

News Feed: What's in it for Me?

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ABSTRACT

Over a billion people use social networking sites like Facebook to maintain awareness of their friends. Facebook's News Feed is the primary mechanism by which people are shown updates about their friends' daily activities on the site in the form of an algorithmically curated list of stories. This paper examines how people browse the News Feed, their perceptions and satisfaction while using it, and the interactions they make with their personal social network. We conducted a qualitative study involving think-aloud semi-structured interviews as the participants casually browsed their own feeds. We observed a wide variation in the use of the News Feed ranging from careful consideration of social conventions, judgment of people, and annoyance and frustration towards certain friends. Our findings suggest that people do not deliberately curate their own News Feed either due to lack of awareness or perceived social repercussions.

Author Keywords

Facebook; social networks; News Feed

ACM Classification Keywords

H.1.2. User-machine systems: Software psychology

INTRODUCTION

Today, over a billion people use social networking sites (SNSs) such as Facebook to upload photos, write personal messages, and share digital content [7]. The prevalence and ubiquity of SNSs has begun to complement established mechanisms of communication (in person conversation, telephone, text message) by providing people with a semi-public profile page to which they can post or re-share content that they find interesting or represents their personality or identity [1, 22] – such as textual status updates, photos, videos, news articles, and links to websites. Facebook's News Feed, first introduced in 2006, quickly became a key mechanism to present the posts and activities of friends, as well as entice people to share

content of their own [4]. In this paper we present a qualitative study that investigates how people browse their News Feed and the extent to which they feel they can influence its content.

The News Feed highlights or promotes certain stories that are algorithmically identified to be popular or particularly relevant to the reader. This contrasts with other content stream approaches, as used by Twitter, that list tweets chronologically with minimal filtering. One of the primary reasons that a filtered News Feed exists is to show the reader a manageable volume of their friends' stories and to promote certain posts deemed particularly relevant to the reader. Without any filtering, the reader would be overwhelmed with uninteresting stories and unable to find the stories they truly care about.

It is reasonable to assume that Facebook uses a variety of metrics to determine if a story is important to the reader and makes assumptions about what a given person wants to see, which may not be an accurate reflection of their actual tastes [15]. Facebook has been tweaking the News Feed since its creation and has large volumes of logs and tests to guide their design decisions. However, because this is proprietary information, others who wish to develop similar approaches to the News Feed cannot rely on Facebook to disclose their trade secrets.

We conducted semi-structured contextual interviews with eleven people while they browsed their Facebook News Feed to gain an in depth and tacit understanding of this interface. In our study we take a fresh look on people's News Feed activities by exploring the interplay between their interactions with the News Feed and their emotions. Limiting our number of interviews allowed us to explore our questions in depth and detail. It also supported a flexible open ended approach allowing us to learn about new factors as they arose. Our questions focused on people's perceptions and emotional responses to News Feed stories. As with the nature of qualitative studies, we received extensive information about our participant's practices with the News Feed and discovered that participants lacked awareness of their own potential to influence the content of their News Feed and that social factors such as judgment stood in the way of this curation possibility.

UNDERLYING SOCIOLOGICAL FRAMEWORKS

The following conceptualizations of social behavior are relevant to our exploration of Facebook's News Feed: Goffman's work that theorizes how people present themselves to each other [12], Coleman's explanations of

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the workings of social capital [6], and Granovetter's work on social weak ties [13].

Goffman uses a theatre metaphor to explain social interactions: individuals make a *performance* to the *audience* and it is expected that these performances match the individual's *role*. A person may play different performances for different audiences based on their changing role. For example, a person's role with their relatives is different from their role at work, and so their performances are also different. Usually, individuals make performances effortlessly and without any awareness that they are performing; however, in some cases the performance is carefully calculated to give the audience a specific impression of the individual. In addition to performances, an individual's *personal front* – clothing, age, gender, body, posture, speech – are used to establish and communicate their role to the audience. For example, a surgeon's clothing communicates their role to the audience. The audience expects that an individual's performance and personal front be congruent with each other and their role.

Coleman extends the notion of *social capital* from the economic concepts of physical capital (materials and tools) and human capital (skills and knowledge). Social capital is then the relations between people that can be called upon to accomplish tasks, to upkeep societal norms, and to enable information flow throughout the social network. For instance, trustworthiness inside of a social group allows individuals to expect the return of favors they have done for their friends and creates reciprocity obligations for those that receive favors.

Finally, Granovetter explains that a social network broadly consists of closely-knit groups (locally dense) connected together with weak ties (globally sparse). It is through weak ties that new information is shared between closely-knit groups [2] and allows individuals to grow their social capital by creating connections to groups of people they would not normally know.

RELATED WORK

The primary uses of Facebook since its launch in 2004 have been to maintain pre-existing social connections and to learn more about new acquaintances [8, 17, 19, 20, 31]. Many people use Facebook to “lurk” – to read content without liking, commenting, or sharing – as a way to keep up with their friends' activities as well to organize offline activities such as parties, dates, and other spontaneous meetings [3, 25]. In particular, Facebook allows people to communicate more easily with acquaintances and weak or new friends [3]. While these studies primarily target university students, Facebook has also been studied in the workplace setting. A new set of complex social rules emerged when people began to mix personal and professional networks such as: sharing content more carefully; concealing parts of their profile after realizing that senior co-workers could see them; and feeling pressure to accept friend requests from clients [27]. With nearly half

of Facebook friends being strangers or acquaintances, people expressed concern about their content being seen by these specific “social insiders” on their friend list rather than “outsiders” or people who they are not friends with on Facebook [10, 16]. Sharing content with selective groups may be a possibility to mitigate this concern [18].

After a period of initial opposition, the News Feed was quickly adopted because it made it easier have “ambient awareness” of social groups and their daily occurrences [30]. Visiting a friend's profile directly was the only way of reading their posts prior to News Feed. Information and ideas are dispersed more widely and more quickly when seen on the News Feed [2, 28]. Facebook users express curiosity when they see their friends' activity on the News Feed and begin to look at their profile to see what they are up to [14]. Seeing friends share content encourages new users to participate by sharing content of their own [4].

The design and consequent social effect of the News Feed has been discussed in the popular media as well. What happens if the News Feed algorithm is given too many signals or purely inauthentic signals – in the form of likes? After two days of liking everything on his News Feed, one author describes his feed being entirely devoid of people – instead a stream of extreme political articles, click-bait [5], and celebrity sensationalism [15]. Others ask if the News Feed shows readers positive “feel-good” content rather than current events or serious topics. In the summer of 2014, two viral trends were circulating in the United States: the first was the “ALS ice bucket challenge”, a viral campaign that challenged people to dump water on their heads [29]; the second was the reaction of a fatal police shooting in Ferguson, MI. Many users pointed out that, while their Twitter feeds were primarily filled with tweets about Ferguson, their News Feeds were nearly devoid of this content – favoring the “ice bucket” videos instead [9, 23, 24]. Should SNS designers have a responsibility to show their users a balanced content feed when up to 28% of internet users get their news from SNSs [26]?

STUDYING NEWS FEED ACTIVITIES

Our study goal was to discover people's personal practices and activities when using the News Feed, especially their emotional responses to the stories they are shown. To explore these questions we conducted a qualitative study with semi-structured contextual interviews. We were able to observe Facebook users when interacting with their News Feed and to ask directed questions about their browsing activities as the participants revealed more details. We chose to use a qualitative approach to glean a deeper understanding through gathering a few extensive interviews and conducting in depth analysis. This approach has allowed us to examine complex questions, providing a description that is a rich slice of reality.

Participants and Recruitment

Eleven people from the ages of 19 to 37 (4 male and 7 female) participated in our study. Recruitment was done via

notices posted to one researcher's personal Facebook profile, billboard notices posted around the university, and word-of-mouth recruitment. To get a reasonable spread across the ages of the usual Facebook users, we selected approximately two to three participants for each of the following age groups: 18-21, 22-25, 26-29, 30-33, 34+. Our participants came from many disciplines and professional backgrounds: a geologist, programmer, neuroscientist, rock climbing instructor, and undergraduate and graduate students. Participants were remunerated with \$20.

Experimental Setup

The study was conducted in a quiet, private room with a chair and a desk and an optional desktop computer. A video camera was placed behind the participant and facing the display of the computer they were using. An audio recorder was placed on the table in front of them to record clear audio of the interview. The researcher sat next to the participant's table. If the participant chose to bring their own device, they placed it on the table in front of them and the video camera was adjusted to bring the device in frame.

Procedure

On confirming the appointment time, participants were asked to refrain from reading their News Feed for four hours prior to the start of the interview so that fresh stories would have time to accumulate. The study had four separate components completed as follows.

Pre-study Questionnaire

Before commencing the News Feed browsing portions of the study, each participant completed a questionnaire that asked personal demographic information and several Facebook-usage questions. Once completed, the rest of the study was explained and any questions were answered. A short demonstration of think-aloud protocol was conducted to familiarize the participant with this technique [21].

Initial News Feed Browsing

The participant was instructed to log into their Facebook account on their chosen computer. They were given several minutes to address any important or routine tasks such as reading notifications or answering private messages and were also instructed to close the chat feature. These steps eliminated any distractions during the browsing sessions.

The participant was then asked to browse their News Feed as they would normally use it on their own, including liking, commenting, and sharing posts, visiting their friends' profiles, looking at photos and videos, and opening links as they wished. Participants were given up to 12 minutes for this portion of the study, or until they began seeing posts that they had already read previously.

This portion of the study was not video or audio recorded, as required by ethics, to address potential privacy and dignity concerns. As the participants were instructed to not read their News Feed for several hours prior to the study, they would not be aware of what posts would appear on feed. Any egregious posts that did appear could be hidden

using Facebook's hide feature or the participant could choose to withdraw from the study entirely. Neither of these actions was undertaken by any of the participants.

One researcher was present during this portion and recorded field notes describing any actions the participant made during the initial browsing session to serve as entry points for open ended questions or discussions.

Think-aloud News Feed Browsing

The participant was then instructed to return to the top of their News Feed and to begin browsing while verbalizing what they were doing, thinking, and feeling [21]. This portion and the post-study interview, were video and audio recorded. The researchers prompted the participant with probing questions if they began to quickly skip posts without explanation or if they had non-verbal reactions to a post such as unusual facial expressions, a lengthy contemplative pause, or laughing. Participants were often asked to explain how they knew the friend who was posting, why they were interested or not in the post, and any specific context if the situation called for it.

Post-study Interview

The study concluded with a semi-structured interview intended to further explore any topics that were discovered during the think-aloud portion. The researchers also asked questions that addressed the following topics: perceptions of friends based on their posts; annoyances or negative feelings while browsing; self-censorship; perceived judgments placed on the participant by their friends; emotions regarding unfollowing or unfriending people; perceived online social conventions; and general opinions about Facebook. The participant was encouraged to discuss any additional topics or opinions they held about Facebook, the News Feed, and social networks in general.

Analysis

The think-aloud and interview transcripts were open-coded in two passes as in the constant comparative method [11]. First, three representative transcripts were selected from participants who had explained their emotional decisions, interpersonal relationships, interests, and browsing behavior in great depth. Thus, themes and codes discovered from these interviews would form a good basis for open-coding the other transcripts. One researcher analyzed all three interviews while another researcher analyzed two of the interviews. This independent analysis showed 92% similarity between the two researcher's coding and categorization, demonstrating rigor. Code categories were formulated and the remaining interviews were coded by both researchers independently.

FINDINGS

We have identified six thematic categories that encompass the majority of the browsing actions or emotional affects observed. Loosely summarized, they are: friendship and interest considerations, annoyances and judgment, liking and commenting actions, and News Feed curation.

Friendship Classification

As expected, the type and strength of a friendship makes a large impact in the interest and overall emotional response of the participants. This was mentioned by all the participants when looking at the stories on their News Feed. Participants glanced at the name or profile picture of the story poster to identify who posted it, and used the following sub-categories as metrics to determine if they were interested to read more about the story. *"I always read the names first."* (P2)

Friendship strength and closeness

The type of friendship greatly determined if participants were interested in reading stories from people. Participants classified friendships on a discrete scale typically consisting of three designations: close friend, friend, and acquaintance. Participants referred to people as close friends when they knew them for a considerable period of time, trusted them, socialized frequently, and shared similar values. *"[We were] close friends in high school. We see each other around quite a bit now still."* (P7)

In contrast, "acquaintance" was a loose term and had different meanings between the participants. For instance, one participant described acquaintances as old co-workers or classmates whom they no longer socialize with, another described them as people they simply do not feel a strong personal connection to, and a third explained that an acquaintance could be a complete stranger or someone who they have met face-to-face only once. *"I've had Facebook for 7 years and I have a lot of different ranges of acquaintances. What I mean by this is that I worked with them at a grocery store for a few years when I was in high school. And I have not talked to them since then."* (P2)

The designation, "friend", referred to people who were in neither of the other two groups. These were people such as current co-workers or classmates, people the participant socialized with but did not know well, or even former close friends with whom the participant lost touch. *"I used to go to HS with him and his friends, we lost touch."* (P10)

Frequency of interaction

Participants were more interested in posts from people who they interacted with on a regular basis, either in real life or on Facebook. These "frequent friends" often posted about shared experiences that were relevant to the participant, for example photos of a hiking trip, which invited further socialization either on Facebook or in person. *"...who I'm more apt to spend time looking at or reading posts or commenting on. And I think those are the people who have more regularity in my immediate life right now."* (P5)

Friendship context and history

Participants explained that the context of a friendship was sometimes an important factor when considering posts from friends. This was mostly used to pay attention to former colleagues and classmates, for example, when their friend changed jobs or had career success. *"This person was my ex-colleague but is currently in a position of chief technical*

officer of a company, so sometimes I read his posts as well." (P3) Four participants had professional contacts in their friend-list and used Facebook to maintain awareness of the personal lives of their professional network.

Location

Geographic distance between two people played a large role in participants' choice to read stories. As Facebook is used primarily to keep up with friends' lives, participants were interested in posts from friends living far away. This allowed them to maintain awareness of several people's lives without the need to be in constant contact with them. Participants explained that these stories sometimes spurred them to re-establish contact with friends they haven't talked to in a while. *"He's an Australian friend of mine with a family so I just had a quick look at his kids."* (P5)

Friends' reputations

Many participants had intricate knowledge of the typical stories certain friends shared. Participants explained that they knew that specific friends shared funny or interesting stories most of the time and were eager to pause to read these posts. *"He posts good stuff that I'm interested in."* (P5) Participants readily forgave the situations when reputable friends made posts that were out of character for that particular individual. *"She often posts things that are usually pretty funny, clever, but not this time."* (P8)

Conversely, participants quickly identified people who posted stories that they found boring, did not like, or even were annoyed with. In these cases, participants usually had to be asked specifically about these posts as they often scrolled passed them quickly without explanation. One instance of a negative reputation is when participants were aware what the subject matter of their friends' posts was, and usually it was something of little interest to them. *"I know she posts what she normally posts. I'm just familiar with her posts and a lot about fashion that I'm not interested in."* (P5) Other times, participants expressed that a particular friend simply posted too often, usually with short status updates about their day to day activities such as getting coffee, waiting in lines, or sitting in traffic. *"I think he posts a lot of stuff, so you kind of become numb to it after a while. Maybe if he posted a Facebook status update once a week even, I'd be more interested in reading it but he's posts stuff all the time and I've read enough of them to know I'm not interested."* (P2)

Story Affinity

Personal interest plays a major role for participants. This category encompasses several motivations ranging from curiosity about a friend they want to learn more about, whether the story is written well or has professional photos, or if the story relates to the reader in some way.

Curiosity about friends

Participants want to see stories about the people they care deeply about. Participants were curious to read stories made by their close friends or people who they frequently interacted with and cared less about posts from

acquaintances. *"I might have paused to look at this for a sec. It's my uncle and cousins."* (P10) In some cases however, stories from acquaintances were found to be interesting as the participant explained that they had lost touch with that person and were interested to see what they were up to. *"It is our undergrad institutions alumni, they got together recently three or four days ago, I saw many pictures and I like all of them."* (P6) Status updates and photos allowed participants to see what their friends were doing, where they were, who they were with, how they were feeling, and their opinions about topics dear to them.

Personal interest in the content

People are interested to read stories that are about things they are interested in themselves. Participants explained how they scan stories quickly to identify if it relates to them in any way. By glancing at the preview text or picture, they have a cursory idea if the story is worth further investigation or not. *"That's probably my general mode, I'm scanning for key photos that grab my interest or key content."* (P5) Participants cared very little and skipped past stories if they had no interest in its content or any other reason to read it. *"Immediately within the first few words I know it's not something that really relates to me."* (P2)

Participants usually paused to read a story if they believed they could get something out of it. Personal motivations for reading a post can range from curiosity about an unfamiliar topic; prevalence of the story in current events: *"It's about yesterday's game. The Uruguay and Italy, one player bites another."* (P3); high familiarity about the subject matter of the story: *"I normally read this because it has to do with philosophy."* (P10); and perceived entertainment value: *"I like animals. The video had a cat and a horse."* (P9)

Personal interest in the stories is also heavily linked to the friendship type and strength. The close friends of the participants – with shared interests and values – posted content that was eagerly read for its subject matter rather than to get an update about that person. Essentially, the participant was interested in similar things that their close friends were interested in. *"I'm friends with them because I have something in common with them. And usually the stuff that they post I would like and be interested in."* (P2)

Stories related to the participant

Participants were interested in stories that directly connected to them. The simplest case of this is when the participant appeared in a photo or was tagged in a photo or status update. The participants stopped to read these stories completely, usually clicking on status updates, photo, and albums to see them in more detail. *"I clicked on the first picture because I'm in the first picture. [laughs]"* (P2)

The story could be about something that the participant and friend had previously discussed, either in person or online. For example, a friend posted travel photos depicting places and experiences that had been specifically shared with the participant a few days ago. *"She had talked specifically*

about certain experiences that she had in India so I might spend more time on this album looking for the photos that she had talked about." (P2) Prior to the study, one participant's friend had reached out to her social circle – via Facebook – to ask a technical question for a project she was working on. The participant offered his advice to the friend and explained that he was interested in a video that the friend posted showing her working project. *"This is why this one caught my eye, because it triggered that [previous] conversation."* (P11) In another situation a participant began reading posts from a music festival that he had attended in his home town. *"This is a festival in Nova Scotia that I've gone to once or twice."* (P10)

Story aesthetic and perceived quality

Nearly every story on the News Feed has a short description and preview image that sometimes piques readers' interest because of its perceived quality. In the case when a story was not about a friend and did not seem to have personal relevance, several participants were still drawn to the post because of the preview image or text. One participant explained that they clicked on a story because the preview image appeared to be a professional quality photograph of a person (who they did not know). Another participant followed a link because they found a colorful infographic to be particularly aesthetic. *"I opened this one up, that just looks like an attractive picture."* (P10) Finally, a participant paused to read a long textual post because the first sentence was written with poetic language. *"I would actually probably read through more of this because it's fairly well written."* (P2)

Annoyances

Some stories on the News Feed were met with negative emotions like annoyance, frustration, and exasperation. Though occurring infrequently, all of the participants expressed some degree of negativity towards specific stories they saw. While these feelings were mostly mild annoyances or quips, a handful of situations arose where participants described feeling offended or frustrated.

Feeling overwhelmed

Most participants expressed frustration at the volume of uninteresting stories being posted by specific people. Described earlier in the friendship section, we found that these people had previously established reputations in the minds of the participants. *"They post a lot of things on Instagram and a lot of things on Facebook and it's always status updates about their life and I just don't have the vested interest."* (P2) The participants described the majority of these people as acquaintances or people they do not know well or spend time with. During some interviews, we observed participants scrolling over dozens of posts at a time – often status updates.

It was not only status updates and posts from acquaintances that were found to be overwhelming. Participants sometimes ignored even close friends when they over-shared any type of story, particularly Instagram photos.

"She posts a lot. I just find that it can be pretty aggressive, it always has a lot of hashtags and a lot of stuff from Instagram too." (P11) Another participant explained that her friend is constantly posting updates from her travels and that she doesn't want to see constantly. *"She's always going away on trips. I don't really need to see all the updates." (P8)* Some participants held the opinion that their friends "lived their life on Facebook", explaining that their entire lives seemed to be documented on their profile. *"I know she's a pretty high user for Facebook, she posts a lot. 'I'm having a coffee today', so I kind of cruise through her stuff, just because it's shit like this. It's just not interesting. I guess when we first became friends I read all of them and got a general gist of 'she's a Facebook liver', her life is on Facebook." (P5)*

Participants expressed similar annoyances towards subscribed pages that posted content often. These pages usually shared links to articles that the participants were interested to read – they had willingly subscribed to the pages, after all. However, participants explained that some pages shared several links and pictures each day and that they felt overwhelmed by the amount of posts coming at them and began to ignore content coming from those pages. *"Sometimes it has something interesting and I'll take a look, but lately I've been ignoring it because I get bombarded with stuff from them." (P8)*

Rude and offensive stories

While we did not observe this situation occurring during our study, participants explained previous events where occasional stories evoked strong negative emotional responses. One participant explained that they found the post offensive and they went as far as to report it to Facebook for removal. *"The post that showed up was offensive and I even reported it as well." (P11)* The post in question was about an animal rights petition that used graphic imagery to incite people to join the petition. Another participant found a particular story rude but would not go into further detail. *"They posted something that said something bad, it wasn't very nice so I just blocked it." (P9)*

Unsolicited invitations

Lastly, all our participants unilaterally ignored Facebook application invitations and ads. Participants explained that most app invites came from friends who were playing games on Facebook who had invited them to join. *"I find updates from people who play games, like Facebook games, I find that really annoying." (P2)* Likely there are many people who play Facebook games and click on these invitations but not so among our participants. Ads were also ignored, though were less berated by our participants. One person suggested that targeted ads may be welcome, especially if vouched by their friend who had become a "fan" of a brand. *"Suggested posts, I don't look at because first of all there's no personal connection. For the sponsored posts, maybe if there was a really close friend of*

mine who had liked something might be more intriguing to me." (P1)

Liking and Commenting

Liking and commenting are the primary mechanisms for people to communicate with their friends about their posted content. We observed several behaviors regarding these mechanisms that make suggestions about broader social conventions between people on Facebook. It is important to remember that likes are one of the main signals that the News Feed uses when predicting what content to show.

'Like' awareness, reciprocity, and obligation

Similar to being aware of friends' posting habits, nine out of eleven participants were aware of what friends consistently liked or commented on their own posted stories. *"I could probably tell you on a small list of who likes things more often than other people." (P5)* In seven of the participants, this awareness contributed to the social behavior of liking posts made by these friends in return. Participants described feelings of obligation to "return the favor" and like posts that they did not necessarily find interesting. *"Maybe there is a friend who always keeps liking my posts and my pictures and stuff, so when they post a picture or post which is probably not very interesting to me, but out of that obligation that they like my posts, I go ahead and like them." (P1)* Others explained that they would only reciprocate if they felt genuine interest toward their friend's post. *"I liked the picture also she generally likes my stuff too, so I feel in some ways you kind of have to reciprocate. If I have friends that always like my stuff, I commonly will like their stuff too, as long as I'm fairly interested in it." (P2)* Participants describe feeling pressure to like posts when they are tagged in them or when posts are shared directly to their profile. *"When posts are directly on my page then I kind of feel pressure. Maybe posts that I was tagged on, I usually like them." (P4)*

In cases when social pressure was not a factor, participants explained that they wanted to show their support by liking posts of friends who were sharing stories about major life events such as birthdays, marriages, career or life advancement – perhaps as a social lubricant. *"I like it because they are my friend and they are getting married and this is very important to her or him, so I liked it. This is not pressure, someone not blaming me, but maintaining good vibes.[laughs]" (P6)* Other times, participants explained how liking or commenting on stories from new Facebook friends is a way of establishing a new friendship. *"It's like a new car smell in a relationship, you put your best foot forward, so times you do it [reciprocate]. It's not like you're not being true to yourself but you just go out of your way to extend a bit of effort to make a comment [or like] with somebody new." (P5)*

Casual, choosy, and genuine 'likes'

We discovered three patterns among our participants for how they distributed likes to the stories they saw on the News Feed. The first was a casual approach, observed in

only one participant who liked up to half of the stories presented to her during the first browsing session. Photos, videos, status updates, and links were all given likes without hesitation. It appeared to the researcher that if the participant paused at all to read a post that she would like it. She explained that seeing these stories made her happy and she wanted to express that by liking them.

Conversely, most participants liked stories sparingly during the study and explained that they prefer to “save” their likes for specific stories or people. *“I try to save them [the likes].”* (P8) Some participants explained that they would only like one or two stories from each friend, specifically the posts that they themselves considered important, and refrain from liking the less meaningful posts. *“They got engaged recently and I did like those photos that came out of that but this I’m not going to like.”* (P2) This participant also said that she preferred to like stories that did not have many likes to show her support, avoiding liking the stories that many people had already liked. *“If they already have a lot of likes, I don’t as much feel the need to like it.”* (P2)

Commenting

Commenting on stories was not observed as frequently as the action of liking. In the cases when participants did write comments, they did so for stories they had some affinity or interest to, either because of who posted it, who or what the post was about, or that it was something that they personally related to. Participants commented on stories centered about their friends without much hesitation, using the comment feature to have in situ conversations in the specific context of the post. *“I felt like I had to comment because it seems like, probably an exaggeration, but a lot of his pictures he has a black eye.”* (P10) Commenting was also done to ask specific questions about the post or to provide friends with support. Comments were usually short and something the participants were comfortable sharing in public. Participants used Facebook’s private chat feature when they wanted to have more in depth conversations or discuss private matters. *“In this particular case I might not comment [...] I’ll go back later tonight, I’m going to write a nice note to her or something like that.”* (P8)

The action of writing a comment was seen by some participants as a stronger indicator of interest than the action of liking. Commenting required more investment of time and energy, and so they felt that story should really be worthy of their comment. *“I don’t often comment on unless I feel like it’s good, well written, impactful, socially responsible, moral, funny.”* (P5)

Participants were careful about writing comments about articles that they did not fully understand because they did not want to appear unknowledgeable or to express an opinion they did not fully stand behind. In these cases they deferred to not writing anything. *“I don’t want to say something completely foolish that doesn’t make sense in terms of the article or whatever.”* (P9)

Some participants expressed frustration that their friends only liked posts and wished that more people would engage them with comments. Participants occasionally started commented on stories specifically to start a discussion. *“I find that a lot of times on Facebook, you put something up and someone likes it but then they won’t comment on it, they won’t say anything and sometimes I want to start a discussion.”* (P8)

Reading comment threads

Reading a comment thread was an action taken by all participants. Reading the comments or opinions of their friends increases the reader’s social capital. Comments give people insights into their friend’s personal relationships or their other activities that they might not make explicit posts about. *“I clicked on the comments because I wanted to see if anybody I knew closely was looking for a job.”* (P2) The action of opening a comment thread was done much more often if the participant knew that their close friends had made comments while caring little if they did not know who was commenting. *“I see immediately that they’re not anybody that I know so I don’t read them in detail.”* (P2) Others were more interested in the conversations than who was involved. *“I’m more interested in what people are saying than who’s saying it.”* (P5) Participants were hesitant to comment because there were many non-friends who had already commented on a story, and they preferred to read anonymously rather than engage with strangers. *“All these people that I don’t know are commenting on it. I wouldn’t comment.”* (P2)

Passing Judgment

Passing discreet judgments about other people is a common activity and occurs on Facebook as well. Participants explained that they judged their friends based on the posts they shared and were aware that they themselves were likely being judged by people on Facebook.

Judgment on friends

When asked, eight of the participants explained that they placed judgments onto their friends, particularly acquaintances who they did not know very well. Participants formed opinions about their friends primarily based on the stories they shared or comments that they wrote on other posts. *“I think it’s about the post, what the comment is. It’s a reflection of that person. There’s one particular person who doesn’t really think before they speak, puts a lot of silly things out there.”* (P5) The posts also served to reinforce the participant’s pre-existing opinions formed from previous social interactions outside of Facebook. *“I had the thoughts about her having that baby prior to her posting pictures of it. So I wouldn’t say that the posts are what form a negative opinion. I don’t really like her anyway so then I find it annoying but it’s kind of adding together.”* (P11) The posts made by acquaintances combined with new opinion forming allowed participants to gauge whether they wanted to know more about a particular person. *“I have a lot of acquaintances on Facebook that I don’t know at ton about. I will definitely*

gauge whether that it's somebody that I would want to have more contact with based on what they post.” (P2) Participants judged their friends on the extent of how personal their posts were, explaining that they themselves would not share as much detail as their friends. *“I really don't like Facebook sometimes when people start posting a lot of personal, something that they should keep to themselves rather than letting the entire world know. I myself don't do that.” (P1)*

One participant humorously explained that passing judgment on his friends can be an enjoyable activity. *“You know what's fun? Judging people.” (P5)*

Awareness of judgment from friends

Participants were aware that their friends likely judge their actions in the same ways that they judge others, and this affected their posting behavior. In most cases, participants expressed their desire to not overwhelm their friends with too many of their own stories, preferring to post infrequently about things that are interesting or especially important to them. *“I don't want to flood their News Feed with stuff, I want it to be interesting.” (P2)* When asked if outside judgment has changed his posting behavior, one participant explained that he tried to make his posts clear and engaging. *“Maybe it would manifest in terms of wording, how I would phrase it. I tried to a bit more thoughtful and engaging.” (P5)*

Outside judgment also affected the participants' commenting and liking behavior. One participant did not want her comments to be misconstrued and took great care to write clearly and edit her comments before posting. *“I'll want it to be something that I have made very clear. I don't like to be misconstrued so I would probably go over it a couple of times.” (P11)* A different participant explained that she never likes negative stories because she knows that this action is sent to her friends' News Feeds and does not want to be associated with negativity. *“I do not post any negative kind of things, never ever. I do not even like these posts, because when I like a post that is also notified to my friends' Facebook feed, and I don't want those people to know those posts.” (P3)*

Unfriending, Unfollowing, and Hiding Posts

Most participants explained that they do not take any actions to hide or limit posts from their friends. Only two participants explained that they actively unfriended people, which was motivated by the desire to keep their friend-list small and manageable. Often the unfriend action was triggered by a post from that person. *“I'm triggered by it if I see something in my News Feed, ‘Oh that person's still on my Facebook? I should unfriend them.’” (P8)*

Although many participants expressed annoyance or frustration at some of their friends' posts, the action to unfollow or unsubscribe from a friend was rarely taken primarily because it was an all-or-nothing action. Participants did not want to miss out on future posts from

their friend that they might find interesting. *“Yeah, but there's sometimes something that comes up that I'm interested in.” (P10)*

On occasion, participants were not even aware of the unfollow or hide features of the News Feed. *“I didn't know it was a thing.” (P2)* In other situations they incorrectly believed their friend was notified when they hid posts from them, and because of this avoided taking the hide action. *“I'm guessing that once you do that, it will let them know. ‘So and so blocked your post’” (P9)*

DISCUSSION

In this paper, we closely examine the News Feed browsing behavior of eleven participants in order to shed light on this important and ubiquitous feature of Facebook. Our study was exploratory in nature, examining people's emotional responses, annoyances, and irritations to their own News Feed. Through this qualitative lens we re-affirmed many findings from other studies [3, 8, 17, 19, 20, 25], noted the complex social interplay between friends, the variety of social conventions, and the feelings of pressure and judgment present on Facebook. These findings point towards the broader topic of personal curation.

Social Browsing

Our participants paid more attention to close friends than to acquaintances and were interested to see activity from friends whom they had frequent interactions with. Most participants had pre-existing knowledge of their friends' posting habits; some friends were known for posting “high quality” content such as interesting articles or funny pictures while others made posts that were considered boring or uninteresting. The participants could quickly determine what stories they were interested to read by scanning the preview text or picture for clues about their personal interests. Posts from people living in different cities were also interesting to the reader, even if they were from acquaintances – but only as long as they had some sort of positive emotion about the individual. It could be that people pay attention to acquaintances on the News Feed as a way of maintaining their social capital and using these weak ties to stay connected to distant groups of people, for instance old high school friends from their hometown.

Social Pressure Surrounding Likes

The action of liking stories presented a range of complex decisions for participants. Some participants liked stories casually while the majority made careful considerations about their likes. We observed several cases of *like reciprocation* – liking the posts of someone who likes your posts – a behavior done to “repay” friends for their likes. Other participants described feeling obligated to like their friends' posts as a way to show their support. This behavior could be a mechanism for people to maintain their social capital, similar to returning favors in day-to-day life. By occasionally liking their friends' posts, people are able to meekly maintain their friendships in the absence of other communication. Some participants abstained from liking

certain posts out of fear of judgment from their friends, others did not like any posts whatsoever, and others only liked stories from specific people. None of the participants reported that they understood the action of liking is a method of sending signals to the News Feed.

Prevalence of Judgment

Facebook is a SNS consisting primarily of offline friendships where people are not anonymous. There are often many complex social conventions for people to consider before taking actions that may have repercussions in their offline friendships. We discovered that writing comments or liking stories often came with feelings of hesitation or fears of external judgment. Participants sometimes avoided commenting despite wanting to for fear of starting a confrontation or from having their comment misunderstood.

In almost all of the interviews, the participants expressed a sense of judgment about their friends' or their posts, often manifested when considering people who are acquaintances or strangers. Feelings of judgment ranged from minor annoyances to near disdain. Many participants expressed annoyance at people who posted too frequently or shared predictable or uninteresting status updates. The strength of this emotion was reflected when participants explained that they were careful about what and how often they shared.

Invoking Goffman's conceptualization, we suggest that an individual's actions and profile on Facebook extends their real-life *performances* and *personal front*, respectively. In this light, it is not surprising that our participants are so vigilant about what image they portray to their friends through actions of sharing, liking, and commenting. In essence, the individual is charged with creating a single performance seen by different *audiences*, which must be congruent with multiple *roles*.

The Issue of Curation

We found that participants took almost no steps to deliberately curate their News Feed. Most of our findings play into this factor:

- **Unaware:** Some participants were simply not aware that they could hide specific stories or unfollow people if they were not interested in seeing their posts.
- **Reluctance:** Participants were reluctant to take seemingly drastic measures to alleviate minor annoyance from seeing predictable posts from previous acquaintances.
- **Effort:** It was often considered more effort to take the unfollow action than to scroll past the offending posts.
- **Fear of missing out:** More importantly, even when participants expressed a willingness to unfollow someone, they chose against doing so out of fear of missing out on some future posts that might be interesting to them.
- **Social impact:** The perceived social capital of becoming subscribed to an acquaintance was worth putting up with their uninteresting – and sometimes vexing – posts.

LIMITATIONS AND FUTURE WORK

With qualitative studies there is always the possibility of re-examining people's interactions with the News Feed from a different perspective. For instance, how do our findings compare to adolescents or to people from different socio-economic status? It is also possible to take a quantitative approach and conduct extensive surveys that may lose some richness in details but are more generalizable.

As to future research, our findings suggest an opportunity for more discovery in the area of curation. How could SNS recommendation systems like the News Feed incorporate features that give people greater control over what they are shown? Is there a way to give the system clear signals without the social pressures present today? While we do not expect our work to influence Facebook, these questions are worthy of exploration as personal recommendation systems become more pervasive in our lives.

CONCLUSION

From our study we gained a rich reality-based description of how people experience reading the News Feed. While this description may not be exhaustive in the broader population of Facebook users, there are some insights the HCI community may gain from our study.

If personalized recommendation engines such as Facebook's News Feed make incorrect predictions, the reader may not be relied on to correct these mistakes. This lack of action may stem from social protocols that the reader strongly adheres to or it may stem from laziness or apathy. Alternatively, the reader may simply not be aware of how to send signals to the News Feed to help better curate their content, or may not understand how taking or withholding certain actions – such as liking – affects what they are shown.

Perhaps it may be prudent to diminish the effect that publically visible actions on Facebook have on the News Feed given the apparent social implications of these actions. It is conceivable that Facebook could track what posts a reader scrolls past quickly or pauses to read. Could the "hide story" feature instead be re-appropriated to a more prominent (and likely private) dislike button?

Throughout August and September 2014, Facebook has launched a video advertising campaign on its own Facebook page about the News Feed. The videos present several short vignettes where a variety of users ranging from adolescents to seniors describe how to curate their News Feed. These videos explain how actions such as liking, unfollowing, and list management change the News Feed. The hide feature is not presented in these videos.

Has the optimization of the News Feed reached a limit? Is it now up to us, the users, to start better curating our own feed, and will we be given functional tools to do so? Perhaps of more interest is the possibility of future News Feed-like interfaces outside of Facebook. Our study indicates that there are rich avenues to explore in the area of

personally curated content streams, where it might be possible to support more subtle types of curation.

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