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# Sharing the small moments: ephemeral social interaction on Snapchat

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#### **ABSTRACT**

Ephemeral social media, platforms that display shared content for a limited period of time, have become a prominent component of the social ecosystem. We draw on experience sampling data collected over two weeks (Study 1; N = 154) and in-depth interview data from a subsample of participants (Study 2; N = 28) to understand college students' social and emotional experiences on Snapchat, a popular ephemeral mobile platform. Our quantitative data demonstrated that Snapchat interactions were perceived as more enjoyable - and associated with more positive mood - than other communication technologies. However, Snapchat interactions were also associated with lower social support than other channels. Our qualitative data highlighted aspects of Snapchat use that may facilitate positive affect (but not social support), including sharing mundane experiences with close ties and reduced self-presentational concerns. In addition, users compared Snapchat to face-to-face interaction and reported attending to Snapchat content more closely than archived content, which may contribute to increased emotional rewards. Overall, participants did not see the application as a platform for sharing or viewing photos; rather, Snapchat was viewed as a lightweight channel for sharing spontaneous experiences with trusted ties. Together, these studies contribute to our evolving understanding of ephemeral social media and their role in social relationships.

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#### **KEYWORDS**

Ephemerality; emotion; support; persistence; mobile; temporal

Many forms of communication can be recorded, thus enabling them to be re-experienced by the original speakers and broadcast to new audiences. Compared to more ephemeral forms of communication practiced by oral cultures (Ong, 2013), technologies such as parchment, photography, and audio recording capture specific moments and make them accessible over time and across space. *Persistence* refers to a category of temporal affordances that can influence user experiences on social platforms by prolonging the accessibility of social information (boyd, 2011; Treem & Leonardi, 2012). Temporal features of social media shape the uses and perceptions of a given medium (Kaun & Stiernstedt, 2014), and research shows that social media are valued in part for their archiving capacity (Zhao & Lindley, 2014). Hence, the persistence of social and mobile media

allows people to organize, document, and remember personally meaningful experiences from the past (Ozkul & Humphreys, 2015).

The knowledge of whether content will be persistent may also influence what content people share in the present. Prior work suggests that persistent (and asynchronous) computer-mediated communication (CMC) platforms can make self-presentational concerns more salient (Berger, 2013). Sharing persistent content increases the potential audience size and allows each audience member to view social artifacts longer and more often. For these reasons, persistent social media are more likely to lead to experiences of "context collapse," in which users find it challenging to decide what information to disclose given their diverse online audiences (Marwick & boyd, 2014; Vitak, 2012). In addition, enduring records can hold liars accountable for deceptive messages (Hancock, 2007) or force the negotiation of personal privacy boundaries (Litt & Hargittai, 2014). Taken together, persistent affordances often impact user expectations and experiences of mediated interaction.

# **Ephemeral** social media

Perhaps in response to the challenges introduced by persistent media, there has been a growing interest in platforms that are designed to erase communication artifacts after a short period of time. These newer ephemeral social media include applications like Snapchat, Yik Yak, Slingshot, and Frankly Chat. Ephemerality is sometimes paired with anonymity, which both afford greater privacy for users (e.g. Confide, Wickr). Previous relevant work has focused on more temporary sharing online, including examinations of anonymous sites like 4chan or YouBeMom (Bernstein et al., 2011; Schoenebeck, 2013), "throwaway accounts" on Reddit (Leavitt, 2015), real-time sharing during disasters (Vieweg, Hughes, Starbird, & Palen, 2010), and the perceived ephemerality of the Facebook newsfeed stream (Kaun & Stiernstedt, 2014). These studies suggest that ephemerality can facilitate benefits for users that are distinct from those associated with more permanent platforms.

Of course, some forms of communication have always been ephemeral - in particular, face-to-face interaction (see Hollan & Stornetta, 1992). Similarly, other synchronous styles of communication, such as voice and video calling, represent mediated channels in which no record is stored by default. Ephemeral social media thus share some properties of synchronous communication such as face-to-face conversation, but differ in that they are typically asynchronous. Despite this distinction, ephemerality is now a central component of the user experience for many social platforms. Counts and Fellheimer (2004) developed a photo sharing application with limited persistence (simple builtin discard options), and users reported enjoying the glimpses into friends' lives and "disposability" of the pictures (p. 605). Indeed, participants in their study even suggested altering the interface such that untagged photos would be deleted automatically. More recently, a number of popular applications with user interfaces that are designed around ephemerality have emerged. For example, Confide requires the user to scroll over text messages to view them, Frankly Chat asks the user to tap once in order to see received content, and Snapchat requires the user to press and hold to view. Once activated, visual cues in the application interfaces alert the user that content will expire momentarily.

Kaun and Stiernstedt (2014) point out that media technologies are "in a profound way about organizing and creating a sense of time" (p. 1156) in societies. One modern example is the emergence of "live" social streams on platforms such as Facebook and Twitter, in which time has been "re-standardized as social media time" (Kaun & Stiernstedt, 2014; p. 1157). In other words, social and mobile media influence how individuals plan their behavior, perceive time lapse, and experience daily life (Burchell, 2015). Different media technologies also afford a range of temporal experiences, yet research is just beginning to investigate these distinctions in terms of specific affordances and practices (Keightley, 2013). Furthermore, much remains unknown about how ephemeral social media practices relate to extant research on temporal experiences, such as the established psychological benefits of being present "in the moment" (Killingsworth & Gilbert, 2010; Langer, 1989).

The temporal characteristics of ephemeral content challenge the presumed informational and personal benefits of documentation. In the current research, we evaluate the relationship between ephemerality and user experiences in the case of Snapchat, a mobile social platform that has become prominent in recent years. In line with recent research on social media and mood in daily life (e.g. Wang, Niiya, Mark, Reich, & Warschauer, 2015), we adopt an ecological approach to evaluate the range of user experiences that emerge from the Snapchat application – relative to other interaction channels. We also employed a multi-method investigation with quantitative and qualitative data sets following recent recommendations for studying everyday social media (Brabham, 2015). Specifically, we combined in vivo smartphone experience sampling method (ESM) surveys of recent social interactions "in-the-wild" (Study 1; N = 154 individuals; 11,215 surveys) and qualitative data collected from interviews with a sub-sample of these participants (Study 2; N = 28). Drawing on both datasets, our central goal was to determine whether Snapchat is associated with social and emotional experiences that are distinct from other interaction channels. We used the quantitative data in Study 1 to compare the effects of Snapchat on the perceived social and emotional outcomes reviewed below, and to examine the most common interaction partners. Although our ESM data provide detailed information about the overall impact of Snapchat interactions, they offered no information about the specific Snapchat practices - or their connection to the medium's main affordances, such as ephemerality. Accordingly, in Study 2, we turned to our interview data to interpret the patterns captured by the quantitative data.

# **Ephemerality on Snapchat**

By default, the Snapchat application deletes all content that is shared 10 seconds (or less) after the recipient opens it (Kotfila, 2014). Recent cross-sectional studies found that individuals use Snapchat more "for fun" (e.g. sending funny pictures and selfies) than for privacy-related or sexually-motivated reasons (Katz & Crocker, 2015; Roesner, Gill, & Kohno, 2014; Utz, Muscanell, & Khalid, 2015). Minimal research, however, has focused on how the ephemeral nature of Snapchat's exchanges affect user experience. Snapchat supports temporally limited sharing by (1) requiring the shared content to be created at (or close to) the time it is shared and (2) deleting the shared content from the Snapchat application for both sender and receiver. As its marketing materials state, Snapchat is

about "sharing a moment." Here, we understand a "moment" to be shared content that is constrained to be *contemporary* and *temporary*.

For the sender, content must be proximal and present-based, meaning that users cannot send archived photos from their phone. Rather, they must capture photographs and videos from within the Snapchat interface in order to send a message. This guarantees that a shared "moment" is in fact a moment occurring at (or very close to) the act of sharing. Snapchat also emphasizes directed communication where the audience of a "snap" is specified and thus known. Unlike many other platforms where the specific audience is unknown (although the potential audience may be known; see Bernstein, Bakshy, Burke, Karrer, & Park, 2013), Snapchat gives the sender explicit control over audience by allowing the user to choose who the snap is sent to and notifying the user when the snap is viewed. Once transmitted, content disappears after a few seconds. Receivers can choose to save snaps by taking a screenshot; however, the act of screen-saving is reported to the sender by Snapchat automatically. In addition, Snapchat constrains the act of sharing to a single event with no specific affordances for aggregated social feedback (such as "likes" on Facebook or "favorites" on Twitter).3 The only social residue, or record, of a Snapchat interaction for the sender is the "seen" confirmation.

Based on these dimensions, a "snap" thus represents a deliberative, shared experience that is temporally bounded. In doing so, Snapchat facilitates a distinctive sharing practice that is both in-the-moment and momentary, and comparable to the practice of "context sharing" across social media platforms (e.g. Bentley & Metcalf, 2008). "Context" refers to information about the surrounding situation of an individual, encompassing features such as physical location, emotion, and the presence of others. As such, context sharing is the act of distributing information about one's context to others. Many social platforms encourage users to share their immediate context with others as part of their interface; Facebook has provided their users with prompts such as "What are you doing right now?" or "What's on your mind?" while Twitter has asked, "What's happening?" Snapchat facilitates this practice as well, but then goes further, by requiring users to share proximal content.4

# Mobile photo sharing and audience

Despite Snapchat's unique temporal features, the user experience of Snapchat warrants comparison to other social media platforms. As a native mobile application, Snapchat is built around image sharing "on the go" and therefore depends on the mobile affordance of portability (Schrock, 2015). Such portability allows individuals to share personal images regardless of the time or place, which is important given the "contemporary" constraint of Snapchat. In its focus on short videos and images, Snapchat is also similar to other tools that support face-to-face photo sharing (i.e. unmediated; Clawson, Voida, Patel, & Lyons, 2008) and enable lightweight photo sharing to increase social presence (Counts & Fellheimer, 2004). Rivière (2005) argues that sharing photos "operates at the level of emotional perception and increases our capacity for emotion and to feel 'together'" (p. 174) with another person.

As a result of these characteristics, photo sharing over mobile devices supports a range of purposes, including recording memories and supporting relationships, self-presentation, and self-expression (Litt & Hargittai, 2014; Van House, 2009). Previous work has shown that mobile photo sharing tends to occur with intimate partners (Okabe & Ito, 2006) and supports both relationship development and maintenance (Hunt, Lin, & Atkin, 2014). Likewise, extensive research has shown that core forms of mobile communication (i.e. calling and texting) are used primarily for maintaining a small number of close ties (Campbell, 2015). For these reasons, we specifically consider how interactions with different ties are related to Snapchat practices.

# User experience on Snapchat

Although Snapchat is similar to other photo sharing applications, its ephemeral nature likely affects the user experience in important ways. In this research, we consider how sharing through Snapchat compares to other social media in terms of the social and emotional experience for users. We focus on specific social facets (enjoyableness and supportiveness) and emotional facets (mood valence and arousal) given potential links between less persistent photo sharing, social presence, and perceived amusement (Counts & Fellheimer, 2004).

Extensive research has demonstrated that emotional experience is closely tied to social interaction (Kok et al., 2013). Emotional states are most commonly deconstructed along the two dimensions of valence (positive-negative) and arousal (inactivating-activating) (Hepach, Kliemann, Gruneisen, Heekeren, & Dziobek, 2011). When individuals have more positive emotional valence (Cunningham, 1988) or higher emotional arousal (Berger, 2011), they are more likely to interact and share with others (Rime, 2009). Further, sharing positive emotions actually increases the overall mood effect of an experience, particularly when the listeners are enthusiastic in return (Gable, Reis, Impett, & Asher, 2004). In other words, it is not just good news that makes people happy; the act of sharing itself allows for a positive echo effect and higher relationship satisfaction (Lambert et al., 2012).

At the same time, not all daily interactions offer the same emotional experiences or benefits to individuals (Duck, Rutt, Hoy, & Strejc, 1991). Although positive social interaction and positive mood are positively correlated overall, their relationship depends on the type of interaction. In particular, the enjoyableness and supportiveness of a given social interaction are two distinct dimensions that may influence emotional well-being in different ways (depending on the quality of the encounter). Most of the time, Vittengl and Holt (1998) suggest that social interaction should be associated with "a fun or active type" (p. 257) of positive affect, or social enjoyment. Conversely, periods of intense negative affect and stress should be associated with social interaction of a helping or coping kind, or social support (Cohen & Wills, 1985; Vittengl & Holt, 1998) - though empathy in certain positive situations may also provide enhanced emotional support (Morelli, Lieberman, & Zaki, 2015). Consequently, both enjoyable and supportive types of interaction positively impact emotional health, but through somewhat discrete mechanisms.

Recently, some studies of in situ experiences have focused on how mediated interactions can influence emotional states during everyday life. Kross et al. (2013) found that spending more time on Facebook during one time period was associated with declines in emotional valence in the following time period. On the other hand, Mark, Iqbal, Czerwinski, and Johns (2014) found that face-to-face interaction was associated with positive mood throughout the workday, while Facebook activity predicted better mood at the end of the workday. Alternatively, Gonzales (2014) found that taking part in more meaningful interactions throughout daily life - particularly through text-based channels (i.e. texting, Facebook, email) - predicted gains in self-esteem over two weeks. Therefore, extant research confirms that established CMC channels (e.g. texting, Facebook) are related to short-term emotional states, but does not consider the role of ephemeral social media or the perceived differences between social enjoyment and support.

# Study 1

ESM provides researchers with empirical data regarding short-term, real-time outcomes by surveying participants multiple times a day. By asking participants about their most recent social interactions (broadly defined), ESM allows us to capture immediate user experiences of Snapchat relative to other channels. Based on the literature reviewed above, we propose a set of research questions about the emotional experiences of Snapchat interactions. In line with distinctions made in previous work, we probed participants about all interactions on two dimensions of perceived communication quality: enjoyment and supportiveness. This deconstruction allowed users to report how affectively positive interactions via a given channel are independent from the extent to which those interactions are perceived to be supportive. We also considered the implications of Snapchat (vs. other channels) for real-time mood. With few Snapchat studies to draw on, we posed parallel research questions concerning subjective perceptions of Snapchat interactions and the mood correlates of Snapchat interactions:

RQ1: How do Snapchat interactions compare to other interaction formats in terms of their perceived (1a) enjoyableness and (1b) supportiveness?

RQ2: How do Snapchat interactions compare to other interaction formats in terms of their relationship to emotional (2a) valence and (2b) arousal?

Given that relationship strength has been linked to the mobile photo sharing affordances of Snapchat as well as the outcomes of interest noted above, we further ask:

RQ3: Do Snapchat interactions occur with closer or weaker relationships than other forms of communication?

## Method

## Participants and procedure

A sample of 154 undergraduates at a large university in the United States provided data as part of a larger study about social media use. A total of 1656 undergraduates, randomly selected by the Registrar's Office, received an invitation email with a link to an online screening survey. Screened individuals (N=364) were automatically and immediately informed of their eligibility; to be eligible, participants were required to be 18 years or older, own a smartphone, have a United States phone number, and report posting content to Facebook daily (in order to restrict the sample to active users of social media). All 220 eligible participants were invited to participate in the study, and 154 participants completed all phases of Study 1. Among our sample, 67% of participants identified as female, 74% identified as White, 23% identified as fraternity/sorority members, and 83% reported that one or both parents had a college degree or graduate education. The average age was 20.4 years. The University of Michigan Institutional Review Board approved this study. The quantitative portion of the study (Study 1) included three parts: (1) an initial online baseline questionnaire, (2) six daily smartphone surveys for 14 days, and (3) a final online endpoint questionnaire. At baseline, participants answered information about their basic demographics. Following these questions, participants were given instructions to register their smartphone number for the experience-sampling portion of the study. During the ESM phase, participants received six short questionnaires over the course of each day for two weeks. Participants received monetary incentives based on their completion rate (M = 88.7%, SD = 12.5%). Survey links were delivered via text message using the API services of a public cloud communications company. Participants were instructed to complete the surveys "right away," but not to answer a survey once a newer one arrived. The survey questions were designed such that all questions could be answered whenever the participant opened the survey link, even if the text message had been delivered at an earlier point. The surveys were typically completed in less than two minutes given their short length.

# Survey measures

At the baseline appointment, participants completed a longer survey that included demographic items (and other psychological measures not reported). During the 14-day experience-sampling period, participants were sent a link to a shorter survey throughout the day. Four questions asked about participants' "most recent interaction." Interactions were defined broadly as "any form of communication between you and another person." The first question was "How did your most recent interaction occur?" and presented the following interaction options: Face-to-Face, Voice Call, Text or Instant Message, Email, Facebook (including messenger), Twitter, Instagram, Snapchat, and Other. The remaining questions dealt with interaction enjoyment, interaction supportiveness, and closeness of interaction partner (Eisenberger, Taylor, Gable, Hilmert, & Lieberman, 2007): "How pleasant or unpleasant was your most recent interaction?" with response options: (5) very pleasant to (1) very unpleasant (M = 3.99, SD = 0.98); "Within that interaction, how supportive or unsupportive was that person to you?" with response options: (5) very supportive to (1) very unsupportive (M = 3.90, SD = 0.97); and "How close are you to that person?" with response options: (1) not at all close to (5) very close (M = 3.89, SD = 1.24). Prior to the four questions about most recent interaction, three questions asked about participants' current physical and emotional status: (1) location, (2) emotional valence (five-point scale; very negative to very positive; M = 3.53, SD = 1.02), and (3) emotional arousal (five-point scale; very low energy to very high energy; M = 3.08, SD = 1.08). After the two-week ESM procedure, a longer endpoint survey asked participants whether they used Snapchat and other social media. If participants selected yes, then they were asked how often they sent pictures using Snapchat and how often they sent videos using Snapchat on a nine-point Likert-type scale used in previous survey research with options "Never" to "About Every 10 Minutes." These items were included in the second survey to avoid biasing respondents. In total, 88% of our sample (133/153) reported that they use Snapchat. In addition, 90/133 (68%) Snapchat users reported sending a photo at least daily and 27/133 (20%) reported sending a video daily.

# Analysis plan

Our analysis plan was developed around the hierarchical, or nested, nature of the data set. Linear mixed models were used to account for non-independence of observations within participants and days. Hence, in each model, day (1-14 for the two weeks) was nested within participants (1-154) with intercept terms specified as random effects (i.e. allowed to vary across days and participants). Linear mixed models represent a robust way to take advantage of large data sets in which time points are simultaneously nested within days and within participants. Linear mixed models allow us to model effects using information about the full sample with limited Snapchat observations. Models were run using the lmer function in R using the REML estimation, and the lmerTest was used to test for significance (R, 2010). Our primary predictor variable in these models was social interaction type, a categorical variable including Snapchat and the seven other channel choices.

#### Results

The experience-sampling portion of the data set included a total of 11,200 observations. The most common reported interaction type was face-to-face, which accounted for 6737 of the collected surveys. Some participants did not identify any of their "most recent interactions" as Snapchat during the two-week period (n = 60 reported at least one Snapchat interaction in an ESM survey). Many more (n = 115), however, reported using Snapchat at some point during the two-week period - just not as a "most recent interaction" when receiving ESM surveys throughout the day (a function of our ESM surveys occurring only every few hours throughout the day). In total, participants reported 204 Snapchat interactions out of the 11,078 interactions (122 interactions, labeled as "Other," were excluded from analysis).

# Recent social interactions (RQ1)

We first evaluated how Snapchat compared to other types of interactions in terms of overall enjoyment and supportiveness (RQ1), controlling for closeness of the interaction partner. Participants viewed Snapchat interactions as significantly more pleasant than texting, email, and Facebook – but significantly less pleasant than face-to-face interactions. Separately, results showed that interactions via Snapchat were viewed as less supportive than faceto-face communication, voice calling, text messaging, email, and Twitter. The full results for the enjoyment model (1a) and supportiveness model (1b) are displayed in Figure 1.

## **Current mood (RQ2)**

Next, we examined whether Snapchat use was associated with more positive or negative mood, as compared to other channels (RQ2). Examining associations between Snapchat use and emotional valence, Snapchat predicted more positive mood compared to recent

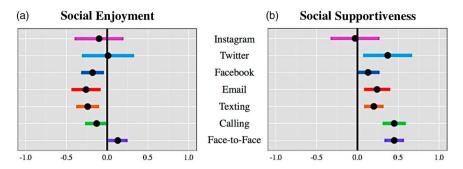


Figure 1. The caterpillar plots above display the channel coefficients and their 95% confidence intervals, as compared to Snapchat (center line). Channels that do not overlap with the center line were significantly higher (right of center line) or lower (left of center line) than Snapchat in terms of average Enjoyment (RQ1a) and Supportiveness (RQ1b). The enjoyment model included fixed effects as covariates for partner closeness [b = 0.15, t(11030) = 20.49, p < .001], gender [b = 0.02, t(151) =0.39, p < .70] and day [b = -.003, t(1900) = -1.24, p < .22]. The support model also included fixed effects as covariates for partner closeness [b = 0.22, t(11000) = 30.12, p < .001], gender [b = 0.03, t](152) = 0.55, p < .59, and day [b = -0.005, t(1905) = -2.20, p < .03].

texting, email, and Facebook interactions, but more negative mood than face-to-face interactions. By contrast, examining associations between Snapchat use and arousal, Snapchat was associated with lower arousal than face-to-face interaction, but not significantly different from other channels. The full results for the valence model (2a) and arousal model (2b) are displayed in Figure 2.

# Recent interaction partners (RQ3)

Finally, we tested whether social interaction types were associated with different degrees of closeness, or tie strength, in terms of the interaction partner (RQ3). Average closeness of a

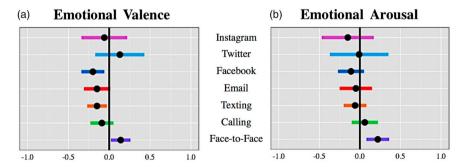
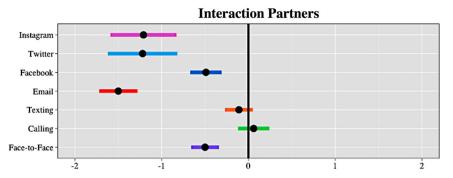


Figure 2. The caterpillar plots above display the channel coefficients and their 95% confidence intervals, as compared to Snapchat (center line). Channels that do not overlap with the center line were significantly higher (right of center line) or lower (left of center line) than Snapchat in terms of average Valence (RQ2a) and Arousal (RQ2b). The valence model included fixed effects as covariates for partner closeness [b = 0.05, t(10810) = 6.55, p < .001], gender [b = 0.06, t(152) = 0.77, p < .44] and day [b = -0.02, t(1921) = -5.45, p < .001]. The arousal model also included fixed effects as covariates for partner closeness [b = 0.01, t(10870) = 1.70, p < .09], gender [b = 0.06, t(151) = 0.88, p < .01] and day [b = -0.01, t(1934) = -3.33, p < .001].



**Figure 3.** The caterpillar plot above displays the channel coefficients and their 95% confidence intervals, as compared to Snapchat (center line). Channels that do not overlap with the center line were significantly higher (right of center line) or lower (left of center line) than Snapchat in terms of average interaction partner closeness (RQ3). The model also included fixed effects for gender [b = 0.02, t(152) = 0.09, p < .93] and day (1-14) of data collection [b = -0.003, t(1898) = -4.45, p < .001] as covariates.

Snapchat interaction partner was not significantly different from calling or texting, but was significantly higher than face-to-face, email, Facebook, Twitter, and Instagram. The full results for the interaction partner closeness model are displayed in Figure 3.

# Study 2

The results of Study 1 show that, on average, Snapchat interactions are more enjoyable and associated with more positive mood, but perceived as less supportive than the other mediated communication channels. In addition, Snapchat interactions tended to occur with close ties. To investigate practices on the platform that might explicate these relationships, such as the kinds of content being shared, we turn to our in-depth qualitative data. Based on our quantitative data analyses and the literature reviewed above, we ask:

RQ4: What kinds of content are participants sharing on Snapchat?

*RQ5*: What are the salient affordances of Snapchat?

RQ6: What types of ties are participants interacting with on Snapchat?

#### Method

# **Data collection**

The second study included a sub-sample of 28 participants from Study 1. We contacted 57 participants from Study 1, who were selected randomly within active and less active levels of self-reported social media use. We sent them emails inviting them to participate in an interview study with the research team. Among them, 35 participants expressed interest and 28 participated in the interview (24 females, 4 males). The second and third authors conducted all of the interviews in a campus office. The interview protocol asked participants to describe what social media sites they used, how they used them, with whom they interacted, and any emotions associated with their use. Questions



about Snapchat use focused on who they sent snaps to, who they received them from, expectations of reciprocity, norms about what to share, and differences between Snapchat and other sites they used regularly (e.g. Facebook, Instagram).

# **Data analysis**

All 28 interviews were audio-recorded and transcribed verbatim. ATLAS.ti was used to code and organize data, using the constant comparison method (Strauss & Corbin, 1998). We used an iterative process in which the second and third authors and two graduate student research assistants read through a sample of transcripts and then met to create a preliminary codebook. Using an open coding process, quotes were coded into these higher-level categories using a unitization scheme whereby each question-answer set was treated as one unit. After coding a sample of transcripts, the group met to refine the codebook and to clarify any ambiguous coding instances. After the codebook was finalized, each transcript was coded independently by at least two of the coders. The codebook included codes related to Snapchat practices and content, norms of Snapchat use, interpersonal relationships and Snapchat, and observations of and comparisons to other social media platforms. The second and third authors then engaged in a secondary process of selective coding and memoing to develop the themes described below. Our analysis focused on understanding and documenting salient user practices, affordances, and relationship patterns, especially as they speak to the findings from our quantitative analyses.

# **Findings**

# Snapchat content: funny, spontaneous, and quotidian (RQ4)

Our fourth research question asked about the kinds of content participants shared on the platform. Our data suggest that the content shared via Snapchat was typically mundane, quotidian "little snippets" of everyday life. For instance, P26 used Snapchat to communicate with a childhood friend who lived in another state. For them, Snapchat provided a window into each other's daily lives. P26 told us:

It's funny because I'm actually almost more well-informed about her daily life because of [Snapchat].... So I see little snippets of what she is doing and I can gather enough from what she's posting or Snapchatting and what I'm Snapchatting back.

Although Snapchat was used to share these everyday moments, it was not associated with the "big moments" or curated photographs that tended to be shared via other platforms. As P26 explained, "Snapchat is more just like everyday stuff; or just like, funny faces with your friends." In a particularly telling example of Snapchat being used to share "everyday moments," P18 told us that:

in the fraternity something that's done a lot is taking Snapchats when you're on the toilet ... you can see that you're clearly on the toilet or you're making a face like you're on the toilet. And that's something that you'd never send a picture of somebody to, 'cause that'd be considered kind of weird. Um, but in Snapchat for some reason it's okay.

This distinction was salient for many: participants typically understood Snapchat as a form of messaging rather than photo sharing. For example, P4 told us:

Snapchat's kind of like a message to me, like a messaging platform, 'cause it's not permanent so it's kind of like you're taking a message in the form of a picture, but I wouldn't consider it actually like ... When you [the interviewer] said 'picture' I really thought of like stuff I keep on my phone and stuff like that, not Snapchat.

Participants mentioned a range of everyday "carefree" topics they snapped: a cute pet, a nice outdoor scene, or other everyday moments. P23 told us she shared snaps about the weather ("like today I was walking to the gym this morning with my friend and it was pouring rain, so we took a Snapchat like, 'oh it's raining'"). P1 said he sent "short snippets of text along with, you know, facial expression or something of that nature, or ... a photograph of the surroundings, or what's going on," and P7 described receiving what she called "normal snaps," such as "Oh, look, I got a new haircut!," "This is my guitar," "We're walking down this street with our bikes," or "Look at all my friends in this room." The mundane nature of Snapchat exchanges meant that participants often did not remember the specific content of their recent exchanges. For example, when asked about his last Snapchat use, P1 replied: "They were just literally a picture of my face and a couple were, just something, I don't know exactly what it was but it was nothing."

A large component of everyday life messages were represented through "selfies" photographs of one's face, often with an exaggerated expression related to the immediate context such as "waking up" or "at the library" (with the library visible as background in the shot). Selfies were a very common Snapchat practice, and the primary form of Snapchat content that some participants exchanged. All participants reported that they shared and received at least some selfies, with some reporting the vast majority of content shared was selfies. For instance, P26 reported that "99%" of her snaps were of her face, for instance, an "unhappy face" when she was packing. Others said that between 20-80% of the snaps they sent were selfies, with many participants reporting that at least half or more were selfies. When asked, P11 said she sent "mostly like face shots with like a 'whatcha doin?' kind of caption." Similarly, P14 said she sent "usually selfies like reaction shots to things ... like '3 exams in a day, oh no!" Such selfies were typically accompanied with textual explanations of her facial expression. P6 described exchanges such as snapping an exhausted expression, an exhilarated "Done!" expression, or pretending to sleep after exams - and receiving "similar faces like 'yay!" in return.

The general understanding of Snapchat as "a message in the form of a picture," as opposed to a photo archiving or broadcasting platform, may have contributed to the development of norms around suitable snap content. Unlike platforms with persistent content, Snapchat content could be more playful. P27 pointed to Snapchat content's expiration timing as a rationale for sharing everyday moments as opposed to momentous ones. When asked about what he did on Snapchat, he explained: "Uh, just like little funny quips. Like if you just have a funny thought and you can just make a funny face and send it to someone. It is much more laid back, just 'cause you can do anything." When asked why this was the case, he continued:

Well, only because it is like ten seconds or less. And you can send it to the people you want to send it to. It is just more of a funny thing so you don't feel as pressured to have substance to it .... It is just like the idea behind Snapchat allows it to be more carefree.

Indeed, humor was a major component of Snapchat use, and a large portion of this funny content took the form of intentionally "ugly" or goofy self-portraits. When asked about "ugly faces," P21 told us "I think that's what Snapchat's fun for is the ugly pictures, the funny ugly face ... that's pretty much all my friends and I snap back and forth to each other is funny faces, ugly faces." Still, while many participants reported that they shared and received "ugly" photos, the photos were still cultivated. P7 said she would share "the intentionally ugly one, but definitely not one of me actually ugly."

# Snapchat affordances: ephemeral and restricted (RQ5)

Our fifth RQ asked about the salient affordances and their role in shaping perceptions of the platform. Participants focused on three characteristics of Snapchat experiences: the limitation on sharing archived content ("contemporary" content), the limitation on viewing shared content ("temporary" content), and the restriction on sharing text.

P27 pointed to the lack of persistent content as a possible rationale for the frequency of snaps, "Just because you can do it more often and it seems like people don't get as annoyed. Because if it was there forever, it would just be a little overwhelming after a while." The ephemerality of Snapchat content also seemed to influence the kinds of photos participants decided to share, such as asking a friend for feedback while shopping for jewelry via Snapchat so they didn't have to worry about "clogging up [her] phone" (P24). This distinction between persistent and ephemeral content was also noted by P1, who explained:

Snapchat is basically a messaging service and Facebook is, you know, everything else .... Facebook content actually exists where Snapchat content - it's sort of destroyed. So Facebook is sort of like a modern day time capsule where you can go back and look at these things whereas Snapchat is an in-the-moment example of what's going on.

Other participants echoed this notion of Facebook as being a place for archiving memorable events or sharing "big news," but not Snapchat.

Some users reported capturing snaps in an attempt to introduce persistence into the platform. Although it was generally perceived to be a norm violation, some participants reported that they regularly captured screenshots. P5, for example, shared that his fraternity sometimes shared snaps while they were on the toilet, a "weird phenomenon," but even so screenshots were seen as normative for this community.

They don't disappear. We screenshot each others' Snapchats all the time ... I think it's something that we deem acceptable so, like, we know that there's always, there's never a Snapchat that's actually going to disappear if it's actually that like, if it's something you would want to disappear, it's probably not going to.

Some participants reported that screenshots might be posted to Facebook, but not out of maliciousness, and only when the person posting to Facebook felt that the original owner of the snap would not mind it being shared there. For example, P5 said:

One time I had an entire conversation with [my girlfriend] where she was sending me text messages and I was responding with her screenshots of her Snapchats, 'cause I have enough saved up that I could have a conversation with like the words in the Snapchats. Usually I would never use them in a way to really embarrass her if she didn't want to, but for her birthday I made like a compilation of like some of the best ones and posted it on her [Facebook] Wall 'cause it's funny and she doesn't care."

In addition to the non-archival nature of the content, which meant it typically wasn't viewable by future audiences (unlike, say, Facebook posts), participants also described constraints on Snapchat content that influenced how they used the platform and, importantly, attention patterns on the site. Our participants reported attending more closely to snaps, because they knew the snaps would disappear after a few seconds. Our data suggest that Snapchat was more likely to command the full attention of the recipient as opposed to other forms of social media which were subject to multitasking. As P26 explained:

Actually, because you can only see the photo for a certain amount of time, it's really not a real life and real world experience. But in a way it is because when you meet someone face-to-face, you can't like freeze their face for a certain amount of time - or freeze what they're saying. Like you could on Facebook, you could go back and read old messages. But with Snapchat, you see it for a certain amount of time so you take in as much as you can. Rather than like, 'Oh, someone sent me a photo.' You glance at it and you might go back to it. With Snapchat, you can't go back to it so when I get snaps from her I take in a lot from the details. Even if it's a real fuzzy one, you can still just gather a lot.

The short duration of Snapchat content led users to be more vigilant about attending to a snap and its details because of the limited opportunity to interpret messages. P26 pointed out that text overlaid on the image was "very helpful. But again, you have to read them so fast. You take in as much as you can in however many seconds it gives you." In this way, the temporary nature of snaps made them as ephemeral as face-to-face exchanges, and subject to some of the same norms regarding attention. As P26 explained:

It's just like with face-to-face interaction, you can't capture permanently what's happening. You have to live in the moment ... Snapchat is more like, 'Here is ten seconds of what's happening to me right now. Find out what's happening or else you can't know because it's going to go away.' Kind of like in life if you're talking with a friend or something, you want to pay attention to what they're talking about.

Combined, the non-persistent nature of content and limited text content shaped the kinds of interactions on the platform. Consistent with our quantitative findings suggesting that Snapchat was not associated with feelings of support, participants said they would not use the platform to communicate emotions that were intensely negative, serious, or which required social support. P24 explained, "Snapchat is just, I think, for fun. If you really actually want to talk to someone, call them or text them or see them." As P18 pointed out, limitations on duration (often a few seconds) and the number of characters (less than 50) that could be added to the image restricted the amount of information snaps could be expected to convey:

Like they're not about serious topics really 'cause you don't have that many characters to express, like, anything. So if [my girlfriend is] mad at me she won't Snapchat me that she's mad at me but she might say like, 'haha look at this face I'm making' or not say that but send me a picture of a funny face and I'll send one back ...

These limitations on content were evoked by participants when they explained why it was not used to share information, plan events, or for extended conversations. As P1



explained, "It's not a great source of information 'cause it's gone in 10 seconds ... usually just funny or conversational [content], of that nature."

# Snapchat interactions: primarily close ties (RQ6)

Our final research question focused on the kinds of ties, or relationship partners, participants interacted with on the platform. Participants generally reported about 30 contacts on the platform, though none knew the exact number since Snapchat does not report a count to users. In a few cases, participants described group snaps (such as among members of a fraternity). Regardless of the number of contacts, participants reported interacting more with close ties and the platform was often used to check-in with close ties throughout the day through the sharing of mundane content. Related to our discussion above, these close ties typically had knowledge of the sender that enabled interpretation of the thin slices of content and brief duration imposed by Snapchat. For instance, when talking about Snapchat content such as "ugly faces," P16 said:

It's not like if that [image] got out, it could hurt me in anyway, I don't think. But it's also pictures that I might not want someone else to see because like, it's an awkward angle or an ugly face or something. My friends know me well enough, they're like 'Wow she's being a loser right now! Leave [P16] alone!' but other people might be like 'Wow, that girl's got some issues.'

Here, the shared knowledge of one another allowed these close friends to exchange content that they wouldn't share with weaker ties for fear of being misinterpreted. In another example, P14 took "secret selfies" from her lap to let her friends know she was in class. She was confident that her friends could discern her location from this photo angle. Snaps were typically exchanged with strong ties who knew more about the sender. For this reason, close friends used the platform to exchange content that was meaningful and quickly interpretable to close ties – but "irrelevant" or potentially confusing to others.

Given the close nature of many Snapchat interactions - and related to our above discussion of salient Snapchat practices and affordances - trust was also mentioned as a critical component of Snapchat interactions. For example, P2 stated:

It's so, kind of, intimate to send a picture of my face or you know what I'm doing to people I don't know as well or maybe don't have that kind of trust. I would say, and definitely for more official conversations or different exchanges - I would never Snapchat my boss, you know, I'd text him if something goes wrong.

Participants reported sharing selfies, especially "ugly" selfies, with close ties with whom they trusted with the content of the snap. When asked if there were things she would not share on Snapchat, P28 replied:

Not really, because it's just up there for 3–5 seconds, but people could still take screenshots, actually. So I don't really worry about that but it's in the back of my mind. But I don't really care because they are my friends. They are my close friends. But if they're strangers, I wouldn't really do that.

In her case, the combination of a trusted audience of close ties and the ephemeral features of the platform meant that content was not subject to the same stringent curation that many described using for more persistent channels such as Facebook.

## Discussion

The combination of experience-sampling surveys (Study 1) and in-depth interviews (Study 2) offers insight into what kinds of content people are sharing on Snapchat, how shared content is perceived, and how these interactions may affect social relationships and emotional experiences. Our quantitative data suggested that Snapchat interactions were viewed as more enjoyable and were associated with more positive mood than other common communication platforms (e.g. Facebook, texting, email, calling). Concurrently, they were reported to be less supportive. The high degree of enjoyment and low level of support, occurring alongside times of elevated mood, suggest that Snapchat represents an intriguing combination of emotional affordances. Our qualitative data provide insight into the practice of context sharing - a potential source of positive emotional experiences - and potential hints about why Snapchat is not optimal for social support exchanges. The interview data indicated that participants used Snapchat for re-establishing a quick connection around quotidian content often with close ties. One of the most striking findings to emerge during interviews was the fact that our participants did not see Snapchat as a form of image or video sharing so much as "messaging" - bolstering Katz and Crocker's (2015) recent research on "visual conversation." Despite its similarity to generalized mobile photo sharing, Snapchat was perceived as a site for direct interaction, not simply a platform for distributing or viewing visual content.

Our interview data highlight the importance of context sharing as a Snapchat practice. By context, we mean the "here and now" aspects of a particular experience. Unlike the forms of context sharing seen on other social platforms, the contexts shared on Snapchat as described by our participants were more mundane (e.g. walking outside, weird looks). Specifically, participants used Snapchat to exchange spontaneous content during the course of a typical day, including selfies, humor, and feelings, echoing findings from other early research (Roesner et al., 2014; Utz et al., 2015). Such proximal sharing centers Snapchat in the "now." The small moments shared on Snapchat were not particularly exciting or memorable. In fact, participants typically did not recall most of the Snapchat messages sent or received, nor saw them as consequential. Yet, our quantitative and qualitative data suggest these small moments provided clear benefits to participants; the interactions were associated with positive mood and allowed them to reaffirm connections with close ties. In contrast to the big moments shared on sites like Facebook, Snapchat appears to be a space for exchanging small, context-rich moments.

In this way, the value of Snapchat is comparable to other mundane forms of social interaction, such as small talk (Coupland, 2003), brief interactions with acquaintances and strangers (Sandstrom & Dunn, 2013, 2014), and shared eye contact in public (Wesselmann, Cardoso, Slater, & Williams, 2012). These social exchanges were often overlooked in past scholarly work, but accumulating research suggests that even minimal social investments can support affective well-being (Sandstrom & Dunn, 2014). Likewise, our findings suggest that the meaningfulness of Snapchat communication stems in part from the sharing of insignificant slices of personal life "in the now." Once received, Snapchat constrains how the receiver is able to consume the "now" context, reproducing the event only once - as if it was occurring in real-time. Participants pointed to the ephemerality of the content as focusing their attention on the current interaction. This increased attention to the present may help explain why Snapchat interactions were

associated with more positive mood than several other platforms. Although our data do not speak to the direction of causality, substantial research in psychology suggests that present focus - concentrating on what one is doing as opposed to the contemplating the past or future (Killingsworth & Gilbert, 2010; Langer, 1989) - is associated with feelings of reward and positive mood. Furthermore, the limited time may amplify the affective response to a given message because of its perceived scarcity (Lynn, 1991).

The time limit on viewing images and videos was reminiscent of offline interaction for some of our participants. As one of our participants explained, " ... just like with face-toface interaction, you can't capture permanently what's happening." Snapchat messages seem to provide a lightweight, yet engaging interaction comparable to face-to-face - particularly given the most common types of shared content (e.g. faces, jokes). The visual nature of Snapchat provides an opportunity to see a friend's experience and increase "social presence" (Counts & Fellheimer, 2004), almost as if in a shared face-to-face setting for just a few seconds (Rivière, 2005). Indeed, our quantitative data demonstrated that face-to-face was the only form of communication viewed as more pleasant than Snapchat. Our interviews revealed that requiring users to share proximal content constrained them from curating to the same degree that they could on other channels. The temporal boundary set on sharing - content must be set in the present (i.e. non-archived) - seemed to decrease the stakes of sharing for our participants. Consequently, Snapchat circumvents some of the self-presentational concerns that influence the user experience of other media (e.g. Vitak, 2012) and thus perhaps encourages more authentic and less filtered exchanges (see also Katz & Crocker, 2015). In the words of one participant: "in Snapchat, for some reason it's okay."

Snapchat use was also strongly tied to close relationships, which may amplify the positive emotional experiences described above. Social interactions in general, and interactions with close others especially (Forgas, Bower, & Krantz, 1984), are associated with positive mood. Our interview data suggested that relationship partners on Snapchat have the shared trust and knowledge needed to interpret content that includes incomplete context, minimal curation, and little description. Hence, an "ugly" or expressive selfie is more meaningful to a close friend, who is given an opportunity to view the unflattering, quotidian aspects of daily life. Weak ties can "like" a carefully posed photo on Facebook; only close ties can see an ugly photo on Snapchat. In doing so, the interactions that occur through Snapchat affirm the preferential status of a close relationship. Over time, these small exchanges may also serve as channels for relationship maintenance (Ellison, Vitak, Gray, & Lampe, 2014), despite lacking the capacity for social support as on Facebook (Rozzell et al., 2014). Indeed, the combination of text and time limits reduces the utility of Snapchat messages for transferring complex information (cf. texting limitations; Rettie, 2009). Hence, snaps may act as a form of social grooming - a lightweight form of communication attention to ties that serves to reinforce social bonds (Donath, 2007). These acts of social grooming may serve to prime close relationships and expand feelings of personal trust, but do not necessarily contribute to perceptions of social support.

As with all research, our exploratory studies on Snapchat and the role of ephemeral affordances are subject to several limitations that should be considered as opportunities for future research. First, we recruited participants who were active Facebook users. It is possible active Facebook users are more likely to be active Snapchat users, biasing our results toward heavy social media users. Second, participants were also college students

at a single university and thus may not represent Snapchat users who are at different ages or education levels. Third, our interview study oversampled females compared to males, such that our qualitative results may more strongly reflect female experiences of Snapchat. Fourth, future research should manipulate temporal affordances experimentally to understand direct changes on social interaction. Last, further research is needed to ascertain whether the aggregated "small moments" on Snapchat can collectively contribute to long-term emotional well-being or relationship maintenance.

## Conclusion

Beyond Snapchat, the increasing range of temporal affordances across platforms (e.g. Slingshot, Timehop, Yik Yak) raises questions about the contemporary social media ecology. On the surface, the temporal affordances of Snapchat and other applications could also be interpreted as strong limitations when compared to platforms with more diverse and inclusive features (e.g. Facebook). The findings of this research, however, demonstrate that restricting the designated range of social interaction can be useful in some circumstances for some types of user experiences. Our experience sampling surveys showed that Snapchat is associated with more positive affect, but less social support, than other mediated channels. Our interviews clarified how affordances, practices, and expectations - around ephemerality, in particular - result in sharing the small moments on Snapchat, rather than the big moments seen on Facebook. Together, the two studies help to delineate Snapchat's position in the social media ecology: a lightweight channel for sharing spontaneous experiences with trusted ties.

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No potential conflict of interest was reported by the authors.

#### **Notes**

- 1. Since the current research was conducted, Snapchat has changed their interface such that users now tap to view content.
- 2. Note that the ephemerality assumption applies to the primary sharing interface alone and therefore excludes the private interaction window. Although 1-on-1 interaction window was not available during our data collection, current affordances allow the user to share archived content with the individual (demarcated by a different color in the notifications window).
- 3. However, more recent additions (not available during the data collection period) provide users with more long-term feedback about their Snapchat relationships (e.g. friends that a user shares the most frequently with, friends who they snap at but whom do not snap back). Of course, the user can also provide social feedback by responding directly.



4. The Snapchat application has incorporated a personal text chat option since the data collection period of the two studies. Nonetheless, the text messaging part is not a primary function of the revised interface, which continues its emphasis on visual content.

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