

# A Tale of Four Platforms: Motivations and Uses of Facebook, Twitter, Instagram, and Snapchat Among College Students?

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#### Abstract

The current research explores differences between Facebook, Twitter, Instagram, and Snapchat in terms of intensity of use, time spent daily on the platform, and use motivations. The study applies the uses and gratifications (U&G) approach to contrast the four platforms. A cross-sectional survey of college students (N=396) asked participants to indicate the intensity of using Facebook, Twitter, Instagram, and Snapchat as well as nine different use motivations. Findings show that participants spent the most time daily on Instagram, followed by Snapchat, Facebook, and Twitter, respectively. They also indicated the highest use intensity for Snapchat and Instagram (nearly equally), followed by Facebook and Twitter, respectively. With regard to use motivations, Snapchat takes the lead in five of the nine motivations. Findings are discussed in relation to the U&G approach and uniqueness of different social media and social networking sites (SNSs).

#### **Keywords**

uses and gratifications, motivations, social media, social networking sites, Facebook, Twitter, Instagram, Snapchat

## Introduction

Social media are generally defined as "Internet-based, disentrained, and persistent channels of masspersonal communication facilitating perceptions of interactions among users, deriving value primarily from user-generated content" (Carr & Hayes, 2015, p. 49). In other words, social media can be any form of computer-mediated communication where individuals not only set up profiles to present who they but also generate content of their own, see, and interact with content of their friends or other users online (Carr & Hayes, 2015). Social networking sites (SNSs), a subdomain of social media, have been defined as

a networked communication platform in which participants 1) have uniquely identifiable profiles that consist of user-supplied content, content provided by other users, and/or system-provided data; 2) can publicly articulate connections that can be viewed and traversed by others; and 3) can consume, produce, and/or interact with streams of user-generated content provided by their connections on the site. (Ellison & boyd, 2013, p. 157)

SNSs generally entail the creation and maintenance of online relationships, both personal and professional, via various platforms (Schauer, 2015).

Nearly, two-thirds of all American adults and three-quarters of Internet users report using one or more SNSs (Perrin, 2015). While young adults (aged 18-29 years) have the highest social media adoption rates (90%), other age groups-for example, teenagers and older adults-are also exhibiting exponential growth in social media adoption rates (Perrin, 2015). Across different social media platforms, the numbers of users are exceeding hundreds of millions and in some cases (i.e., Facebook) exceed the number of citizens in the world's largest country. While Twitter was widely popular a few years ago, newer social media such as Instagram and Snapchat are rising in popularity. Facebook remains popular among young adults, yet it is being abandoned by teens migrating to Instagram and Snapchat (Duncan, 2016; Lang, 2015; Matthews, 2014).

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The changing nature of social media makes for an interesting comparative analysis of the leading platforms. This study explores differences in uses and gratifications (U&G) among Facebook, Twitter, Instagram, and Snapchat,<sup>1</sup> and, in doing so, aims to better understand the uniqueness of each platform. This study applies the U&G approach across platforms to predict use intensity from a set of nine use motivations. Before providing the study's theoretical framework, the next section introduces each of the platforms examined in this study.

#### Literature Review

# From the World's Largest Country to the Fastest-Growing Movement

Facebook. Facebook is the most popular SNS. Per the company's website, "Facebook's mission is to give people the power to share and make the world more open and connected" (Facebook, 2016). Facebook allows people to connect with friends, family members, and acquaintances and gives people the opportunity to post and share content such as photos and status updates (Stec, 2015). Founded in 2004, the platform has over a billion active daily users and over 1.65 billion monthly active users, with a majority of users accessing it via mobile devices (Facebook, 2016). About three quarters of Internet users report having a Facebook account, and 7 in 10 users report accessing the site daily, highlighting the habitual and ritualized nature of Facebook use (Duggan, 2015b). The majority of young adults (18-29 years old) report using Facebook (87%), yet this age group experienced a 5% drop in usage rates from 2013 to 2015, however, there was no significant change in Facebook usage rates among Internet adult users (Duggan, 2015a; Duggan, Ellison, Lampe, Lenhart, & Madden, 2015).

Twitter. Founded in 2006, Twitter has been categorized as a microblogging site, where users interact in "real time" using 140 character tweets to their followers. Users can converse using mentions, replies, and hashtags (Stec, 2015). Despite reports indicating declining popularity and importance of Twitter amid diminishing investment (Fiegerman, 2016; Tsukayama, 2016), Duggan (2015b) reports no major changes in the percentage of Internet adult users who have active Twitter accounts. One-third of online young adults between the ages of 18 and 29 years reported using Twitter in 2013, compared to 37% who used it in 2014 and 32% in 2015 (Duggan, 2015a; Duggan et al., 2015). Over the past few years, data about the number of Twitter users have faced critique over credibility, as Twitter overestimates the number of users by including accounts that have not been active for long periods of time (Bennett, 2011). Nonetheless, recently Twitter released that it has 320 million active users with 1 billion unique monthly visits to sites from embedded tweets (Twitter, 2016).

*Instagram.* Instagram is a photo-sharing mobile application that allows users to take pictures, apply filters to them, and share them on the platform itself, as well as other platforms like Facebook and Twitter (Stec, 2015). Per the company's website, Instagram has over 400 million active monthly users who shared over 40 billion pictures, with an average of 3.5 billion daily likes for >80 million photos shared daily on the site (Instagram, 2016). More than half of young adults (18–29 years old) report using Instagram, thus making them the largest group of Instagram users (Duggan, 2015a; Duggan et al., 2015).

Snapchat. Snapchat is a social media mobile application that lets users send and receive time-sensitive photos and videos, which expire upon viewing (Stec, 2015). The number of Snapchat users has grown significantly in recent years because of its recordability and modality affordances. The recordability affordance allows users to post photos, videos, and text messages that disappear after 24 hours. Regarding Snapchat's modality affordance feature, users communicate with others through photographs and video clips (up to 10s long), while also adding filters to their photos and videos (Waddell, 2016). Specific to Snapchat-which has also been recently adopted by Instagram-is the ability for individuals to select the audience viewing their content. Users can post their photo or video snaps to their own stories, public stories, or privately send them to other users (much like direct messaging on Facebook and Twitter). Recent estimates show that there are over 100 million Snapchat users worldwide (Piwek & Joinson, 2016). With roughly a quarter of young adults (18-29 years old) using Snapchat, this platform was rated as the third-most popular social media platform after Facebook and Instagram (Duggan, 2013; Utz, Muscanell, & Khalid, 2015).

Facebook, Twitter, Instagram, and Snapchat are the four leading social media platforms. Per Lenhart (2015), young adults or millennials are the heaviest social media adopters and users. They are born and have grown up with pervasive information communication technologies (ICTs) and do not know life without them; something that has become a defining common characteristic of this generational group (Cotten, McCullough, & Adams, 2011; Palfrey & Gasser, 2008). Millennials use social media for a variety of reasons, including communication with friends and family members, information seeking, and social relationship maintenance, among others (Ito et al., 2008; Ling, 2008; Palfrey & Gasser, 2008). This study explores differences in the U&G of the four leading social media platforms. The following section provides an overview of the U&G approach as a theoretical framework for our study.

#### U&G: A Theoretical Framework

The U&G approach has evolved in parallel to growing diversity and pervasiveness of ICTs. The emergence of social media and SNSs extended the U&G approach to include a larger set of motivations and different forms of identifying usage behaviors. Before we discuss the evolution of U&G per the emergence of social media, we briefly review U&G's basic assumptions.

U&G has five major assumptions related to the nature of media and their users: (a) audience members are active and goal-oriented consumers of media; (b) people gratify certain needs when using media; (c) as media satisfy needs, they become sources of competition to other need-satisfying sources; (d) media users are aware of their interests and motives and have certain expectations of media that help them with media selection and need gratification; and (e) media users are the ones capable of judging the quality of media (Katz, 1959; Katz, Blumler, & Gurevitch, 1973). Considering that media gratify basic human needs (e.g., social, psychological, and physiological), the study of U&G takes into consideration users' psychosocial individual differences, media use motivations (e.g., information, entertainment, surveillance, personal relationship, identity, and diversion, among others), and media use effects or consequences to form an understanding of how and why people use media (Katz, Blumler, & Gurevitch, 1973; Papacharissi, 2008; Rosengren, 1974).

U&G is both one of the most-often used and criticized theoretical frameworks. There are four major areas of critique: (a) conceptual ambiguity of motivations, needs, and uses; (b) lack of a uniform way of measuring media use and heavy reliance on self-reports; (c) problematic assumption related to awareness of needs by users and being too individualistic while disregarding other contextual and cultural influences; and (d) limited explanatory power (Rayburn, 1996). Despite these limitations, the concept of understanding *why* people use media is an essential empirical question that continues to change with media development. While enhancing the framework's relevance, continued growth and diversification of ICTs brings the challenge of diminishing consistency across media types as well as the emergence of a new set of motivations and uses in light to expand the U&G framework (Ruggiero, 2000). The ICT boom has also led to the reconciliation of some U&G assumptions, such as the assumption about the active nature of media audiences, given that ICT affordances facilitate individualistic and active information seeking and selection (Anderson & Meyer, 1975; Chen, 2015; Dicken-Garcia, 1998; Morris & Ogan, 1996; Newhagen & Rafaeli, 1996; Rayburn, 1996; Ruggiero, 2000; Swanson, 1979).

The diversity of options offered by the Internet creates a challenge for U&G scholars. In abstract terms, the Internet has a set of unifying characteristics (e.g., demassification, interactivity, asynchronicity, hypertextuality, packet switching, and multimedia; Ruggiero, 2000). However, one can no longer regard the Internet as a single homogeneous channel that conveys uniform messages. Social media offer numerous opportunities distinguishable from those offered by other Internet services and traditional media in functionality and

structure that manifest themselves on system and user levels. This study takes this approach to shed light on cross-platform differences in social media U&G.

## U&G: The Unique Case of Social Media

The distinctive affordances of SNSs not only redefine existing U&G that have been previously documented with traditional forms of media but also the changing nature of using SNSs changes the gratifications sought and obtained from SNSs and reshuffles their order of importance in comparison with traditional media, as well as in a way that reflects the specific features of each platform. The following section reviews past studies that used the U&G theoretical framework to examine different SNSs.

Mäntymäki and Islam (2016) suggest that the use of SNSs has both positive and negative influences. Using the U&G approach, Mäntymäki and Islam (2016) placed social enhancement and interpersonal connectivity as positive gratifications, while exhibitionism and voyeurism as negative gratifications for SNS use. Exhibitionism, interpersonal connectivity, and voyeurism, respectively, were the strongest predictor of SNS use and so was the number of SNS friends (Mäntymäki & Islam, 2016). Mäntymäki and Islam (2014) found that content consumption and content production on SNSs are associated with different motivations: voyeurism and exhibitionism, respectively.

Seidman (2013) suggests that use of SNSs can help users build, communicate, and interact with other people as a way to maintain social relationships. In regard to positive behaviors, such as self-promotion, Belk (2013) found that selfdisclosure (Hollenbaugh & Ferris, 2014) could be gratified through social media use. However, Marwick (2012) suggests that following users on social media without the aim of maintaining or developing relationships can be a form of social surveillance or voyeurism as depicted by Mäntymäki and Islam (2014, 2016).

People use social media to obtain information about others (Lampe, Ellison, & Steinfield, 2006). The information gained helps them maintain interpersonal relationships, as depicted by Seidman (2013), thus helping them fulfill their need to belong (Baumeister & Leary, 1995). Others use social media to meet like-minded individuals as well as to receive companionship and social support (Wellman & Gulia, 1999). However, Jung and Sundar (2016) found that senior citizens over 60 years old used social media, specifically Facebook, for social bonding, social bridging, curiosity, and as a vehicle for responding to family member requests. Joinson (2008) identified seven motivations for Facebook use among college students: social connection, shared identities, photographs, content, social investigation, social network surfing, and status updates. Additionally, the author found that entertainment-related content motivated younger users to spend more time on Facebook.

Whiting and Williams (2013) identified 10 motivations for using social media: social interaction, information seeking, passing time, entertainment, relaxation, communicatory utility, convenience utility, expression of opinion, information sharing, and surveillance or knowledge about others. Comparing Facebook and Snapchat, Stanley (2015) found that undergraduates more frequently use Snapchat than Facebook and expressed motivations to increase networking when joining Facebook as opposed to peer pressure and content appeal that drive Snapchat use. Stanley (2015) also found a gender difference in U&G of Facebook and Snapchat. Females were found to join Facebook and Snapchat in order to monitor life of families and friends, whereas males join Facebook to network and meet new people.

The earlier stages of investigating the U&G of social media platforms, mostly in relation to Facebook use, have centered on the social value of social media as it relates to interacting and connecting with friends. For example, earlier studies on Facebook showed that connecting and staying in touch with friends, family, and acquaintances; maintaining social ties; and keeping up with old friends, among other socially relevant motivations were the primary motives for using a platform like Facebook (Quan-Haase & Young, 2010; Raacke & Bonds-Raacke, 2008). However, over the past 12 years, the nature of Facebook, as well as other social media platforms, evolved in such a way where other motivations are advancing in salience. Entertainment, medium appeal, and self-documentation have become more prevalent and predictive of usage patterns among Facebook users (Alhabash, Chiang, & Huang, 2014; Alhabash, Park, Kononova, Chiang, & Wise, 2012; Karlis, 2013).

The nature of Twitter, with its limited 140-character tweets, redefined the types of motivations and gratifications that users seek. Liu, Cheung, and Lee (2010) found that information sharing and social interaction were most predictive of expressed intentions to continue using Twitter. Similarly, Johnson and Yang (2009) found that information sharing motivations were moderately correlated with time spent on the site weekly and frequency of visits per week. Park (2013) found that among opinion leaders on Twitter, their motivations of information seeking, mobilization, and public expression predicted their use of Twitter within a political context.

Research on both Instagram and Snapchat is still in its infancy due to the recent increase in adoption rates. Sheldon and Bryant (2016) found that Instagram users place less emphasis on connecting with other people and more on personal identity and self-promotion, in addition to other motives, including surveillance and knowledge gathering about others, documentation of life events and general coolness, which includes self-promotion and displaying creativity such as photography skills. This particular study found that surveillance was the strongest motivation for Instagram usage.

With regard to Snapchat, Waddell (2016) indicated that Snapchat's recordability affordance feature provides gratification of maintaining privacy while the modality affordance feature offers users better opportunities for self-expression than text-based communication technologies. The photographs were also found to afford users capacity to establish and maintain connections with family members, friends, or significant others regardless of the geographical distance. Utz et al. (2015) found that participants were more inclined to send humorous snaps (photos or videos) as well as selfies (photos or videos of themselves). In comparing the motivations to use Snapchat and Facebook, Utz et al. (2015) found that distraction or procrastination was the highest motivation to use Snapchat, while maintaining social connection was the highest for Facebook. Finally, Utz et al. (2015) found that Snapchat use is associated with higher feelings of jealousy compared to Facebook. Piwek and Joinson (2016) found that Snapchat users primarily use it to communicate with close friends and family members, thus highlighting the importance of private communication. Additionally, a few studies highlighted the differentiating factors about Snapchat use in that it affords more personal and private communication with close friends and family with lower emphasis on selfpresentation and impression management (Bayer, Ellison, Schoenbeck, & Falk, 2015; Piwek & Joinson, 2016; Vaterlaus, Barnett, Roche, & Young, 2016).

Past literature points to a number of observations about the overall view of the U&G of social media platforms. First, past research suggests that affordances and functionality of each platform yield a unique set of motivations and gratifications sought and obtained through platform use. Second, as sociotechnical systems evolve and strive for continued reinvigoration by updating their design and functionality, motivations and usage patterns also change. Third, while each platform has unique features and motivations for using it, there could be common and complimentary motivations across platforms.

Considering the limited number of studies that compare U&G across different social media platforms (Stanley, 2015), this study aims to explore cross-platform differences in use intensity, time spent daily on the platform, and use motivations. Past research has operationalized Facebook use with the Facebook intensity scale (e.g., Ellison, Steinfield, & Lampe, 2007), which includes a set of affective and cognitive attitudinal measures of Facebook use as well as reference to the number of Facebook friends and time spent on the platform. In this study, we define Facebook intensity in exclusion of the number of Facebook friends and time spent daily on it and focused on defining intensity as it related to the evaluative component of Facebook use (cognitive and affective). We asked the following questions:

*RQ*1. What are the differences, if any, in use intensity, time spent daily, and motivations to use Facebook, Twitter, Instagram, and Snapchat?

*RQ2*. How do motivations to use Facebook, Twitter, Instagram, and Snapchat and time spent daily on the platform predict the intensity of platform use?

### Method

## Sample

To answer the study's research questions, we conducted a cross-sectional survey of college students (N=396), recruited through a student subject pool at Michigan State University. Participants were recruited online and completed the survey anonymously via Qualtrics.com and received course or extra credit for participation. A total of 33 participants were excluded for failing quality control check questions, thus reducing the sample size to 363 participants. A larger proportion of the sample identified as female (64.6%), with a mean age of about 22 years (SD=2.98 years), and mostly White (79.3%). With regard to having active accounts on the four social media platforms, 97.2% reported having an account on Facebook, 79.1% on Twitter, 87.1% on Instagram, and 84.3% on Snapchat. For cross-platform analyses, we only used participants who indicated they had active accounts on all four platforms, which reduced the sample size to 240 for certain statistical analyses.

#### **Operational Measures**

All scale items used in this study were measured using a seven-point Likert-type scale anchored by "Strongly Disagree" to "Strongly Agree." A detailed list of all items is provided in Appendix. To measure the intensity of using Facebook, Twitter, Instagram, and Snapchat, we used six items adapted from Ellison et al.'s (2007). We also asked participants to indicate the amount of time they spent daily on each of the platforms using two drop-down menus: one for hours per day and another for minutes per day that were combined into overall minutes per day. As for motivations to use each platform, we used Liu et al.'s (2010) list of motivations. In total, we asked participants to express their agreement/ disagreement with statements pertaining to the following motivations for information sharing (three items), self-documentation (three items), social interaction (three items), entertainment (two items), passing time (three items), selfexpression (two items), medium appeal (one item), and convenience (two items). Additionally, we asked participants to indicate the number of friends/followers they have on the platform. Specific to Twitter, Instagram, and Snapchat, we also asked participants to indicate the number of users that the participants follow on the platforms. For all questions related to the number of friends or followers, participants were instructed to enter the number using an open-ended question. Averaged variables were created for multi-item construct following satisfactory factor and reliability analysis results (see Appendix). Additionally, we included demographic control variables, where we asked participants to

indicate their sex (male vs. female), age by indicating their birth year, ethnic background (multiple choice question: Asian, Black/African American, Native American/Alaska Native, and White), and class standing (freshman, sophomore, junior, senior, MA student, PhD student, and other).

## Results

#### Cross-Platform Differences

Research question 1 inquired about the differences between Facebook, Twitter, Instagram, and Snapchat in terms of use intensity, time spent daily, and motivations to use each platform. To answer this research question, data for each measure of interest (time spent, use intensity, and nine motivations) were submitted to a four (platform)-repeated measures analysis of variance (ANOVA). Results are summarized in Table 1.

Results show that participants spent the greatest amount of time on Instagram (M=108.73, SD=101.55), followed by Snapchat (M=107.15, SD=106.47), Facebook (M=106.35, SD=94.65), and Twitter (M=88.92, SD=104.14), respectively, F(3, 223)=3.37, p<.05,  $\eta_p^2$ =.04 (see Figure 1). Pairwise comparisons showed that the difference between Twitter and Instagram was significant (p<.05) and that between Twitter and Snapchat approached significance (p=.057), while the other pairwise differences were not significant.

As for the intensity to use each platform, participants expressed the highest intensity to use Snapchat (M=5.07, SD=1.44), followed by Instagram (M=5.06, SD=1.56), Facebook (M=4.49, SD=1.41) and Twitter (M=4.22, SD=1.83), respectively, F(3, 237)=24.43, p<.001,  $\eta_p^2$  = .24 (see Figure 2). Pairwise comparisons showed that all crossplatform differences were significant (p<.05) except for the difference between Facebook and Twitter and Instagram and Snapchat.

Results showed that all motivations, except for information sharing, were significantly different across the four social media platforms. Results are summarized in Table 1 and Figure 3; thus, we will limit this report to highlighting trends and similarities across motivations. A trend in the prevalence of use motivations related to self-documentation, social interaction, entertainment, passing time, and convenience emerged across the four platforms. Snapchat takes the lead in these five motivations, followed by Instagram, Facebook, and Twitter, respectively. With regard to selfexpression motivations, we see that Instagram slightly leads, followed by Snapchat, Twitter, then Facebook, respectively. Snapchat takes the lead for medium appeal, followed by Instagram, Twitter, and Facebook, respectively.

#### Predicting Use Intensity Across Platforms

Research question 2 deals with exploring the ways in which the nine motivations to use each of the four platforms and time spent on the site predict the intensity of using Facebook,

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$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Information sharing	4.14 (1.54)	4.07 (1.62)	3.96 (1.61)	4.09 (1.75)	F(3, 237) = 1.45, ns
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Convenience 4.93 (1.35) 4.71 (1.79) 5.27 (1.48) 5.38 (1.47) $F(3, 237) = 16.95, p < .001, \eta_p^2 = .18$	Medium appeal	4.37 (1.42)	4.67 (1.67)	4.81 (1.39)	5.24 (1.39)	$F(3, 237) = 25.94, p < .001, \eta_p^2 = .25$
	Convenience	4.93 (1.35)	4.71 (1.79)	5.27 (1.48)	5.38 (1.47)	$F(3, 237) = 16.95, p < .001, \eta_p^2 = .18$

Table I. Repeated measures ANOVA.

FB: Facebook; TW: Twitter; IN: Instagram; SC: Snapchat; ANOVA: analysis of variance.



Figure 1. Time spent daily on social media.

Twitter, Instagram, and Snapchat. To answer this question, we ran comparable ordinary least squares (OLS) hierarchical regression models. All four regression models include platform use intensity as a criterion variable, the demographic variables (age, sex, ethnicity, and class standing) as predictors in the first block, and the eight motivations, as well as time spent on the platform daily, the number of friends/followers and the number of users they follow (applicable to all except Facebook), as predictors in the second block. The risk for multicollinearity was assessed for each model and was deemed acceptable. Tolerance scores ranged from .17 to .92, and the variance inflation factor (VIF) ranged between 1.14 and 5.49. There were only two predictors in the Twitter model with a VIF score exceeding 5; however, we chose to keep the predictors in that model for the sake of comparability across platforms.

As summarized in Table 2, results showed that demographic variables explained between 4% and 13% of the variance in intensity to use each of the platforms. Females reported greater intensity to use Facebook and Instagram than males, while males reported higher intensity to use Twitter. Participants also indicated greater intensity to use Twitter and Snapchat if they were in lower class standing



Figure 2. Means differences in intensity to use Facebook, Twitter, Instagram, and Snapchat.

(e.g., freshmen and sophomore). Finally, ethnic background only predicted Twitter and Instagram intensity. However, except for gender's maintained prediction of the intensity to useTwitter(males>females) and Instagram(females>males), all of the demographic variables become nonsignificant with the introduction of the U&G variables.

The second block of predictors (U&G variables) added between 51% and 61% of the variance explained in the intensity to use each of the four platforms, thus amounting to a total variance explained range of 58%-66%. Across the four platforms, entertainment was consistently the strongest predictor of use intensity. The intensity to use Facebook was significantly predicted by entertainment, time spent daily on the platform, self-documentation, and convenience (marginally), respectively. Entertainment, time spent daily, convenience, and gender, respectively, significantly predicted the intensity to use Twitter. Instagram use intensity was significantly predicted by entertainment, self-documentation, the number of users followed, self-expression, gender, time spent daily, and passing time, respectively. Finally, entertainment, convenience, the number of friends, self-expression, and time spent daily, respectively, were significant predictors of the intensity to use Snapchat.



Figure 3. Mean differences in motivations to use Facebook, Twitter, Instagram, and Snapchat.

# Discussion

This study explored social media U&G across four different popular platforms: Facebook, Twitter, Instagram, and Snapchat using a sample of college students. Following is a summary of the study's main findings.

Our study showed that participants spent the greatest amount of time on Instagram and Snapchat, then Facebook and Twitter. The increasing popularity of Instagram and Snapchat has also been shown in other studies (see Stanley, 2015). This was also mirrored in the findings related to use intensity, where participants rated their intensity of using Instagram and Snapchat higher than that of Facebook and Twitter. In other words, participants indicated a greater intensity of use—or more accurately more favorable affective and cognitive attitudes toward—Instagram and Snapchat than Facebook and Twitter.

With regard to the motivations to use each platform, participants reported using all four platforms equally to share information. Across the four platforms, the two-highest rated motivations were for entertainment and convenience. As noted by prior studies (e.g., Alhabash et al., 2014), there are changing values attached to using social media that move beyond the hypothesized value of socialization and social networking. Our findings showed little to no association between network size (i.e., the number of friends/followers) and the intensity to use each platform. Alhabash et al. (2014) pointed that over the past few years, the average number of friends and followers on SNSs such as Facebook has been exponentially increasing. This increase in network size makes it impossible to primarily use platforms like Facebook or Instagram to connect and socialize simply because the user has a large number of friends that makes it hard to maintain relationships with all of them. This is why, we argue,

Predictors	Facebook	Twitter	Instagram	Snapchat		
	β	β	β	β		
Block I: control variables						
Age	.06	.04	04	.003		
Sex	.22***	10†	.36***	.10		
Asian	03	24†	.15	13		
Black/African American	01	.05	.04	.02		
Native American/Alaska Native	04	02	01	06		
White	.11	06	.25†	.03		
Class standing	.08	19**	08	18**		
Model statistics	$R = .28, R_{adj}^2 = .06,$ F(7, 345) = 3.97***	$R = .28, R_{adj}^2 = .05,$ F(7, 267) = 3.19 ****	$R=.39, R_{adj}^2=.13, F(7, 288)=7.44***$	$R = .26, R_{adj}^2 = .04,$ $F(7, 285) = 2.89^{***}$		
Block 2: U&G predictors						
Age	003	.009	03	.02		
Sex	.04	09*	.12***	.02		
Asian	.007	.03	.14	04		
Black/African American	.003	.06	04	.04		
Native American/Alaska	01	.02	.04	008		
Native						
White	.12	.12	.16	.05		
Class standing	.06	07	02	05		
Information sharing	01	06	.06	.05		
Self-documentation	.14*	.08	.22**	.12		
Social interaction	.10	.13	03	.06		
Entertainment	.35***	.34***	.30***	.23**		
Passing time	02	.05	.10*	.05		
Self-expression	.10	.09	.13*	.12†		
Medium appeal	.07	02	02	.08		
Convenience	.09†	.15*	.04	.19**		
Time spent daily	.15***	.21***	.  **	.09*		
No. of friends/followers	.04	01	08	.14†		
No. of users I follow	-	.05	.18**	07		
Model statistics	$R = .76, R_{adj}^2 = .58,$ $F(17, 321) = 28.23^{***}$	$R = .83, R_{adj}^2 = .66,$ F(18, 256) = 30.99 ***	$R=.81, R_{adj}^2=.64, F(18, 277)=30.14$	$R = .82, R_{adj}^2 = .65,$ $F(18, 274) = 31.50^{***}$		
R <sup>2</sup> change	.52***	.61***	.51***	.61***		

**Table 2.** Regression results for the relationship between eight use motivations, time spent daily, network size, and the intensity to use Facebook, Twitter, Instagram, and Snapchat.

<sup>†</sup>p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001.

passive use motivations, such as entertainment and convenience, take precedence over social interaction.

The four platforms deviate from similarity when inspecting the other use motivations. For example, following convenience and entertainment, participants reported they use Facebook for passing time, medium appeal, information sharing, self-expression, social interaction, and self-documentation motivations, respectively. As for Twitter, motivations other than entertainment and convenience include medium appeal, passing time, self-expression, information sharing, social interaction, and self-documentation, respectively. It is worth noting that for both Facebook and Twitter, information sharing was the sixth-highest motivation, compared to the least rated motivation for Snapchat and Instagram. Convenience, medium appeal, passing time, self-expression, self-documentation, social interaction, and information sharing, respectively, were the motivations to use Instagram. As for Snapchat, we see that after entertainment and convenience, medium appeal, passing time, self-expression, selfdocumentation, social interaction, and information sharing followed, respectively (see Figure 4).

The regression results also point to intriguing contrasts across the four platforms. Before looking how use motivations predict intensity of use, it is important to look at the relationship between the time participants spent daily using the platform and the intensity of use, which was a significant predictor for all platforms. However, we see that the contribution of usage time to the intensity of use is greater for

	FACEBOOK	TWITTER	INSTAGRAM	SNAPCHAT
1	Convenience	Entertainment	Entertainment	Entertainment
2	Entertainment	Convenience	Convenience	Convenience
3	Passing Time	Medium Appeal	Medium Appeal	Medium Appeal
4	Medium Appeal	Passing Time	Passing Time	Passing Time
5	Information Sharing	Self-Expression	Self-Expression	Self-Expression
6	Self-Expression	Information Sharing	Self-Documentation	Self-Documentation
7	Social Interaction	Social Interaction	Social Interaction	Social Interaction
8	Self-Documentation	Self-Documentation	Information Sharing	Information Sharing

Figure 4. Ranking of use motivations across Facebook, Twitter, Instagram, and Snapchat.

Facebook and Twitter than it is for Instagram and Snapchat. It is the plausible that the nature and progression of Facebook and Twitter lend themselves to greater time engagement than Instagram and Snapchat. Another plausible explanation is that Facebook and Twitter have been in use for a longer period of time than Instagram and Snapchat. For our sample, participants reported that, on average, they have been using Facebook for 6.65 years (SD=1.77 years), followed by Twitter (M=4.20 years), SD = 1.60 years), Instagram (M = 3.50 years, SD = 1.27 years), and Snapchat (M=2.85 years, SD=1.23 years), F(3, 221) =373.01, p < .001,  $\eta_p^2 = .84$ . What this suggests is that participants had a longer period to time to ritualize their use of each of these platforms, and therefore, their attitudes toward the medium (use intensity) is positively related to how time they spend daily on the medium.

As found in previous studies (e.g., Alhabash et al., 2014), our findings showed that the strongest predictor of use intensity was the motivation to use the platform for entertainment purposes. Our findings also suggest a few contrasts across the different platforms. Facebook use intensity is also driven by self-documentation, convenience, and self-expression. Twitter use intensity is also driven by convenience motivations. Instagram use intensity is also predicted by self-documentation and passing time. Finally, the intensity of using Snapchat is predicted further by convenience and selfexpression. Snapchat and Instagram were the only platforms in which network size (number of followers and the number of users followed, respectively) mattered in terms of use intensity, plausibly due to the nature of interactions on it and its novelty, therefore placing greater emphasis on the size of the audience of friends compared to other platforms.

#### Implications

This study is one of few that compared the U&G of four leading social media and SNS platforms among college students. The most apparent theoretical implication for this study is the similarities and dissimilarities across the four different platforms in relation to usage patterns and motivations. The distinctiveness of each platform is certainly reflected in several ways in relation to time spent daily on the platforms, to the different motivations, and how the motivations predict use intensity.

The second implication deals with the robustness of the U&G approach in predicting use-related evaluations and behaviors from motivations. Despite critiques of the U&G approach, the regression models reported here predict more than half of the variance in use intensity across the four platforms. However, it is worth mentioning that per the U&G approach, we followed a general and plausibly standardized approach to measuring uses and motivations; therefore, future research should attempt at understanding the uniqueness of the general motivational expressions per each platform. For example, does using Facebook for self-documentation is similar to that motivation on Snapchat where messages disappear after a certain period of time?

Third, it is important to note the differences between what we could term as "old" and "new" social media platforms. Our findings showed that fewer motivations predicted the intensity to use Facebook and Twitter (e.g., entertainment for both and self-documentation for Facebook), while more motivations come into play in predicting the intensity to use Instagram and Snapchat. This suggests that as social media platforms age, the motivations—and to a certain extent, the gratifications sought and obtained from them—become harmonious, whereas newer platforms have room for a more diverse set of motivations and gratifications sought and obtained. In a different light, Instagram and Snapchat are perceived as more specialized media than Facebook and Twitter, which could potentially influence the diversity of motivations sought and obtained from their use.

Fourth, our findings showed that network size had little to no influence on the intensity of using the different social media platforms. With the exception of Snapchat and Instagram, the number of friends and followers and those participants followed did not predict the intensity of use. This can also be understood within the lens of the "old" versus "new" platforms presented in the previous paragraph. Longevity of use could impact how salient the size of one's network is, yet new platform use may leave more room for the influence of one's network size. Our findings also provide professional communicators be them advertisers, marketers, PR practitioners, or health communicators—with a deeper understanding of the complexities and intricacies of dealing with social media audiences. Understanding user motivations, from a theoretical perspective, should inform professional communicators as they design campaigns on social media. The high emphasis on entertainment by our participants should lead these professional communicators to designing campaigns that adhere to and gratify these motivations for engagement and continuity purposes.

## Limitations and Future Research

Our study used a college-student sample, with a majority of female and White participants. Despite the fact that young adults are the heaviest adopters and users of social media and social networking platforms, our results cannot be generalized to the entire population of social media users. Future studies should replicate our survey with individuals from diverse demographic groups.

We took a standardized approach in asking participants about their motivations and uses of the different platforms. This brings up a number of limitations. First, there could be a test-retest effect on the way participants responded to all the questions pertaining to each of the platforms. Second, by taking a standardized approach, we limited the unraveling of unique features and trends related to each of the four platforms. Future research should take a hybrid approach that asks standardized questions across different platforms, yet allows for unique features to be included in the study design. This study explored cross-platform differences in uses and gratification of Facebook, Twitter, Instagram, and Snapchat. Our findings showed that newer platforms— Snapchat and Instagram—are taking the lead in usage and motivations for use in several aspects.

Specific to our question about the time spent on each of the platforms, we see that participants used the four platforms for a total of about 506 minutes per day. This number contradicts industry reports that estimate the amount of time spent daily on social media is closer to 120 min (2 hr; Mander, 2016). It is noteworthy that the averages reported here are specific to a college-student sample and are in line with previous research (e.g., Ellison, Steinfield, & Lampe, 2010; Junco, 2013); thus, differences with a general population sample are inevitable. There are a number of potential threats to the validity of our measure of time spent on each platform. First, we did not account for simultaneous use of platforms (i.e., multitasking). Second, we asked participants to indicate the number of hours and minutes spent on each platform, which could have been misunderstood by some participants. However, we inspected the data for outliers and removed cases that appeared out of the ordinary (e.g., spending 23 hr/ day on Facebook). Finally, the nature of asking users to selfreport the time spent on any medium is problematic as it

relies on retrospection. Junco (2013) showed that there is a large discrepancy between self-reported time spent on Facebook and actual behavioral data extracted through computer software. The differences were stark: participants reported spending 149 min daily on Facebook, while the behavioral data showed they spent 26 min/day on average. However, the overestimation was consistent across different activities, whereas the proportion of time spent on each activity matched between the self-report and behavioral data. Therefore, while our measure is not without error, we still believe that it reflects the relative importance participants placed on each platform, and their idea of how involved they are with that particular platform.

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#### Note

 Snapchat might not fully adhere to the Ellison and boyd (2013) definition of a social network site (SNS). Snapchat users set up their profiles and contribute their user-generated content to their own stories and other types of stories as well as receive content from others (users and system). Additionally, users have the ability to interact with other users' content. However, Snapchat does not satisfy the definition's emphasis on public viewership of one's profile. Nonetheless, the interactive nature of Snapchat provides more support for it being an SNS rather than not.

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#### **Author Biographies**

Saleem Alhabash (PhD, University of Missouri) is an assistant professor of public relations and social media at the Department of Advertising + Public Relations at Michigan State University. His research focuses on investigating the persuasive effects of exposure to and use of new and social media. More recently, his research examined the effects of alcohol cues and advertising via social media on alcohol use behaviors among youth and young adults. Another are of research deals with understanding the determinants, effects, and means of prevention of digital aggression (or cyberbullying).

Mengyan Ma (MA, Michigan State University) is a PhD student of Department of Advertising + Public Relations at Michigan State University. Her research interests include family communication on healthy eating, food app innovation for low-income communities, as well as social media use and mental health of college students and teenage girls. Appendix. Descriptive statistics, factor, and reliability analyses for study variables.

Variable	Facebook		Twitter		Instagram			Snapchat				
	М	SD	Load	М	SD	Load	М	SD	Load	М	SD	Load
Intensity to use												
is part of my everyday activity	4.95	1.78	.875	4.36	2.24	.915	5.37	1.76	.897	5.42	1.68	.888.
l am proud to tell people l'm on	4.18	1.61	.760	4.07	1.76	.808.	4.86	1.70	.839	4.77	1.75	.847
has become part of my daily routine	4.93	1.76	.863	4.30	2.24	.919	5.40	1.72	.896	5.39	1.69	.874
I feel out of touch when I haven't logged onto for a while	3.93	1.92	.839	3.80	2.14	.894	4.58	1.91	.842	4.43	2.04	.810
I feel I am part of the community	4.40	1.65	.825	3.99	1.96	.900	4.70	1.81	.863	4.69	1.86	.855
l would be disappointed if shut down	4.47	1.86	.777	4.15	2.09	.860	5.18	1.85	.860	5.09	1.84	.853
Eigenvalue (% of variance explained)		(67.94)		4.68	(78.07	)	4.50	(75.07	)	4.39	(73.08)	
Cronbach's $\alpha$	.905			.943			.933			.924		
Information sharing: I use to												
Share information	4.39	1.67	.902	4.08	1.83	.918	4.00	1.81	.902	4.03	2.01	.894
Share information useful to people	4.13	1.77	.887	3.82	1.76	.890	3.66	1.84	.890	3.78	2.04	.897
Present information on my interest	3.92	1.76	.852	4.10	1.83	.898	4.43	1.84	.837	4.24	1.96	.892
Eigenvalue (% of variance explained)	2.33	(77.56)		2.44	(81.35)	)	2.31	(76.88	)	2.40	(80.02)	
Cronbach's $\alpha$	.854			.885			.849			.875		
Self-documentation: I use to												
To record what I do in life	3.73	1.74	.906	3.69	1.80	.911	4.97	1.76	.888	5.05	1.79	.897
To record what I have learned	3.12	1.71	.844	3.16	1.77	.854	3.43	1.80	.723	3.33	1.99	.711
To record where I have been	3.65	1.86	.858	3.34	1.82	.900	4.89	1.75	.885	4.87	1.83	.907
Eigenvalue (% of variance explained)	2.27	(75.63)		2.37	(79.00)	)	2.06	(69.82	)	2.13	(71.07)	
Cronbach's $\alpha$	.838			.867			.778			.785		
Social interaction: I use to												
To connect with people who share some of my values	3.99	1.72	.881	3.83	1.84	.917	4.14	1.82	.903	4.04	1.97	.889
To connect with people who are similar to me	4.14	1.71	.879	4.01	1.90	.910	4.25	1.85	.890	4.38	1.92	.885
To meet new people	2.94	1.83	.794	2.94	1.82	.811	3.20	1.89	.826	3.12	2.07	.792
Eigenvalue (% of variance explained)	2.18	(72.71)		2.33	(77.59)	)	2.29	(76.31	)	2.20	(73.34)	
Cronbach's $\alpha$	.809			.854			.843			.815		
Entertainment: I use to												
lt is enjoyable	4.66	1.54	.943	4.70	1.74	.957	5.50	1.39	.940	5.49	1.47	.951
lt entertains me	4.90	1.58	.943	4.84	1.76	.957	5.54	1.42	.940	5.56	1.48	.951
Eigenvalue (% of variance explained)	1.78	(88.85)		1.83	(91.65)	)	1.77	(88.45	)	1.81	(90.36)	
Cronbach's $\alpha$	.874			.909			.869			.893		
Passing time: I use to												
It helps pass the time	5.03	1.61	.859	4.86	1.81	.875	5.32	1.49	.861	5.30	1.57	.876
I have nothing better to do	4.50	1.78	.801	4.43	1.91	.840	4.50	1.81	.811	4.83	1.78	.862
lt relaxes me	3.69	1.76	.694	3.78	1.80	.778	4.58	1.70	.783	4.23	1.93	.822
Eigenvalue (% of variance explained)	1.86	(62.06)		2.08	(69.26)	)	2.01	(67.05	)	2.19	(72.87)	
Cronbach's $\alpha$	.686			.777			.747			.807		
Self-expression: I use to												
To show my personality	3.93	1.78	.920	4.27	1.91	.930	5.01	1.71	.921	4.88	1.76	.906
To tell others about myself	3.73	1.77	.920	3.77	1.85	.930	4.51	1.76	.921	4.36	1.90	.906
Eigenvalue (% of variance explained)	1.69	(84.70)		1.73	(86.44)	)	1.70	(84.78	)	1.64	(82.10)	
Cronbach's α	.819			.843			.820			.780		
Convenience: I use to							_			_		
It is easy to use	4.90	1.510	.913	4.76	1.70	.945	5.40	1.40	.947	5.39	1.520	.949
It is convenient	4.93	1.37	.913	4.60	1.83	.945	5.30	1.44	.947	5.26	1.558	.949
Eigenvalue (% of variance explained) Cronbach's $\alpha$	1.67 .797	(83.31)		1.79 .879	(89.31)	)	1.79 .884	(89.63	)	1.80 .890	(90.07)	