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Full length article Unlocking the power of ephemeral content: The roles of motivations, gratification, need for closure, and engagement

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Highlights

- Fear of missing out, trust, and immediacy positively influence gratification obtained from using ephemeral content.
- Social pressure negatively influences gratification obtained from using ephemeral content.

- Gratification mediates the effect of motivations on engagement with ephemeral content.
- Need for closure moderates the indirect effect of motivations on engagement with ephemeral content through gratification.

Abstract

The use of ephemeral content – a time-limited feature and function of social media – has been rising rapidly and is the latest marketing and social media buzzword. With insufficient academic research, however, the motivations for using ephemeral content and its influences on user engagement remain unclear. Building on the extant literature, this study aims to delve into the power of ephemeral content by identifying its antecedents and consequences in users' decision-making processes. Data from an online questionnaire (N=303) demonstrated that users adopted ephemeral content based on motivations such as fear of missing out, trust, immediacy, and social pressure to obtain gratification. The results also showed that users' gratification influenced their engagement with ephemeral content and mediated the relationships between motivations and engagement. Most importantly, need for closure moderated the indirect effects of motivations on engagement through gratification. Theoretical and practical implications are discussed.

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Keywords

Fear of missing out; Trust; Immediacy; Social pressure; Gratification; Engagement with ephemeral content

1. Introduction

Social media have become ubiquitous, with the expectation of reaching 3.02 billion monthly active users by 2021. As of 2018, more than 100 million people in Asia, the fastest-growing region for social media adoption, have a social networking site profile (Statista, 2018). Social media are networked communications that allow users to maintain personal profiles, publicly articulate connections, and consume, produce, and interact on the platforms (Ellison & Boyd, 2013). Typical forms of content in social media can be recorded with high persistence, meaning that the content is displayed permanently and publicly on users' profiles. However, prior research (Vitak, 2012) has suggested that persistent forms of communication, especially in computer-mediated platforms such as social media, can raise users' self-presentational concerns regarding privacy, disclosures, and outcomes of use. Social media users sometimes encounter difficulties deciding what information they should disclose given their massive online audiences (Marwick & Boyd, 2014).

Considering the tensions caused by sharing persistent forms of post content, there has been discernible growth on the use of ephemeral content, and today, it is a prominent component of the user experience in the social media ecosystem. Ephemeral content is defined as communication artifacts, including text, pictures, and videos, that will be erased after being displaying for a limited period of time (Bayer, Ellison, Schoenebeck, & Falk, 2016). It shares several of the properties of face-to-face conversations and voice calling, in that messages can be synchronously delivered to engaged audiences and, by default, there are no stored records of the interactions (Ogara, Koh, & Prybutok, 2014). For instance, Instagram provides a service for sharing ephemeral content, "Instagram Stories," which vanishes after 24 h (Read, 2018). It enables users to interact with content creators by replying to the story, responding to the polling stickers, and linking to other websites via the "swipe-up" function. Given all these interactive features, Instagram Stories has generated 300 million daily active users since 2017 (Mediakix, 2017).

Although users are gravitating toward adopting ephemeral content in social media, academic attention focused on understanding their usage of this feature is still in its infancy. Prior research has only touched on evaluating users' general usage of and relationship experience with ephemeral content (Bayer et al., 2016, Utz et al., 2015). Scant research has delved into the power of ephemeral content in terms of identifying its antecedents and consequences in users' decision-making processes. The overarching questions remain in regard to the ways in which users are motivated to embrace ephemeral content and what outcome behaviors are engendered as a result of such motivations.

The current research, therefore, aims to provide insights into the mechanism underlying ephemeral content usage through the lens of uses and gratification (U&G) theory (Katz, Blumler, & Gurevitch, 1973) as it delineates users' motivations, psychosocial dispositions, and media use effects holistically. Building on the literature, this research probes into users' motivations, including fear of missing out (Lai, Altavilla, Ronconi, & Aceto, 2016), trust (Green, Wilhelmsen, Wilmots, Dodd, & Quinn, 2016), immediacy (Bolter, 2000), and social pressure (Fox & Moreland, 2015), for using ephemeral content to obtain gratification. This research further examines the mediating role of gratification (Katz et al., 1973), as well as the moderating role of need for closure (Kruglanski & Webster, 1996) in the relationships between users' motivations and engagement with ephemeral content (Brodie, Ilic, Juric, & Hollebeek, 2013).

2. Literature review and hypothesis development

According to Katz et al. (1973), U&G theory posits that individuals are active media users who select and use media to obtain gratification, a feeling of satisfaction or pleasure when fulfilling needs via media consumption. It emphasizes what users do with media rather than what media do to users because these individuals are not only goal-driven but also self-aware. In line with the literature, Smock, Ellison, Lampe, and Wohn (2011) have identified that individuals use social media to gratify their needs for entertainment, information sharing, escapism, and social connections. Ephemeral content, moreover, provides users with a multitude of opportunities for information and interactions vying for users' attention, given practical restrictions and limited time. Under the tenets of U&G theory, the following sections depict the socio-psychological mechanism underlying users' adoption of ephemeral content in social media.

2.1. Fear of missing out and gratification

Przybylski, Murayama, DeHaan, and Gladwell (2013) have proposed the notion of fear of missing out (FOMO), which is defined as "a pervasive apprehension that others might be having rewarding experiences from which one is absent" (p. 1841). Other scholars (Beyens, Frison, & Eggermont, 2016) have argued that FOMO is driven by the desire to stay constantly connected with what others are doing and have conceived it as a motivation. This could be why users engage in social media activities for social connection and interactions.

More specifically, FOMO is a feeling invoked by social exclusion, an experience causing actual, potential, or perceived psychological distance between individuals and between individuals and groups, and may cause technology-related anxiety called "social pain" (Eisenberger & Lieberman, 2004). Considerable research has demonstrated that social pain introduces threats to social relationships, such as cracks in relationships and being excluded from social groups (Pickett, Gardner, & Knowles, 2004). Those who experience FOMO in response to social exclusion will activate an adaptive social monitoring system to survey the environment for social interactions. Accordingly, they are likely to increase social media usage to satisfy their needs for inclusion (Lai et al., 2016).

Considering the nature of ephemeral content, which appears for only a limited period of time, it has the potential to raise users' FOMO. When users miss ephemeral content posted by their friends in social media, they may feel excluded from their social circles. They may intensify their usage by spending more time browsing or checking for new updates more frequently and, in turn, obtain gratification from catching up with friends. This research thus suggests that FOMO could be a fundamental motivation driving users to consume ephemeral content in order to gratify their desire for being included socially as well as for maintaining social relationships.

2.2. Trust and gratification

Mayer, Davis, and Schoorman (1995) have defined trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor" (p. 712). Research has demonstrated that trust in the digital environment is more difficult to gain and maintain compared to trust in offline settings (Friedman, Khan, & Howe, 2000). According to social exchange theory (Roloff, 1981), individuals are likely to enter an exchange relationship by self-disclosing private information to others if the exchange is perceived to be trustworthy and beneficial. Similarly, trust has been found to be important for members of virtual communities to exchange information with other members online and has been a primary element for users to exhibit social media use (Ridings, Gefen, & Arinze, 2002).

Users' trust in social media can be related to the aspect of privacy. Prior research has shown that users usually interact with each other in social media to express opinions and share daily experiences (Treem & Leonardi, 2012). Yet, in regard to privacy, users in general are apprehensive because they are concerned that negative or confidential personal information might be disseminated in public accidently or recorded for a long time. Compared to the typical form of sharing in social media, in which content posted online can be saved, duplicated, and recirculated anytime and easily after the initial post, ephemeral content displayed across social media platforms shares the common feature of lower persistence, which might ease users' privacy concerns (Utz et al., 2015, Vaterlaus et al., 2016).

Adding to that, the need for trust could be a precondition propelling users to adopt ephemeral content in social media in order to obtain gratification without worrying about privacy. That is, the more trust users gain by using ephemeral content, the more gratification they may receive (Green et al., 2016). Trust, the motivation for users to share and seek information and disclose themselves, serves as a critical antecedent of users' gratification.

2.3. Immediacy and gratification

Based on the theory of remediation, the development of social media brings a new form of two-way communication that engenders immediacy, defined as a sense of presence and an experience of realness (Omar, 2014). Immediacy refers to users' desires for immediate access, understanding, and interaction with content (Bolter, 2000). Media richness theory (Ferry, Kydd, & Sawyer, 2001), on the other hand, suggests that a rich medium must be capable of supporting different kinds of interaction, such as sending or receiving prompt feedback. Such

a feature is closely related to the notion of immediacy. Because media richness shortens the intervals between message delivery in computermediated communication (Gunawardena, 1995), it engenders an immediacy that brings about a sense of involvement and the feeling of social presence (Lombard & Ditton, 1997).

Considering this, ephemeral content in social media provides users with an authentic, exciting, and lively experience and, thus, improves and reforms the user experience because it allows users to stand in an intimate relationship with their desired content. For instance, users can share digital images and videos immediately or even live stream with others through ephemeral content in social media, as if they are talking face to face in conversation. In other words, ephemeral content in social media not only provides users with immediate communication but also leads them to perceive that they are involved in an information exchange with others.

In addition, Stafford, Stafford, and Schkade (2004) have argued that people generally use media to gain gratification depending on the content carried by a medium or the experience of the medium usage process. Content gratification is about the messages inside a medium, while process gratification is about the actual use of the medium. Given the transitory nature of ephemeral content, constantly consuming messages could be essential for users who want to stay current with the latest content posted by others in order to achieve content gratification. Giving prompt feedback can achieve process gratification by providing the experience of being socially connected. The usage of ephemeral content in social media driven by the motivation of immediacy could, thereby, allow users to gain gratification.

2.4. Social pressure and gratification

Considering that social connectivity is the core component constituting social media, relationship-related variables such as social pressure play an important role in influencing users' activities (Iturralde, Margolin, & Spies Shapiro, 2013). Social pressure can derive from users' seeking popularity in the social media environment (Katz et al., 1973, Treem and Leonardi, 2012). Users may feel required to accumulate comments or "likes" from peers and may react sensitively to peers' feedback. Further, prior research reported that users' well-being can be affected not only by peers' positive comments and negative comments but also by not receiving comments from peers (Beyens et al., 2016). The expectation of being popular leads to social pressure as it increases perceived stress when users are not involved in discussions with peer users.

Beyens et al. (2016) have suggested that social pressure can influence individuals' decision-making regarding the adoption of new technology. Since not having frequent interactions with others or being neglected by others is stressful, such social pressure could lead individuals to adopt the new ephemeral content function in social media to ease peer pressure. Moreover, a culture of shared rules, beliefs, and online

community has been well-circulated among social media users (Oksman & Turtiainen, 2004). If an individual is not meeting such shared norms by adopting a new trend for communication, he or she may perceive social pressure from peers.

Nevertheless, prior research has found that users feel obligated to spend more time socializing online because everyone seems obsessed with the instant documenting and uploading of every moment (Fox & Moreland, 2015). Social pressure might urge users to keep checking for new updates as ephemeral content disappears after a period of time, but this increased frequency might decrease the pleasure of using the short-lived content. To put it another way, social pressure would negatively affect the gratification obtained from the use of ephemeral content.

Taking the above review of the literature as a whole, the following hypothesis posits the motivations for using ephemeral content and their effects on gratification.

H1. Users' motivations, including (a) FOMO, (b) trust, and (c) immediacy, will be positively associated with gratification obtained from using ephemeral content, whereas (d) social pressure will be negatively associated with gratification.

2.5. Gratification and engagement with ephemeral content

Engaging in behaviors that have a social networking focus can occur as a result of motivational drivers (Dolan, Conduit, Fahy, & Goodman, 2016). This research defines engagement with ephemeral content as an online behavior resulting from interactive and co-creative user experiences with ephemeral content, including thoughts, emotional connections, and intrinsic motives (Brodie et al., 2013). In the same vein, cognitive engagement refers to users' thoughts about ephemeral content they consume; affective engagement refers to consumers' emotional attachment to ephemeral content; and behavioral engagement refers to users' behavioral interactions with ephemeral content (Hollebeek, Glynn, & Brodie, 2014). In addition, scholars have classified engagement in social media into three levels from highest to lowest, including content co-creation, content contribution, and content consumption (Muntinga, Moorman, & Smit, 2011).

Accordingly, the theory of flow, proposed by Csikszentmihalyi (1975), can be applied to explain the relationship between gratification and users' engagement with ephemeral content in social media. Flow is defined as "the holistic sensation that people feel when they act with total involvement" (p. 36). Prior research has investigated how users' gratification can lead to a flow state. For instance, Cyr et al.'s (2005) study revealed that users who are gratified by online-shopping website usage would perceive a feeling of flow and be likely to visit the website in the future and make repeat purchases. That is, flow is derived from gratification of media use, which further raises users' engagement with media content.

Since motivational factors could stimulate users to adopt ephemeral content and obtain gratification from using it, such obtained gratification engenders enjoyment with a flow state (Katz et al., 1973, Sherry, 2004). Consequently, it may lead to users' consumption of, dependence on, as well as interactive behaviors with ephemeral content (Chen, 2017) and, in turn, enhance users' engagement with ephemeral content. Hence, the following hypothesis is suggested.

H2. Users' gratification will be positively associated with engagement with ephemeral content. In other words, gratification will mediate the respective relationship between (a) FOMO, (b) trust, (c) immediacy, and (d) social pressure and engagement with ephemeral content.

2.6. The role of need for closure

In addition to the antecedents and consequences of using ephemeral content, need for closure (NFC) has been considered as a psychological disposition that could affect users' decision-making processes (Houghton & Grewal, 2000). NFC is defined as a "desire for a firm answer to a question and an aversion toward ambiguity" (Kruglanski & Webster, 1996, p. 264). High levels of NFC are likely to lead to two tendencies, the urgency tendency and the permanency tendency. The urgency tendency pertains to the willingness to seize on closure immediately, while the permanency tendency pertains to the desire to perpetuate closure in terms of preserving past and safeguarding future knowledge. Individuals with high NFC possess characteristics such as a construct preference for order and structure, being uncomfortable with ambiguity, a tendency toward decisiveness, a desire for predictability, and a tendency to be closed-minded (Kruglanski & Webster, 1996).

NFC encourages activities with the aim of achieving closure (Webster & Kruglanski, 1994) that is pertinent to the extent to which users engage with ephemeral content, due to its short-lived presentation style. The disposition of NFC might drive users to view as much ephemeral content as possible to gain an impression of closure and enough information to make predictions in the environments. The transient characteristic of ephemeral content might spur high NFC users to engage with it because of the felt need for a quick decision. Still, due to insufficient empirical evidence, the research question is proposed to assess whether NFC plays a moderating role in users' decision-making processes.

RQ. Will users' need for closure moderate the respective relationship between motivations, including (a) FOMO, (b) trust, (c) immediacy, and (d) social pressure, and engagement with ephemeral content through gratification?

We proposed the overall conceptual model shown in Fig. 1 to examine, in a social media context, the effects of motivations (i.e., FOMO, trust, immediacy, and social pressure) for using ephemeral content on gratification, the effect of gratification on engagement with ephemeral

content as well as its mediating effect, and the moderating effect of need for closure in the relationships between motivations and engagement with ephemeral content through gratification.

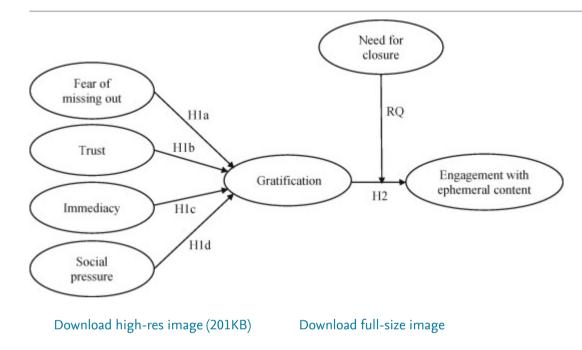


Fig. 1. The proposed conceptual model.

3. Methods

3.1. Sample and procedure

An online survey was conducted in an attempt to test the hypothesized relationships in the proposed conceptual model. According to Ellison, Steinfield, and Lampe (2007), adults between the ages of 18 and 39 are the largest user segment of social media, with most of them holding accounts in multiple platforms. This study, therefore, adopted a purposive sampling to recruit participants within this age group among the Taiwanese population. In order to collect data from actual social media users with experience using ephemeral content, the questionnaire link was posted on several groups across social media platforms in which users could easily see the post from their news feeds. They were encouraged to complete the survey by being automatically enrolled in a drawing for a \$500 gift card. The survey questionnaire contained a battery of pre-established scales that were selected from previous research and modified to align with the context of this study. The items were initially prepared in English and then translated into Chinese following Brislin's (1987) back-translation procedure to ensure the accuracy of the translation. A pretest with 20 undergraduates was conducted to identify grammatical or word usage errors in the questionnaire. During the survey, a screening question was asked at the beginning to eliminate participants who did not use ephemeral content. Participants were then asked to select the social media platform with ephemeral content that they use most frequently. They rated statements regarding FOMO, trust, immediacy, social pressure, gratification, engagement with ephemeral content, and NFC. At the end, they were asked to provide demographic information and were thanked.

A total of 350 social media users participated in the study. After deleting participants who did not meet the criteria (i.e., beyond the age group 18–39 or not a user of ephemeral content) and incomplete responses, the final sample of 303 participants was used for data analysis. The sample comprised 36.3% males and 63.7% females with an average age of 23.0. The majority had a bachelor's degree (60.1%), followed by a master's degree (36.3%), and high school diploma (3.6%). Regarding the use of ephemeral content in social media, the majority of participants used this feature on Instagram (81.5%), followed by Facebook (12.9%), and WhatsApp (2.0%).

3.2. Measures

3.2.1. Fear of missing out (FOMO)

Przybylski et al. (2013) instruments were adopted and measured on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Sample items included "I fear others have more rewarding experiences than me," "I fear my friends have more rewarding experiences than me," and "I get worried when I find out my friends are having fun without me" (Cronbach's α =0.86, M=2.66, SD=0.69).

3.2.2. Trust

Komiak and Benbasat (2004) instruments were adopted and measured on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Sample items included "I feel that ephemeral content in social media is able to address my needs and preferences," "I feel secure relying on ephemeral content in social media," and "I feel comfortable relying on ephemeral content in social media" (Cronbach's α =0.93, M=3.08, SD=0.93).

3.2.3. Immediacy

Ferry et al. (2001) scale was adopted and measured on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Sample items included "While browsing ephemeral content in social media, I can know immediately what others think about my ideas," "While browsing ephemeral content in social media, I can let others know immediately what I think of their ideas," and "It does not take long to express my reactions to others while browsing ephemeral content in social media" (Cronbach's α =0.82, M=2.57, SD=0.73).

3.2.4. Social pressure

Young and Oei's (1996) instruments were adopted and modified. The items were measured on a 5-point Likert scale ranging from 1 (extremely sure) to 5 (not at all sure). Sample items included "How sure are you that you could resist browsing ephemeral content in social media when you see others using their social media?" "How sure are you that you could resist browsing ephemeral content in social media when you are at a party?" and "How sure are you that you could resist browsing ephemeral content to feel more accepted by friends?" (Cronbach's α =0.93, M=3.48, SD=1.25).

3.2.5. Gratification

Chen's (2011) scale was adopted and measured on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Sample items included "I feel I am connected to other users through ephemeral content in social media," "I feel like I fit in ephemeral content in social media," and "I feel comfortable communicating with other people through ephemeral content in social media" (Cronbach's α =0.91, *M*=2.54, *SD*=0.92).

3.2.6. Engagement with ephemeral content

Alt's (2015) scale was adopted and measured on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Sample items included "I read updates about what is happening with others (e.g., your friends or family members) through ephemeral content in social media," "I respond to social or personal updates of others through ephemeral content in social media," and "I update personal information through ephemeral content in social media" (Cronbach's α =0.87, M=2.27, SD=0.82).

3.2.7. Need for closure (NFC)

Roets and Van Hiel's (2007) 15-item brief NFC scale was adopted and measured on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Sample items included "I don't like situations that are uncertain," "I dislike questions which could be answered in many different ways," and "When I have made a decision, I feel relieved" (Cronbach's α =0.85, M=2.51, SD=0.56).

4. Results

4.1. Testing the effects of motivations on gratification

To begin with, a multiple regression analysis was conducted, whereby gratification was regressed on FOMO, trust, immediacy, and social pressure to test H1. The regression model (Table 1) with all four predictors was significant (R^2 =0.61, F(4, 298)=117.75, p<.001). FOMO (β =0.09, p<.05), trust (β =0.34, p<.001), and immediacy (β =0.36, p<.001) were positively associated with gratification, while social pressure (β =-0.22, p<.001) was negatively associated with gratification. The significant path coefficients supported H1a–d.

B SE ß t Þ Fear of Missing Out .12 .06 .09 2.13 <.05 Trust .33 .05 .34 7.27 <.001 Immediacy 8.61 .46 .05 .36 <.001 **Social Pressure** .03 -.22 -4.89 <.001 -.16 Constant .59 .27 2.14 <.05

Table 1. Results of the multiple regression analysis.

4.2. Testing the mediating and moderating effects

H2 suggested the mediating role of gratification in the relationships between motivational variables, including (a) FOMO (b) trust (c) immediacy, and (d) social pressure, for using ephemeral content and engagement with ephemeral content, while RQ explored the moderating role of NFC in such mediations. Considering that, four moderated mediation models with each of the motivations were estimated respectively using the bootstrapping procedure (5000 samples) with model 14 of the PROCESS macro (Hayes, 2017).

For H2a and RQa, the estimated model (F(4, 298)=107.22, p<.001) was significant in which both gratification ($\beta=0.63, p<.001$) and NFC ($\beta=0.25, p<.001$) significantly influenced engagement with ephemeral content, but FOMO ($\beta=0.07, p=.22$) did not. The indirect effect of

FOMO on engagement with ephemeral content through gratification was significant (Table 2). Given the insignificant direct effect and the significant indirect effect, a full mediation was found to support H2a. Furthermore, the interaction between gratification and NFC on engagement with ephemeral content was significant (β =0.23, *p*<.001). The estimates of each indirect effect from FOMO to engagement with ephemeral content through gratification were then investigated separately for a range of values of the moderator, NFC. The results showed that the indirect effect was significant when NFC was low, moderate, and high. The significant index of moderated mediation (Index=0.13, 95% CI=0.06 to 0.22) further indicated that the indirect effect was contingent on the moderator. A moderation was found for RQa.

Table 2. Results of the moderated mediation analysis (IV = FOMO).

Antecedent	Consequent						
	M			Ŷ			
	β	SE	Þ	β	SE	Þ	
X	.57	.07	<.001	.07	.06	.22	
М	_	_	_	.63	.04	<.001	
W	_	_	_	.25	.07	<.001	
$M \times W$	_	_	_	.23	.06	<.001	
Constant	-1.51	.19	<.001	2.06	.16	<.001	
	$R^2 = .18$ F(1, 301)=65.9	2, p<.001		$R^2 = .59$ F (4, 298)=107.22, p<.001			
Indirect effect of X on Y through M	β_{low} =.29, SE=.06, 95% CI=.19 to .41 $\beta_{moderate}$ =.36, SE=.06, 95% CI=.25 to .49 β_{high} =.43, SE=.08, 95% CI=.29 to .59						
Indirect effect of <i>X</i> on Υ at values of <i>W</i>	β_{low} =.51, SE=.05, 95% CI=.42 to .60 $\beta_{moderate}$ =.63, SE=.04, 95% CI=.56 to .71 β_{high} =.76, SE=.05, 95% CI=.65 to .86						

For H2b and RQb, the estimated model (F(4,298)=106.56, p<.001) was significant in which both gratification ($\beta=0.63$, p<.001) and NFC ($\beta=0.29$, p<.001) significantly influenced engagement with ephemeral content, whereas trust ($\beta=0.03$, p=.51) did not. The indirect effect of trust on engagement with ephemeral content through gratification was significant (Table 3). The insignificant direct effect and the significant indirect effect indicated a full mediation, which supported H2b. Moreover, the interaction between gratification and NFC was significant ($\beta=0.22$, p<.001). The estimates of each indirect effect from trust to engagement with ephemeral content through gratification were significant when NFC was low, moderate, and high, with a significant index of moderated mediation (Index=0.15, 95% CI=0.07 to 0.23). The results indicated a moderation for RQb.

Table 3. Results of the moderated mediation analysis (IV=trust).

Antecedent	Consequent							
	M				Ŷ			
	β	SE	Þ	β	SE	þ		
X	.66	.04	<.001	.03	.04	.51		
M	_	_	_	.63	.04	<.001		
W	-	_	-	.29	.06	<.001		
$M \times W$	-	_	-	.22	.06	<.001		
Constant	-2.02	.14	<.001	2.16	.14	<.001		
	$R^2 = .44$ F(1, 301)=232.		<i>R</i> ² =.59 <i>F</i> (4, 298)=106.56, <i>p</i> <.001					
Indirect effect of X on Υ through M	β_{low} =.34, SE=.05, 95% CI=.25 to .43 $\beta_{moderate}$ =.41, SE=.05, 95% CI=.33 to .51 β_{high} =.43, SE=.06, 95% CI=.39 to .61							

Antecedent	Consequ	Consequent						
	М	М				Ŷ		
	β	SE	Þ	β	SE	Þ		
Indirect effect of X on Y at values of W	β_{low} =.51, SE=.05, 95% CI=.41 to .62							
	$\beta_{moderate}$ =.63, SE=.04, 95% CI=.55 to .72							
	β_{high} =.75, SE=.06, 95% CI=.64 to .87							

X=trust; M=gratification; W=need for closure; Υ =engagement with ephemeral content.

For H2c and RQc, the estimated model (F(4,298)=109.58, p<.001) was significant in which gratification ($\beta=0.58$, p<.001), NFC ($\beta=0.25$, p<.001), and immediacy ($\beta=0.13$, p<.05) all significantly influenced engagement with ephemeral content. The indirect effect of immediacy on engagement with ephemeral content through gratification was significant (Table 4). Given both the significant direct effect and the indirect effect, a partial mediation was found to support H2c. In addition, the interaction between gratification and NFC was significant ($\beta=0.21$, p<.001). The estimates of each indirect effect were significant when NFC was low, moderate, and high, with a significant index of moderated mediation (Index=0.17, 95% CI=0.08 to 0.27). A moderation was found for RQc.

Table 4. Results of the moderated mediation analysis (IV=immediacy).

Antecedent	Consequent						
	M	1		Ŷ			
	β	SE	Þ	β	SE	Þ	
X	.80	.06	<.001	.13	.06	<.05	
M	_	_	_	.58	.04	<.001	
W	_	_	_	.25	.06	<.001	

Antecedent	Consequer	Consequent							
	M	Μ				Ŷ			
	β	SE	þ	β	SE	Þ			
$M \times W$	_	_	_	.21	.06	<.001			
Constant	-2.05	.14	<.001	1.92	.15	<.001			
	$R^2 = .40$ F(1, 301) = .	R^2 =.40 F(1, 301)=203.37, p<.001			<i>R</i> ² =.60 <i>F</i> (4, 298)=109.58, <i>p</i> <.001				
Indirect effect of X on Υ through M	$\beta_{\mathrm{moderate}}$ =	β_{low} =.38, SE=.06, 95% CI=.28 to .50 $\beta_{moderate}$ =.47, SE=.05, 95% CI=.37 to .58 β_{high} =.56, SE=.06, 95% CI=.45 to .69							
Indirect effect of <i>X</i> on <i>Υ</i> at values of <i>W</i>	β_{low} =.48, SE=.08, 95% CI=.38 to .57 $\beta_{moderate}$ =.59, SE=.04, 95% CI=.51 to .67 β_{high} =.70, SE=.06, 95% CI=.59 to .82								

X=immediacy; M=gratification; W=need for closure; Y=engagement with ephemeral content.

For H2d and RQd, the estimated model (F(4,298)=106.46, p<.001) was significant in which both gratification ($\beta=0.66$, p<.001) and NFC ($\beta=0.30$, p<.001) significantly influenced engagement with ephemeral content, whereas social pressure ($\beta=0.02$, p=.61) did not. The indirect effect of social pressure on engagement with ephemeral content through gratification was significant (Table 5). With the insignificant direct effect and the significant indirect effect, a full mediation was found to support H2d. Additionally, the interaction between gratification and NFC was significant ($\beta=0.22$, p<.001). The estimates of each indirect effect were significant when NFC was low, moderate, and high. Furthermore, the significant index of moderated mediation (Index=-0.09, 95% CI=-0.15 to -0.04) indicated that the indirect effect was contingent on the moderator. Evidence of a moderation was found for RQd.

Table 5. Results of the moderated mediation analysis (IV=social pressure).

Antecedent	Consequer	Consequent						
	М			Ŷ	Ŷ			
	β	SE	Þ	β	SE	Þ		
X	42	.04	<.001	.02	.03	.61		
M	_	_	-	.66	.04	<.001		
W	_	_	_	.30	.06	<.001		
$M \times W$	_	-	_	.22	.06	<.001		
Constant	1.45	.13	<.001	2.20	.11	<.001		
	$R^2 = .32$ F(1, 301) = 3	140.62, p<.002	1	$R^2 = .59$ F(4, 298) =	$R^2 = .59$ F(4, 298)=106.46, p<.001			
Indirect effect of X on Y through M	$\beta_{\rm moderate}$ =	β_{low} =23, SE=.04, 95% CI=31 to16 $\beta_{moderate}$ =28, SE=.04, 95% CI=35 to21 β_{high} =32, SE=.04, 95% CI=41 to25						
Indirect effect of X on Y at values of W	β_{low} =55, SE=.05, 95% CI=.44 to .65 $\beta_{moderate}$ =66, SE=.04, 95% CI=.58 to .74 β_{high} =78, SE=.05, 95% CI=.68 to .88							

X=social pressure; M=gratification; W=need for closure; Υ =engagement with ephemeral content.

5. Discussion

Ephemeral content in social media is a relatively new phenomenon that has received little attention in academia. The current research explores the motivational antecedents that drive users to seek gratification from using ephemeral content and how obtained gratification leads to a behavioral outcome, engagement with ephemeral content. The validated conceptual model contributes to the literature by

extending the factors underpinning U&G theory and adding an important moderator, NFC, to users' decision-making processes specific to ephemeral content usage. To the best of our knowledge, this research is among the first to investigate such a phenomenon from a psychological perspective and, thus, offers a number of theoretical implications.

5.1. Theoretical implications

Firstly, this research addresses users' motivations for selecting and using social media platforms in the context of ephemeral content. The findings identify critical factors that strengthen users' ephemeral content usage and delineate the extent to which these factors affect gratification obtained from such usage. It was found that FOMO, trust, immediacy, and social pressure play significant roles in determining users' gratification. The results corroborate those of Przybylski et al. (2013), who also found an association between FOMO and positive affect (e.g., gratification). Similarly, the results echo Green et al. (2016) study, which found that users' trust influenced the extent to which they felt satisfied with media usage. Consistent with prior research findings (Bolter, 2000, Ferry et al., 2001), immediacy was found to be a necessary element in obtaining gratification positively. Although social pressure drove users to adopt ephemeral content, it negatively affected gratification gained from the usage, which corresponds to Beyens et al. (2016) study. In addition, the results could be explained by previous research (Fox & Moreland, 2015) that suggests that users feel imperative to adopt social media because of peer pressure, but at the same time, they may feel constrained by the usage, which leads to low gratification.

Next, the mediating effect of gratification was found to be crucial for enhancing users' engagement with ephemeral content in social media. The results are consistent with previous research (Ilsever, Cyr, & Parent, 2007), which found that, when users are impelled by psychological motivations to use a particular medium, they experience a flow state parallel to gratification in the process. Despite the positive or negative influences of motivations on gratification, they all result in increasing engagement with ephemeral content. Such results are in accordance with Brodie et al. (2013) research finding that, as users are gratified by media usage, they tend to escalate their engagement with the media. Taken together, the findings shed light on the literature on U&G theory (Katz et al., 1973) by refining the mediating role of gratification and adding a context-specific consequence, engagement with ephemeral content, to better depict the mechanism underlying usage of ephemeral content.

Most importantly, the research offers empirical evidence which conforms to previous research (Houghton & Grewal, 2000) that demonstrated that individual differences in NFC can shape the way users exhibit media usage behaviors, at least for using ephemeral content in social media. NFC was found to be an influential moderator in users' decision-making processes in relation to the adoption and use of ephemeral content. The findings indicate that the indirect influences of motivations on engagement with ephemeral content via gratification are

contingent on individual differences in NFC. This implies that the momentary essence of ephemeral content aligns well with users' dispositional tendencies to seek a sense of closure. As such, NFC is likely to further boost users' reliance on and use of ephemeral content.

5.2. Practical implications

Understanding the power of ephemeral content also provides managerial insights for practitioners in the marketplace. The current research can be considered as a guideline for employing marketing strategies via ephemeral content in social media. By appropriately matching users' motivations, ephemeral content can be designed to invoke and raise users' gratification and enhance their engagement. Trust can be enhanced and FOMO can be avoided by sending notifications to users when someone captures their ephemeral content or posts new ephemeral content. Users may feel secure when they know explicitly who is viewing their content in social media. Moreover, users' needs for immediacy and their inclination to ease social pressure can be strengthened by offering them diverse opportunities to interact with target brands and peer users. Instead of creating interactions by offering "likes" and "comments," which are common in social media, providing more interactive functions such as a "polling sticker" or "live video" could be a better choice. Marketers could, thereby, utilize users' gratification to increase their commitment or even build sustainable relationships with them. Last but not least, marketers should take the disposition of NFC into consideration in order to segment and target the suitable user groups efficiently.

5.3. Limitations and future research

The findings, however, should be interpreted with a caution regarding certain limitations. First of all, this study was conducted with a small sample size of young adults with a specific background in Asia. Although young adults are considered heavy users of ephemeral content in social media, there is obvious growth in use among older populations with varied usage behavior. Future research using a wider sample of age ranges and backgrounds would increase the generalizability of the findings. Secondly, cross-cultural studies can offer insights regarding how users behave differently under the influences of culture. Greater effort should be made to recruit diverse participants from different countries in order to achieve a thorough understanding of the ephemeral content phenomenon. Thirdly, reliance on the self-reported survey is one of the limitations of this research. Other research methods, such as behavioral tracking data, can be employed to measure users' actual behaviors. Lastly, other forms of ephemeral content in social media are evolving. The results of this study may not be applicable to the entire social media spectrum. Further studies are encouraged to evaluate the differences between various types of ephemeral content across platforms.

5.4. Conclusion

In conclusion, this research suggests that users' motivations increase their gratification and enhance their engagement with ephemeral content in social media. It further suggests that need for closure can moderate the impact of gratification on engagement with ephemeral content. The findings provide an initial step in understanding the ways in which users engage with ephemeral content, which has become one of the trending activities in the social media realm.

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