that's not what I want. Rather, I wish Facebook would let users review *all* of their daily throwback memories (including those that only others see) or let us opt out of Memories and choose to prevent our old content from appearing in friends' On This Day roundups entirely.⁷⁶ (emphasis in original)

Notably, Gallucci is incorrect in her statement that *Memories* can be disabled — as mentioned previously, only the notifications can be — but more important is the fact that Gallucci's proposed solution to her negative experience with *On This Day* is only a 'wish.' Gallucci, and other social media users, have no way to express their concerns to social media companies that guarantees reasonable requests will be heard and action will be taken to adjust the features accordingly. Even if users take the time to submit feedback through the existing in-platform feedback form systems, neither Facebook, Instagram, nor Snapchat provides a

^{73.} Roger McNamee, "I Mentored Mark Zuckerberg. I Loved Facebook. But I Can't Stay Silent About What's Happening.," *TIME* online, January 17, 2019, https://time.com/5505441/mark-zuckerberg-mentor-facebook-downfall/.

^{74.} Nicole Gallucci, "Facebook's 'On This Day' feature makes me want to delete my account every day," *Mashable*, July 14, 2021, https://mashable.com/article/delete-facebook-on-this-day-memories-feature.

^{75.} Gallucci, "Facebook's 'On This Day' feature."

^{76.} Gallucci, "Facebook's 'On This Day' feature."

guarantee that their feedback will be read. In fact, both Facebook and Snapchat explicitly state that user feedback submissions may *not* be read; Facebook says, "Though we can't review and respond to every submission, we do use feedback like yours to improve the Facebook experience for everyone" while Snapchat simply states, "We may not review every bug or suggestion report we receive." Thus, given the lack of opportunities on social media platforms for users to have genuine input into — and thus a degree of control over — the features they interact with every day, users might believe that they have no choice but to be complacent with memory features, with the exception of deactivating their account. Thus, future research on memory features might examine user complacency, user feedback report attempts, and potential feelings of powerlessness. This might provide a better understanding of the controls that users desire, whether they have asked platforms for these controls in any way, and how — or if — platforms have responded to their users' needs and concerns.

Conclusion

While my research should be considered preliminary, my results suggest that engaging with memory features during the COVID-19 pandemic may increase users' feelings of nostalgia, potentially evoking positive, negative, or neutral affective impacts depending on the user, and may also contribute to a user's worsened body image. They also suggest that unrelated to the COVID-19 pandemic, social media memory features may remind users of how they have developed as people over time. Lastly, my survey results suggest that despite the potential for negative emotional impacts, many users continue to hold favourable opinions of memory features and do not question their lack of control over them.

^{77. &}quot;Give Us Feedback About a Facebook Feature," *Facebook Help Centre*, accessed July 24, 2021, https://www.facebook.com/help/contact/268228883256323.

^{78. &}quot;Report Bugs or Suggestions," *Snapchat Support*, accessed July 24, 2021, https://support.snapchat.com/en-US/a/shake-to-report.

More broadly, my research suggests that the impacts of memory features may 1) vary widely, and 2) change in times of world- or life-disrupting events like the COVID-19 pandemic. Because of these two findings, and because world- and life-disrupting events can occur at any time, social media users must be given more controls to adjust their experiences with memory features. These controls should be easy to locate and use. This is the only way to allow each user to experience memory features in the ways that meet their potentially changing needs and best support their well-being. Thus, I recommend that every social media platform that has memory features should have settings that allow users to enable, reduce, or entirely disable the memory feature(s), as well as to hide memories that contain specific people, time periods, places, words, and types of subject matter. These platforms should also continually monitor user feedback on their memory features' settings, and implement more settings where users identify the need. Doing so will begin to return agency to users and will provide users with the most positive experiences of memory features possible, which, ultimately, benefits users and social media companies alike.

Limitations and Recommendations for Future Research

This research project had multiple limitations that stemmed from its preliminary nature and its restricted timeline as a Master's level research project. First, while my fifteen survey respondents provided valuable insights into the impacts of social media memory features during the COVID-19 pandemic, this sample size is not representative of social media users at large. Thus, future research on this subject should involve more participants, and those participants should be selected more randomly from the general population. In addition, because this study was so preliminary, I did not ask respondents for demographic information about their race, class, sexuality, gender, or any other social factors that have

been shown to influence how a person is impacted by the COVID-19 pandemic.⁷⁹ Beyond the pandemic, these factors may influence how a person experiences social media, including memory features, and thus should be studied in intersectional ways in future research on this topic in order to avoid 'absolutism' wherein one "assumes that the phenomena of interest are the same regardless of culture, race, ethnicity, and [socioeconomic status]."⁸⁰

Future research might also benefit from a mixed methodology approach involving widely distributed surveys and interviews or focus groups. The surveys would address my study's small sample size and lack of demographic information, and combining this with interviews or focus groups could allow researchers to gain deeper insights into participants' thoughts and experiences through the ability to ask follow-up and clarifying questions. In my study, for instance, I might have asked respondents to clarify how they define 'nostalgia' to better understand whether they conceive of it as a positive or negative emotion. I also would have prompted respondents whose responses indicated complacency with memory features about the reason for their complacency, and whether they view it as problematic.

While I asked my survey respondents about how they *anticipate* that seeing social media memories from the COVID-19 pandemic will impact them in the years to come, future research after the COVID-19 pandemic has ended might assess what the *actual* impacts are. This research could allow us to develop a more long-term understanding of the impacts of memory features on users' emotions and personal development after they have archived a (potentially) traumatic life period through their social media content. This research could also

^{79.} Megan M. Ruprecht et al., "Evidence of Social and Structural COVID-19 Disparities by Sexual Orientation, Gender Identity, and Race/Ethnicity in an Urban Environment," *Journal of Urban Health* 98 (2020): 27–40, https://doi.org/10.1007/s11524-020-00497-9.

^{80.} Carol Scheffner Hammer, "The Importance of Participant Demographics," *American Journal of Speech-Language Pathology* 20, no. 4 (2011): 261, https://doi.org/10.1044/1058-0360(2011/ed-04).

provide insight into how users might best engage with memory features after they have documented major traumatic life events through their social media activity.

Lastly, future research on the effects of social media memory features would benefit from interdisciplinary collaboration between new media scholars, and psychologists, neuroscientists, and/or other experts on the human brain, memory, and emotions. These scientific experts could provide insight into the processes of the brain that occur when a user encounters social media memories, which could be combined with new media scholars' expertise on social media platforms and user experiences to result in a more thorough understanding of how these memory features impact users. Their expertise could also contribute knowledge about mental health, mental illness, and trauma, which are relevant factors when developing an understanding of all the potential impacts of memory features on users' well-being. As one example, psychologists with deep knowledge of body image, body dysmorphia, and eating disorders would be valuable to a future study about the impacts of social media memory features on users' body image and self-confidence.

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Appendix A: Online Survey

Social Media and the Flashbacked Self: How Memory Features on Social Media Impact Users During the COVID-19 Pandemic

A study about 'Flashback' and 'Memory' features on social media.

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What am I trying to discover?

Through this study, I am trying to learn about the impacts of social media memory features like Facebook's 'Memories,' Instagram's 'On This Day,' and Snapchat's 'Flashbacks' on social media users, including potential emotional, social, and/or other personal impacts, both during and before the COVID-19 pandemic. I am also hoping to find out how users might best engage with these features, and to compare that to how users actually, typically engage with them.

I am doing this research for my Major Research Project, a component of my master's program, under the supervision of Dr. Paula Gardner.

People participating in this study must be between the ages of 18-24, must have used Facebook, Snapchat, and/or Instagram for at least 2 years, and must have taken note of the 'Memory' features on at least one of these platforms.

What will happen during the study?

This study consists of an anonymous one-time questionnaire which should take about 15 minutes to complete.

The questions will ask about your experiences with and opinions of social media in general, as well as with social media **memory features** in particular, like:

\bigcirc	How would you say that seeing memories from your past on social media makes you
	feel about your past self?
0	Do you think that the memories you see on social media accurately represent who you were or what your life was like at that time in your life?
0	Have you had any strong emotional reactions to your memories from a social media

memory feature that you would like to share? Please describe them.

I will use your responses to complete my research project, which will be in the form of a research paper that is about 40 pages long.

Are there any risks to doing this study?

The risks involved in participating in this study are minimal. You may feel upset, anxious, or embarrassed when reflecting on the memories that social media features have shown to you, or when sharing with me about these experiences. You may also experience discomfort when reflecting upon your past and past self.

You do not need to answer any questions that you do not want to answer or that make you feel uncomfortable, nor do you need to share any experiences that you do not want to discuss. I describe below the steps I am taking to protect your privacy, and I will also provide resources at the end of the survey should you need to reach out to someone for support.

Furthermore, as with any research where information is collected from participants, there is also the risk of a potential data breach. However, because this survey is anonymous, this risk is minimized. To further reduce this risk in this study, I am collecting information via a secure platform often used in academic research, and all responses will be collected on my personal account and will not be shared with others.

Are there any benefits to participating in this study?

The research will benefit you by providing you with an opportunity for self-reflection, and reflection on your social media usage and habits, especially during the COVID-19 pandemic. It will also provide you with a chance to share about your experiences and opinions, and in doing so, to contribute to research.

Additionally, I hope that what is learned as a result of this study will help us to better understand how social media memory features impact users, and also, from this, how we might best engage with these features.

Who will know what I said or did in the study?

Every effort will be made to protect your confidentiality and privacy, beginning with the fact that this survey is anonymous. This survey will not ask for your name, email address, or any other personal information that would allow you to be identified. However, we are sometimes identifiable through the stories we tell, to those who also know these stories. Please keep this in mind when deciding what to share in your responses.

The answers you provide will be downloaded and kept on a computer, and the file will be protected by a password. Once the study has been completed (by September 1, 2021 at the latest), the file will be destroyed.

What if I change my mind about being in the study?

Your participation in this study is voluntary. If you decide to be begin this survey, you can withdraw from it for whatever reason, even after providing your consent to participate, up until you have submitted the survey. There are questions at the end of each section of the survey (except the consent and eligibility-determining sections) where you can indicate your desire to withdraw. In these questions, you will be presented with the option to have the responses you have provided up until that point included in the study data (meaning you will just be ending the survey early, but still participating up to that point), or destroyed (note: your responses will be destroyed unless you indicate otherwise). You may also simply close this window to withdraw.

If you decide to withdraw, there will be no consequences to you. If you do not want to answer some of the questions but still wish to be in the study, you can do this too; the only questions that require an answer are the consent and eligibility-determining questions. Otherwise, you may choose to pass on any question.

Please note that after you finish the survey, it will be impossible for me to remove your responses from the data, as responses are anonymous.

How do I find out what was learned in this study?

I expect to have this study completed by September 2021. I will make my final paper available on MacSphere at: https://macsphere.mcmaster.ca/handle/11375/113.

Questions about the study?

If you have any questions about this study, please contact Erica Rzepecki at rzepecke@mcmaster.ca.

This study has been reviewed by the McMaster University Research Ethics Board and received ethics clearance. If you have concerns or questions about your rights as a participant or about the way the study is conducted, please contact:

McMaster Research Ethics Secretariat

Telephone: (905) 525-9140 ext. 23142

C/o Research Office for Administrative Development and Support

E-mail: ethicsoffice@mcmaster.ca

Participant Consent
Q1: Having read the preamble on the previous page, I agree to take part in this study.
[] Yes
[] No
Q2: I understand that I may withdraw from the study at any point prior to submitting the survey, after which point withdrawal of my responses will no longer be possible.
I also agree that my responses may be used in any papers or publications that may arise from this study.
[] Yes
[] No
Eligibility
Q1: Are you between the ages of 18-24?
[]Yes
[]No
Q2: Have you used Facebook, Instagram, and/or Snapchat for at least two years?:
[]Yes
[]No
Q3: Have you seen, clicked on, reflected upon, and/or shared the 'memories' you have been notified about by a social media memory feature like Facebook's 'Memories,' Instagram's 'On This Day' or Snapchat's 'Flashbacks' at least once before and once during the COVID-19 pandemic?
[]Yes
[]No

Your Social Media Usage

Q1: Which of the following social media platforms do you use, and how long have you been using them for?

Hint: Please check off all of the platforms that you use, and write the length of time you've used them for in the box beside them (approximations are welcome, e.g. 6 months, 2.5 years, 10 years).
[] Facebook
Q2: How often do you use the platform(s) you checked off above?
Hint: Please write the platform name(s) and then the frequency, ex. Instagram and Snapchat: every day, Facebook: once a week.
[Open text box for participants to write in]
Q3: What would you say are your main reasons for using social media? (Please check all that apply and write your own response if needed):
[] Social connection [] Creative expression [] Professional / business purposes [] To document my life and preserve memories of it [] To stay up to date on current events / news [] To communicate with others [] Because it's a social norm [] To look back on memories from my life [] For fun / amusement [] To build a following / fans [] Other:
Q4: Please complete the ratings below, with 1 being "very negatively," 3 being "none/neutral," and 5 being "very positively."
 a) Overall, how would you say that using social media has impacted your self-confidence? [1-5 scale] b) Overall, how would you say that using social media has impacted your emotional well-being? [1-5 scale]

Memory Features During & Before COVID-19

The next several questions will ask about social media 'memories' and social media 'memory features.'

'Memory features' include:

- Facebook's 'Memories,' which itself includes features like 'On This Day' and 'Friends Made On This Day.' These features remind you of your past posts on Facebook, posts you were tagged in, or friends you made on the platform on that day in previous years. These may appear as notifications, or may be presented to you directly at the top of your Facebook feed.
- Instagram's 'On This Day,' which is available under 'Create' mode in Instagram Stories. It shows you the posts you made and some of the people you began following on that day in previous years. You may also get notifications about the anniversaries of your past posts under your 'Activity' tab.
- Snapchat's 'Flashbacks,' which is part of Snapchat's 'Memories.' This feature presents you with all of the snaps you saved to your Memories on that day in previous years.

When I refer to 'social media memories,' I am referring to the past content, and the memories and life events the content depicts, that these social media memory features show you and thus remind you of.

Q1: Overall, how do you feel about social media 'memory' features?

[] I like them
[] I have mixed feelings about them [] I dislike them
[] I am unsure
[] Other:
Q2: How has your opinion of social media memory features changed during the COVID-19 pandemic?
[] I like them more than I did before the pandemic
[] I like them as much as I did before the pandemic
[] I like them less than I did before the pandemic
[] I am unsure
[] Other:
Q3: Please use this space to share about why you feel the way you do about social memory features, and why this has changed or not changed in light of COVID-19:

[Open text box for participants to write in]

O4: How often do/did you engage with (i.e. view, click on, share, or another action) the memories shown to you by these social media memory features, on a scale from 1-5 with 1 being 'never,' 3 being 'sometimes,' and 5 being 'every time I see them'?

- a) Before the COVID-19 pandemic [1-5 scale]
- b) During the COVID-19 pandemic [1-5 scale]

Q5: Please use this space to explain your answer to the previous question, including why you choose to engage with your social media memories or not, and if this varies by platform. [Open text box for participants to write in] Q6: Have you had any strong emotional reactions to your memories from a social media memory feature that you would like to share? Please describe them. [Open text box for participants to write in] Q7: How would you say that seeing memories from your past on social media makes you feel about your past self? Please check off all that may apply: Hint: Different memories may make you feel differently about your past self, so it's okay if you choose contradictory responses. [] Proud [] Neutral [] Embarrassed / 'Cringe' [] Nostalgic [] Other: Q8: Do you think that the memories you see through social media memory features accurately show who you were or what your life was like at that time? []Yes [] Maybe / Sometimes [] No [] Unsure Q9: Please use this space to explain your answer to the previous question: [Open text box for participants to write in] Q10: How did/does receiving notifications from social media memory features about your past posts and actions impact your emotional state or mood? 1 = very negatively, 5 = neither positively nor negatively, 10 = very positively a) Before the COVID-19 pandemic [1-10 scale] b) During the COVID-19 pandemic [1-10 scale] Q11: Please use this space to explain your answer to the question above.

Looking Ahead

[Open text box for participants to write in]

please skip this question.

Q1: Settings for Facebook's 'Memories' enable users to hide memories of specific dates or people, if they don't want to be notified about memories that include them. Would you ever think of using these settings?
[] Yes [] Unsure/Maybe [] No
Q2: If you would like to explain your answer, please do so here.
[Open text box for participants to write in]
Q3: Some social media platforms (Facebook and Snapchat) allow users to deactivate memory or flashback notifications. Do you think you would ever want to deactivate social media memory notifications?
[] Yes [] Unsure/Maybe [] No
Q4: If you would like to explain your answer, please do so here.
[Open text box for participants to write in]
Q5: Thinking ahead to once the COVID-19 pandemic is over: How do you think that seeing 'memories' of the COVID-19 pandemic through social media memory features might impact you personally or emotionally in years to come?
[] Gratitude: It will make me feel grateful that the pandemic is over [] Grief: It will remind me of people I lost or other negative experiences I had during that time and will make me feel sad [] Fear: It will make me feel afraid about the potential of a future pandemic [] Pride: It will make me feel proud of myself for persevering through a difficult time [] Other:
Final Thoughts
Q1: Are there any other thoughts you have about social media memory features, or experiences you have had with them, that you would like to share? If so, please do so here:
[Open text box for participants to write in]
Q2: You have reached the end of the survey. If you would like to withdraw from the study at this point, please indicate so here. If you would like to submit your responses,

[] I would like to withdraw from the study at this point. Please do not use any of the responses I have provided.

You have reached the end of the survey.

Thank you for taking part in this study! Your responses are a valuable part of this research, and we are grateful for your time and thought.

[Options to submit or go to the previous section]

Appendix B: My Personal Survey Response

Social Media and the Flashbacked Self: How Memory Features on Social Media Impact Users During the COVID-19 Pandemic Erica Rzepecki (Master of Arts student)

(Department of Communication Studies and Multimedia – McMaster University)

Page 1: Your Social Media Usage

Q1: Which of the following social media platforms do you use, and how long have you been using them for?

Hint: Please check off all of the platforms that you use, and write the length of time you've used them for in the box beside them (approximations are welcome, e.g. 6 months, 2.5 years, 10 years).

[x] Facebook: 11 years[x] Instagram: 6 years[x] Snapchat: 7 years

Q2: How often do you use the platform(s) you checked off above?

Hint: Please write the platform name(s) and then the frequency, ex. Instagram and Snapchat: every day, Facebook: once a week.

Facebook: usually about once a day

Snapchat and Instagram: several times per day

Q3: What would you say are your main reasons for using social media? (Please check all that apply and write your own response if needed):

[x] Social connection
[] Creative expression
[x] Professional / business purposes
[] To document my life and preserve memories of it
[x] To stay up to date on current events / news
[x] To communicate with others
[x] Because it's a social norm
[] To look back on memories from my life
[] For fun / amusement
[] To build a following / fans
Other:

Q4: Please complete the ratings below, with 1 being "very negatively," 3 being "none/neutral," and 5 being "very positively."

- a) Overall, how would you say that using social media has impacted your self-confidence? [1-5 scale]: 2
- b) Overall, how would you say that using social media has impacted your emotional well-being? [1-5 scale]: 2

Page 2: Memory Features During & Before COVID-19

The next several questions will ask about social media 'memories' and social media 'memory features.'

'Memory features' include:

- · Facebook's 'Memories,' which itself includes features like 'On This Day' and 'Friends Made On This Day.' These features remind you of your past posts on Facebook, posts you were tagged in, or friends you made on the platform on that day in previous years. These may appear as notifications, or may be presented to you directly at the top of your Facebook feed.
- · Instagram's 'On This Day,' which is available under 'Create' mode in Instagram Stories. It shows you the posts you made and some of the people you began following on that day in previous years. You may also get notifications about the anniversaries of your past posts under your 'Activity' tab.
- · Snapchat's 'Flashbacks,' which is part of Snapchat's 'Memories.' This feature presents you with all of the snaps you saved to your Memories on that day in previous years.

When I refer to 'social media memories,' I am referring to the past content, and the memories and life events the content depicts, that these social media memory features show you and thus remind you of.

1: Overall, how do you feel about social media 'memory' features?
I like them
I have mixed feelings about them
I dislike them
I am unsure
Other:
2: How has your opinion of social media memory features changed during the OVID-19 pandemic?
2: How has your opinion of social media memory features changed during the
2: How has your opinion of social media memory features changed during the OVID-19 pandemic?

]	I am unsure
]	Other:

Q3: Please use this space to share about why you feel the way you do about social media memory features, and why this has changed or not changed in light of COVID-19:

For me, my social media memories (depending on the platform) go as far back as when I was twelve years old. A lot changed for me during those years: I graduated elementary school, began and finished both high school and my undergraduate studies, had friendships and relationships that started and ended, lost loved ones, and developed my sense of identity. Navigating all these changes has been a messy process, so when social media memory features remind me of when I was at another stage of life – one I no longer identify with – or of people I no longer am close to, it can cause pain, embarrassment, and shame. However, my social media memories have also made me smile, like those from the trip I took with my sister to London and Paris.

For the first ten to twelve months of the COVID-19 pandemic, I liked social media memory features significantly less than before the pandemic began. These memories highlighted the things I could no longer do and the people I could no longer see, and thus divided my life into a distinct 'before' and 'after,' where the 'after' was far less favourable. After the passing of my dog in October 2020 (which was unrelated to the pandemic, but harder to cope with because of it), seeing memories of her became emotionally fraught as well. However, in the months following the one-year anniversary of the pandemic, as I became adjusted to living in a pandemic and as vaccine distribution became more widespread in Canada providing me with more hope for the end of the pandemic, I found that seeing most of my social media memories was not as painful; I largely came to see them as showing things I would soon be able to do again and people I would soon be able to see again, or as the kinds of fond memories I would soon be able to make again. The exceptions to these were the memories with loved ones I had lost and friendships that had ended, which were the kinds of memories that were painful before the pandemic as well.

Q4: How often do/did you engage with (i.e. view, click on, share, or another action) the memories shown to you by these social media memory features, on a scale from 1-5 with 1 being 'never,' 3 being 'sometimes,' and 5 being 'every time I see them'?

- a) Before the COVID-19 pandemic [1-5 scale]: 5
- b) During the COVID-19 pandemic [1-5 scale]: 5

Q5: Please use this space to explain your answer to the previous question, including why you choose to engage with your social media memories or not, and if this varies by platform.

I engage with my social media memories partially just to 'clear' the notifications, and partially out of curiosity about what I was doing on this day in years past.

I very rarely engage with my Instagram memories, especially because their On This Day feature is hidden within Create mode on Stories, which I do not actively use. So, I engage with them every time I see them, but I don't see them very often. This memory feature is, for me, the least noticeable and thus the least impactful (in terms of either a positive or negative impact).

On Facebook, I will click to view my memories, but I do not share them. I post very rarely on Facebook nowadays, but posted more often when I was in elementary school to early high school – about ten years ago. Thus, the majority of the memories show a version of me that is very different from who I am now, and who knew and interacted with very different people than I do now, so sharing those memories would not feel appropriate.

On Snapchat, I check my Flashback Memories every day, and am most likely to share these as Snapchat is the platform on which I create the most Memories to this day, so they are often more recent and many of the other people in them are still present in my life (so I can share the Flashbacks with them). In addition, due to the more private nature of Snapchat as a platform (specifically, the ability to send snaps only to very specific people), my Snapchat memories are the most authentic and honest of all of my social media memories, and thus I am most likely to re-share them with my close friends than my memories on any other platform.

Q6: Have you had any strong emotional reactions to your memories from a social media memory feature that you would like to share? Please describe them.

As I described in the introduction to the paper I am answering these questions for, I have had strong emotional reactions when seeing social media memories of lost loved ones like my dog. I have also experienced a lot of nostalgia, like when I have been shown memories with friends who no longer live nearby. I have also felt a lot of embarrassment when looking back on social media memories and seeing how I once presented myself on social media in ways that no longer reflect how I see myself or would present myself today. These emotional reactions range widely and thus are hard to predict when I go to open a memory notification.

Q7: How would you say that seeing memories from your past on social media makes you feel about your past self? Please check off all that may apply:

Hint: Different memories may make you feel differently about your past self, so it's okay if you choose contradictory responses.

] Proud
[x] Neutral
[x] Embarrassed / 'Cringe
[x] Nostalgic
[] Other:

Q8: Do you think that the memories you see through social media memory features accurately show who you were or what your life was like at that time?

[] Yes
[x] Maybe / Sometimes
[] No
[] Unsure

Q9: Please use this space to explain your answer to the previous question:

Because I do not share every moment of my life on social media, my social media memories are not entirely accurate representations of every facet of my personality and life from that time. However, I think they are largely accurate representations of specific moments in my life and of myself at specific moments in time. In addition, I think that my Snapchat memories most accurately show who I was and what my life was like at that time, since I collect the most honest memories on that platform (as previously mentioned, I feel less of a need to censor or otherwise alter the way I present myself to fit social norms or impress others).

Q10: How did/does receiving notifications from social media memory features about your past posts and actions impact your emotional state or mood?

- 1 = very negatively, 5 = neither positively nor negatively, 10 = very positively
- a) Before the COVID-19 pandemic [1-10 scale]: 5
- b) During the COVID-19 pandemic [1-10 scale]: 4

Q11: Please use this space to explain your answer to the question above.

Before the COVID-19 pandemic, I think that I received a relatively even distribution of memories that impacted my mood positively, negatively, and neutrally. During the COVID-19 pandemic, there has still been a distribution, but as I mentioned previously, I have found that primarily during the first year of the pandemic, even memories I might have considered 'positive' were tainted with nostalgia and the knowledge that I could not do the things or see the people shown in the memories. While that is still largely true now, later in the pandemic, I find these memories less painful as I have grown accustomed to a socially distanced life, and can begin looking toward post-pandemic life.

Page 3: Looking Ahead

Q1: Settings for Facebook's 'Memories' enable users to hide memories of specific dates or people, if they don't want to be notified about memories that include them. Would you ever think of using these settings?

[]	Unsure/Maybe
٢1	No

Q2: If you would like to explain your answer, please do so here.

These settings are essential to reduce the harm that memory features have the potential to bring to users. Relationships dissolve, loved ones pass away, and other traumatic events and time periods occur, and social media memories can be direct triggers to remind us of those occurrences. The ability to hide periods of time or specific people are one way that users can assert control over their memories and the emotional impacts they have. This also means that, if someone wanted to, they could hide all of their memories from the COVID-19 pandemic, and would not receive reminders of the pandemic when simply visiting social media, which could be important if this period has been particularly traumatic for them. However, it is worth noting that this step of hiding people and time periods is an additional step and moment of emotional labour imposed on users by memory features – if these features did not exist, users would not have to decide to hide the memories, learn how to do so, and type in the names and dates that may be causing them distress.

Q3: Some social media platforms (Facebook and Snapchat) allow users to deactivate memory or flashback notifications. Do you think you would ever want to deactivate social media memory notifications?

$[\]$	Yes
[x]	Unsure/Maybe
[]:	No

Q4: If you would like to explain your answer, please do so here.

I would deactivate Facebook Memories notifications because I do not find that I receive significant value from them, and they remind me of people and stages of my life from long ago that I do not benefit from being reminded of. However, while I might attempt to curate my Snapchat memories (e.g., removing those with people I no longer have relationships with), I do find joy in many of them and enjoy looking through them, so I would like to continue to see them.

Q5: Thinking ahead to once the COVID-19 pandemic is over: How do you think that seeing 'memories' of the COVID-19 pandemic through social media memory features might impact you personally or emotionally in years to come?

[x] Gratitude: It will make me feel grateful that the pandemic is over
[x] Grief: It will remind me of people I lost or other negative experiences I had during that
time and will make me feel sad

[] Fear: It will make me feel afraid about the potential of a future pandemic

[x] Pride:	It will	make r	ne feel	proud	of myse	elf for	perseve	ring	through	a dif	ficult 1	time
[] Other:												

[My additional thoughts on this question]: I think that while these memories might not make me fear a future pandemic in particular, they will make me feel more mindful of how quickly life can change. Within just a few weeks' time, as memorialized through my Snapchat memories, I went from joking about covering my mouth with my scarf on the subway in Toronto before COVID-19 was recognized as a pandemic, to wearing and sourcing fabric for homemade masks as the guidance of health professionals changed to recommend mask wearing. I imagine that this will contribute to the sense of gratitude I will feel that the pandemic is over, which I will be reminded of each time I see a memory from during the pandemic in years to come, but it will also simply improve my ability to take fewer aspects of my daily life for granted.

Page 4: Final Thoughts

Q1: Are there any other thoughts you have about social media memory features, or experiences you have had with them, that you would like to share? If so, please do so here:

I strongly believe that more user controls are needed for social media memory features across all platforms (i.e., the ability to hide memories of specific people, locations, and time periods, and to completely deactivate memory features and not just the notifications) as this would allow users to control how (or if) these features impact them. For example, users could then be mindful of when they are in a mindset where seeing memory-based notifications would be beneficial to them, and when it would be harmful, and adjust their settings accordingly. These settings also need to be easy to locate for any user, and they should offer a range of controls so that users' exact needs can be met (but not so many controls that it becomes overwhelming to try to understand and make decisions about them all).