Why Do College Students Prefer Facebook, Twitter, or Instagram? Site Affordances, Tensions Between Privacy and Self-Expression, and Implications for Social Capital

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Highlights

- Affordances, privacy concerns, gender, and age predict preferred social media site
- Privacy concerns, trust, disclosure and site preference predict social capital
- Facebook preference and being male predict bonding social capital
- Facebook preference is associated with more privacy concerns and less self-disclosure
- Instagram was the most trusted site, followed by Twitter, and then Facebook

Abstract

Whereas the bulk of research on social media has taken a granular approach, targeting specific behaviors on one site, or to a lesser extent, multiple sites, the current study aimed to holistically examine the social media landscape, exploring questions about *who* is drawn to popular social media sites, *why* they prefer each site, and the s*ocial consequences* of site preference. Survey data was collected from 663 college students regarding their use and preference for Facebook, Instagram, or Twitter. Results highlight the popularity of Instagram for college students, and women in particular. Personal characteristics such as gender, age, affordances on specific sites, and privacy concerns predicted social media preference. Expanding upon the *privacy paradox*, we found that participants who preferred Twitter were more likely to have a public (vs. private) profile, reported higher levels of self-disclosure, and indicated more bridging social capital. Participants who preferred Facebook reported *lower* levels of self-disclosure, but higher levels of bonding social capital compared to those who preferred Instagram. These findings suggest that associations between privacy settings, disclosure, and social capital vary as a function of both user motivations and the affordances of specific social media sites.

Keywords: Facebook, Twitter, Instagram, Privacy, Disclosure, Social Capital

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1.0 Introduction

Since 2005, Facebook has remained the most popular social media site in the United States, currently boasting over double the share of US adults (68%) compared to its closest competitors, Instagram (28%; which is owned by Facebook), Pinterest (26%), LinkedIn (25%), and Twitter (21%; Pew Research Center, 2017). Although the majority of social media research has focused on Facebook as an exemplar for social media use (Stoycheff, Liu, Wibowo, & Nanni, 2017), studies have begun comparing behaviors across sites, particularly between Facebook and Twitter (e.g., Binns, 2014; Davenport, Bergman, Bergman, & Fearrington, 2014; Errasti, Amigo, & Villadangos, 2017; Hughes, Rowe, Batey, & Lee, 2012; Panek, Nardis, & Konrath, 2013; Whitty, Doodson, Creese, & Hodges, 2017). However, few cross-site comparisons have included Instagram (e.g., Kim, Seely, & Jung, 2017; Phua, Jin, & Kim, 2017; Pittman & Reich, 2016; Waterloo, Baumgartner, Peter, & Valkenburg, 2017), despite its rising popularity (Instagram & TechCrunch, n.d.).

As Marshall McLuhan noted in 1967, the "social consequences of any medium- that is, of any extension of ourselves- result from the new scale that is introduced into our affairs... by any new technology (p. 23)." If media function as extensions of ourselves, different social media sites are likely to appeal to people with particular characteristics and preferences. The small body of research examining who is drawn to specific social media sites (SMSs) and why and how they use these sites reveals that the affordances of a site, or "functional and relational aspects which frame, while not determining, the possibilities for agentic action" (Hutchby, 2001; p. 444), promote different patterns of behavior and cultural mores on each site. For example, people often

use Facebook to form reciprocal connections with "friends" known from offline contexts (Ellison, Steinfield, & Lampe, 2007). On Instagram and Twitter, there is no option to "friend" people, one can only "follow" and possibly be "followed" back. Although Instagram and Twitter both offer larger audiences than Facebook, reciprocal relationships are more common on Instagram than Twitter. Indeed, Twitter is classified as a micro-blogging site rather than a social network site due to its low level of reciprocal connections and focus on information sharing (Kwak, Lee, Park, & Moon, 2010).

Commonly used modalities of communication also differ across sites. Twitter emphasizes text-based information sharing through brief Tweets, Instagram emphasizes visual image sharing, and Facebook provides the largest array of functions, including text-based posts, photo sharing, and sophisticated privacy settings that allow one to curate specifically who can view each post. Likely due to the complex curating opportunities available on Facebook, sharing of negative emotions is viewed as more appropriate on Facebook relative to more public sites with less sophisticated privacy settings such as Twitter and Instagram (Waterloo et al., 2017).

The privacy settings, modalities of communication, and types of social connections available on each site may appeal to different types of people. For example, people with heightened privacy concerns may prefer sites like Facebook that offer them customizable privacy settings. In contrast, people who seek attention from others online, such as those with heightened narcissistic traits (e.g., DeWall, Buffardi, Bonser, & Campbell, 2011), may be drawn to sites like Instagram where they can broadcast images of themselves to large audiences. Given its focus on text-based information sharing, Twitter may appeal to people seeking intellectual stimulation (Hughes et al., 2012). In the current study, we surveyed college students whose favorite SMS was either Facebook, Instagram, or Twitter to better understand if potential tensions between

privacy concerns and attention seeking, trust in different SMSs, and/or the affordances available on each site influence which SMS emerging adults prefer and the social capital derived through interactions on their preferred site.

1.1 Weighing Trust, Privacy, and Self-Expression on Social Media

Because some level of online disclosure is necessary to "write oneself into being" on SMSs (boyd, 2008), users must navigate issues of privacy and trust when engaging with SMSs. Tensions between the desire to seek attention from others through online self-expression and privacy concerns, or the degree to which people are concerned that information they post online will spread indiscriminately, have been reported in prior research (e.g., Utz & Krämer, 2009). People may prefer a specific SMS because they feel they can trust the site to support them in negotiating self-expression and privacy online. Feelings of trust may derive from privacy controls available on a given site, the public reputation of the site, and personal privacy concerns. Kwon and colleagues (2014) found that the perceived security of Facebook and Twitter influenced attitudes toward each site; positive attitudes were associated with greater intentions to use each site. Likely due to the flexible privacy settings available on Facebook, but not Twitter, Facebook was perceived as more secure than Twitter.

The sense of control that Facebook's privacy settings provide may encourage users to disclose more to their "Facebook friends" over time while using privacy settings to limit disclosure to "strangers" (Stutzman, Gross, & Acquisti, 2012a). Although flexible modifications of privacy settings can be used to direct personal information to select others within one's network, such modifications generally do not reduce the increasingly vast amounts of personal information users are disclosing (perhaps unknowingly) to the corporations running the sites. Consistent with Marichal's (2012) assertion that Facebook has created an "architecture of

disclosure," Stutzman and colleagues (2012a) found that over a period of five years, Facebook users employed progressively more sophisticated privacy settings to limit the amount of information available to the general public while sharing increasing amounts of information within their private networks. Perhaps because personal disclosure is often a central aspect of communication on Facebook, perceived security of information was more strongly associated with the intention to use Facebook than Twitter (Kwon, Park, & Kim, 2014).

Given Kwon and colleagues' (2014) findings, one might hypothesize that Facebook would be the most trusted site among the three tested in the current study. Indeed, teenage girls report that they express their true selves more fully on Facebook than Twitter (Binns, 2014). However, they also report that they experience more negative situations and reduced confidence on Facebook relative to Twitter. Trust in an SMS may fluctuate based on both personal experience and public perceptions of a site. For example, recent breaches in user privacy led some Facebook users to start a "quit Facebook" movement (discussed by Pentina, Zhang, & Basmanova, 2013) and the main reason that people provide for committing "virtual suicide" on Facebook (or deleting one's account) is privacy concerns (Stieger, Burger, Bohn, & Voracek, 2013). At the time of data collection for the current study (June to December 2014), Facebook had recently received negative media attention due to widely publicized reports that the company conducted surveillance of Facebook status updates that users started to write, but did not post (e.g., Golbeck, 2013) and revealed that they could successfully manipulate people's emotions by altering the content of Facebook feeds (Kramer, Guillory, & Hancock, 2014). Because of these events, alongside evidence that awareness of privacy concerns on Facebook is increasing (Stutzman et al., 2012a), we hypothesized that trust in Facebook would be lower than trust in Instagram and Twitter in the current study.

1.2 Intersections between Individual Differences and the Privacy Paradox

Although many social media users report relatively strong concerns about online privacy, these concerns do not necessarily translate into privacy-related behaviors (e.g., Debatin, Lovejoy, Horn, & Hughes, 2009; Tufekci, 2008). One reason may be that social media users are willing to relinquish some privacy (knowingly or unknowingly) to be heard. SMSs offer tremendous potential for self-expression, with technological affordances that draw social attention to one's thoughts, ideas, opinions, artwork, or experiences. The *privacy paradox* describes how potential risks of lax privacy settings are weighed against potential benefits of online engagement with diverse others (Norberg, Horne, & Horne, 2007). The desire to protect one's privacy online may be less important to college students than the unique opportunities for self-expression that SMSs provide. Furthermore, these opportunities for self-expression online may be particularly attractive to people with a greater desire to bask in others' attention, or more narcissistic individuals (e.g., DeWall et al., 2011).

Indeed, the privacy paradox may be particularly heightened among people with more narcissistic traits; they report heightened privacy concerns but demonstrate less vigilance about online privacy and engage in more behaviors on Facebook that expose them to privacy risks (Brittain, Parsons, Calic, & Brushe, 2017; Smith, Mendez, & White, 2014). Given that people often project idealized versions of themselves through SMSs (Manago, Graham, Greenfield, & Salimkhan, 2008), researchers have conjectured that people high in narcissistic traits may be drawn to SMSs more generally because of the opportunities for self-aggrandizement that they provide. Prior studies have found that people who use Facebook report heightened narcissistic traits relative to non-users (Ryan & Xenos, 2011). Heightened narcissistic traits have also been associated with the frequency of Facebook (Ong et al., 2011) and Twitter use (Davenport et al.,

2014; Panek et al., 2013), posting self-promotional content on Facebook (Mehdizadeh, 2010), and using Instagram to be "cool" (Sheldon & Bryant, 2016). However, narcissistic traits may be more consistently associated with motivations for social media use rather than the frequency of use (Bergman, Fearrington, Davenport, & Bergman, 2011; Sheldon & Bryant, 2016).

Given that people with heightened narcissistic traits often post flattering images of themselves (e.g. DeWall et al., 2011) and Instagram provides users with many opportunities to engage with large audiences through self-promoting images, we expected people with heightened narcissistic traits to be most drawn to Instagram. Instagram has been identified by micro-influencers (social media users with many active followers) as the best social media platform for engaging audiences (Bloglovin, 2016). Key characteristics that micro-influencers believe underlie Instagram's ability to engage audiences include its focus on images, its simplicity, and the combination of large audiences and tight (relative to Twitter) personal networks it provides. Pittman and Reich (2016) also found evidence that image-based platforms like Instagram generate feelings of enhanced intimacy and connectedness relative to text-based platforms.

Friendships involving women tend be more intimate than male-only friendships (e.g., Aukett, Ritchie, & Mill, 1988) and women spend more time monitoring and maintaining their online social networks than men (Barker, 2009; Muscanell & Guadagno, 2012). Consequently, women may be particularly drawn to platforms that provide images, such as Instagram or, to a lesser extent, Facebook, due to the opportunities for intimate connections that these sites may provide through images or other related affordances. Woman also exhibit less evidence of a privacy paradox than men; female privacy concerns are more closely aligned with their willingness to self-disclose on SMSs than male privacy concerns are (Taddicken, 2014). Therefore, women may gravitate toward sites such as Facebook that allow them to effectively

maintain their social networks through nuanced privacy settings. Indeed, prior research suggests that women are more likely than men to use Facebook, Pinterest, and Instagram (Pew Research Center, 2015b).

1.3 Social Capital Gained from Specific Social Media Sites

Although social capital, or the actual and potential resources available through one's social networks (Bourdieu, 1986), is considered an essential aspect of a functioning democracy (Putnam, 1995) and SMSs have fundamentally altered the landscape of social connections available to young people, little is known about the degree to which different SMSs differentially support the development of different types of social capital. Bonding social capital refers to benefits derived from relationships with close others who one can rely upon for support while bridging social capital consists of benefits derived from casual relationships (Ellison et al., 2007). We expected that the SMS that one prefers would impact the availability of bonding and bridging social capital. However, tensions between privacy concerns, trust, and the desire to seek attention online may intersect with the affordances of each site (e.g., privacy settings and available modalities or connections) to promote or reduce access to social capital.

To reap the social capital benefits from a site, individuals must self-disclose to a certain degree (Ellison et al., 2011a). Online self-disclosure with select individuals promotes emotional closeness, a feature of bonding social capital (Ellison et al., 2007; Henderson & Gilding, 2004; Jiang, Bazarova, & Hancock, 2011; Walther, 1996). One might assume that those who are more concerned about privacy or who feel distrustful of sharing information through a network, may not be able to express themselves with a level of depth and authenticity that can cultivate intimacy and bonding with their online social networks. However, people who use SMSs intensely and who have higher levels of privacy concerns report heightened bridging social

capital relative to intense users with lower privacy concerns (Phua, Jin, & Kim, 2017). The relationship between self-disclosure and social capital becomes increasingly complex as individuals navigate context collapse, wherein multiple audiences from various aspects of one's life (e.g., school, work, romantic interests) are flattened into a single audience due to the affordances of SMSs (Marwick & boyd, 2011). Privacy settings help users manage context collapse, as they allow users to target self-disclosures towards specific audiences. Not surprisingly, privacy settings have been both directly (Ellison et al., 2011a) and indirectly, via self-disclosure, associated with heightened bridging and bonding social capital derived from Facebook (Stutzman, Vitak, Ellison, Gray, & Lampe, 2012b).

Although the research suggests that the use (and hence the availability) of privacy settings promotes social capital, other affordances of SMSs are also likely to be involved, namely, the types of social connections different sites facilitate. For example, Twitter and Instagram allow for larger, more expansive social networks and may, therefore, foster heightened bridging social capital relative to Facebook. We hypothesized that bridging social capital would be particularly heightened on Twitter due to the flexible opportunities to connect with loose ties, while bonding social capital would be heightened on Facebook due to the opportunities to self-disclose to people who one is already close to via nuanced privacy settings.

A recently published study, the first to our knowledge that compares social capital derived from multiple SMSs, aligns closely with our hypotheses about social capital (which were developed before the paper was published). Phua and colleagues (2017) explored differences in bridging and bonding social capital as a function of the SMS that college students' (N = 305) used most frequently: Instagram (n = 116), Facebook (n = 93), Twitter (n = 60), or SnapChat (n = 28). Gender was not examined in analyses because 82% of the sample was female. Participants

who used Twitter most frequently reported the highest levels of bridging social capital. Bonding social capital was heightened among those who used SnapChat most frequently, followed by Facebook, Instagram, and then Twitter. Among participants with heightened privacy concerns, bridging social capital was highest among those who reported using their preferred site more frequently. Similarly, among participants who reported low trust in their friendships on their most frequently used SMS, frequency of site use was associated with greater bridging social capital. These findings align with prior research indicating that privacy concerns and the use of privacy settings to allow targeted self-disclosure may promote online social capital, perhaps because privacy concerns may encourage people to perform desirable identities online rather than disclosing potentially unlikable aspects of themselves to an often-unknown public. The current study was designed to investigate the degree to which the tensions between privacy concerns and self-disclosure, trust in specific SMSs (rather than trust in one's friends on SMSs as Phua and colleagues operationalized trust), and the affordances of specific SMSs determine the opportunities that young people encounter to develop social capital online.

2.0 Current Study

The goal of this study was to understand who is drawn to each SMS, why young adults are drawn to specific SMSs, and the consequences of SMS preference. The following research questions and hypotheses were addressed:

RQ1. Who prefers each SMS?

H1a: We hypothesized that women would more often prefer Facebook than men. In contrast, we expected men to prefer Twitter more often than women (Mislove et al., 2011).

H1b: We expected people who preferred Instagram to report the highest levels of narcissism due to the numerous opportunities to self-promote via the visual imagery that

Instagram provides.

RQ2. Why do individuals prefer each SMS?

H2a: We hypothesized that Facebook would be identified as the least trustworthy SMS due to recent negative media attention.

H2b: We hypothesized that participants would rate their preferred site as the most trustworthy in comparison with the other sites. We expected that general privacy concerns and the degree to which one trusts each SMS would influence which site one prefers.

RQ3. What are the perceived consequences of SMS use? Unfortunately, we did not develop hypotheses about potential associations between heightened privacy concerns, disclosure and social capital because we were not yet familiar with the aforementioned research linking privacy concerns and disclosure on Facebook to social capital (e.g., Stutzman et al., 2012b) when formulating our original hypotheses.

H3a: We hypothesized that those who favored Facebook over other sites would have greater perceptions of bonding social capital due to the opportunities available on Facebook to build close networks of known individuals.

H3b: We hypothesized that a preference for Twitter would be associated with more bridging social capital due to the opportunities for individuals to connect with a large network of loose ties that Twitter provides.

3.0 Material and Methods

3.1 Participants

A total of 826 participants were asked to complete an online survey via SurveyMonkey in exchange for research credits in an introductory psychology course. Introductory psychology students were targeted due to the use of the introductory psychology course as a general

education requirement at the university; students from a variety of majors may elect to enroll in the introductory course. Only respondents 18-25 years old were included in the current sample to control for potential outliers due to age differences (*n* = 74 excluded).

Participants who did not identify as male or female were removed due to the relatively small number of these individuals (*n* = 2) and those who did not complete at least half of the survey were also removed due to their insufficient data (*n* = 5). Participants who did not select one of the primary SMSs (Instagram, Facebook, or Twitter) when asked to select their preferred SMS were excluded from analyses due to the limited number of participants indicating each of these other sites (*n* = 82; Tumblr *n* = 26, SnapChat *n* = 2, Google+ *n* = 2, WeChat *n* = 2, Vine *n* = 2, *n* = 11 identified an alternative site such as Skype or Reddit; *n* = 37 participants did not identify their preferred *Other* site).

This resulted in a final sample of 663 college students who had been recruited from a subject pool at a large, urban university (459 women, 204 men; *M* = 19.0 years, *SD* = 1.62). Participants were asked to indicate their ethnicity from a series of categories. Almost half of the participants indicated that they were Caucasian (47%; *n* = 310), while 20% indicated Hispanic or Latino (*n* = 133), 12% as African American (*n* = 81), 10% as an Other ethnicity (*n* = 63), 9% as Asian (*n* = 61), and only 2% indicated more than one ethnicity (*n* = 15).

3.2 Procedure

Prior to their participation in the survey, participants were informed of the topic and duration of the survey and were then asked to provide their consent. After providing demographic information, participants were randomly assigned to one of two pathways through the survey, in which the order of scales was dependent upon the pathway assigned.

3.3 Measures

3.3.1 Preferred social media site (SMS) and reasons for preference. Participants were asked, *what is your favorite social networking site?*[1] Response options included *Facebook*, *Twitter, Instagram,* and *Other* (with the option to type-in a site). Then, participants were asked, *what do you like about your favorite social networking site and why?* Given that many participants were users of multiple SMSs, it is important to highlight that SMS preference does not equate to SMS use.

3.3.2. Perceptions of bridging and bonding social capital. Perceptions of Bridging and Bonding Social Capital subscales were adapted from Ellison and colleagues' (2007) Facebook social capital measure, which was originally developed as a measure of general online (vs. Facebook-specific) bridging and bonding capital by Williams (2006). Individual items were slightly revised to focus the questions on social capital derived from their *favorite* site. For instance, participants were asked to indicate their level of agreement with the following statement, "Interacting with people *on my favorite social networking site* makes me feel like part of the larger community." The original item read, "Interacting with people *online* makes me feel like part of the larger community."

Participants were asked to rate statements on a 5-point Likert scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Ten items assessed bridging and ten assessed bonding social capital. Scores for each participant were aggregated for each type of social capital (bridging and bonding) and ranged from 10-50 for bridging and bonding social capital. The transformed version[2] of bridging social capital ranged from 1.00-6.40. The internal consistency for these subscales was moderately high at $\alpha = .83$ for bridging social capital and $\alpha = .70$ for bonding

[1] Twitter is often referred to as a social networking site in the published literature (e.g., Hughes et al., 2012) and consequently, was described as such in our original survey. However, Twitter is currently recognized as a social media site rather than a social network site (Kwak et al., 2010), and is thus described as such in the write-up off the current study.

[2] Rationale for the transformation of bridging social capital can be found in the analytic plan.

social capital.

3.3.3. Trust in preferred SMS. A scale measuring trustworthiness of SMSs was adapted from the Consumer Trust Scale originally developed by Pan and Zinkhan (2006) (with questions pertaining to Netshop.com) and later modified by Fogel and Nehmad (2009). This scale was modified to assess trust in Facebook, Instagram, and Twitter, instead of focusing only on Facebook and MySpace (see Fogel & Nehmad, 2009). For instance, participants were asked to indicate their level of agreement with the statement, *Facebook/Instagram/Twitter* is a trustworthy social network. The original item (Pan & Zinkhan, 2006) read, *Netshop.com* is a trustworthy store. Another sample item from the current study read, *I can count on Facebook/Instagram/Twitter to protect my privacy.*

Participants were asked to respond with their level of agreement to four statements assessing trust for each of the three sites with the corresponding 5-point Likert scale ranging from 0 (*Strongly disagree*) to 4 (*Strongly agree*). Trust in one's preferred site ranged from 0-16. Internal consistency was relatively high: $\alpha = .85$ for Facebook Trust, $\alpha = .93$ for Instagram Trust, and $\alpha = .91$ for Twitter Trust.

3.3.4. Privacy concerns. General online privacy concerns were measured using a scale developed by Buchanan, Paine, Joinson, and Reips (2007), with questions such as, *how concerned are you about your privacy while you are using the Internet?* Responses were recorded with a 5-point Likert scale ranging from 1 (*Not at all concerned*) to 5 (*Very much concerned*). The scale included 16 items that were aggregated into a total privacy concerns score for each participant (range = 16-80). The internal consistency was high ($\alpha = .95$) for this scale.

3.3.5. Privacy behavior. To assess privacy behavior on one's preferred SMS, one item asked participants to indicate whether their profile was open to the public or private: *Is your*

[favorite social networking site] profile open to the public? Response options included *Yes* (1), *No* (0), and *I don't know* (*n* = 12 excluded from analyses involving this variable).

3.3.6. Disclosure. Our assessment of online disclosure was based on prior measures of disclosure (see Stutzman et al., 2012b) with five items included. A 7-point Likert scale ranging from 1 (*Never*) to 7 (*More than a couple times a day*) was given for the following items:

1. How often do you post on your favorite social networking site about your romantic relationship(s)?
2. How often do you post on your favorite social networking site about partying?
3. How often do you post on your favorite social networking site about your political beliefs?
4. How often do you post on your favorite social networking site about your accomplishments?
5. How often do you check-in or post your location on your favorite social networking site?

A total disclosure score was calculated for each participant's public posting behaviors (range = 5-35; *Mdn* = 12). This score captured the level of disclosure reported by individuals who preferred each SMS.

3.3.7. Narcissism. The brief 16-item Narcissistic Personality Inventory (NPI-16) (Ames, Rose, & Anderson, 2006) was used to assess narcissistic traits. This brief measure was adapted from the original and lengthier 40-item Narcissistic Personality Inventory (NPI-40), originally developed by Raskin and Terry (1988). Each item provided two statements and then asked participants which statement they agreed with. For instance, participants were asked to choose between: 1) *I really like to be the center of attention* (1), and 2) *It makes me uncomfortable to be*

the center of attention (0). An aggregated narcissism score for each participant was then calculated (range = 0-16). The internal consistency was moderate at $\alpha = .71$.

4.0 Analytic Plan

Kurtosis and skew were examined to identify non-normal distributions for responses to each non-binary measure. Non-normal distributions were identified for both bridging social capital and disclosure. Square root transformations were successful in normalizing bridging social capital. However, no transformations were successful in resolving the significant skew of the disclosure variable. Therefore, analyses predicting the former used the transformed variable while analyses predicting the latter were non-parametric. The alpha level was set as $p < .05$.

A content analysis was used to analyze qualitative responses to the open-ended question asking participants why they preferred their favorite SMS. A coding team holistically reviewed the content of responses to identify emergent themes that then served as codes (see Table 2 for code examples). After developing a coding scheme, inter-rater reliability was established for each code with a set of two researchers coding approximately 20% of the data ($n = 170$ out of the original 826 participants). Once reliability reached $\geq$ 80% agreement for each code, the remaining dataset was coded independently by the first author.

We used multinomial logistic regression models to examine who preferred each SMS and why individuals preferred a specific site. Predictors in the model examining who preferred each site included age, gender, and narcissism. Predictors in the model exploring why individuals preferred a site included characteristics that had been significant when examining who preferred a site (age and gender), as well as privacy concerns, trust in one's preferred site, and the highest frequency qualitative codes derived from participants' open-ended responses when explaining why they preferred a specific site (i.e., the site highlighted a visual medium, a simple medium,

and/or opportunities to connect with people you know).

We then used a repeated measures analysis to examine if trust towards each of the SMSs (Facebook, Twitter, and Instagram) varied as a function of one's preferred site, gender, and privacy concerns. The between-subjects variables were one's preferred site (Facebook, Twitter, or Instagram) and gender, while the covariate in this analysis was privacy concerns. After examining if disclosure (Kruskal-Wallis H test), privacy behavior (chi-square analyses), and bridging and bonding social capital (ANOVAs) varied as a function of preferred SMS, we included disclosure, privacy behavior, privacy concerns, trust in one's preferred site, age, gender, and site preference (a binary variable focused on the site identified in ANOVAs as predictive of variations in each type of social capital) as predictors in regressions predicting bridging (transformed) and bonding social capital.

We also used independent samples t-tests to examine if scores on key variables varied based on participants' randomly assigned pathway through the survey (pathway A or B). Although most of the variables did not differ as a function of order (*p*s > .05), bridging social capital differed by pathway (t (655) = -4.07, $p < .001$; $d = .32$). Consequently, all analyses including bridging social capital were re-analyzed to verify that the pattern of significant findings did not change as a function of the pathway assigned to participants; they did not.

5.0 Results

5.1. Who Prefers Each Social Media Site?

When asked to select their favorite SMS from Instagram, Facebook, Twitter, or Other, the overwhelming majority of respondents chose Instagram ($n = 397$), while others chose Facebook ($n = 150$) or Twitter ($n = 116$) as their preferred site.

A multinomial logistic regression was used to predict preferred SMS from age, gender,

and narcissism; both age and gender were significant predictors (Table 1).

Table 1

Likelihood Ratio Tests for Multinomial Logistic Regression Analysis Predicting Social Media Site Preference from Age, Gender, and Narcissism

Predictor	-2 Log Likelihood	χ^2	*df*	*Significance*
Intercept	510.94	.000	0	---
Age	527.99	17.05	2	<.001*
Gender	528.02	17.08	2	<.001*
Narcissism	514.09	3.16	2	.20

Note. Cox and Snell R^2 = .052. Nagelkerke R^2 = .062. Gender was coded as binary, male (1) or female (2). An asterisk indicates significance at the .05 level.

Independent samples t-tests revealed that those who preferred Facebook were older (M = 19.50, SD = 1.82) than those who preferred other networks (M = 18.98, SD = 1.54; t (214) = -3.19, p = .002; d = .31). Those who preferred Twitter were younger (M = 18.70, SD = 1.14) than those who preferred other networks (M = 19.18, SD = 1.70; t (236) = 3.75, p < .001; d = .33). There were no significant age differences between those who preferred Instagram and those who preferred the other sites (t (661) = .70, p = .49).

Chi-square tests revealed that male participants (28%) were more likely to prefer Facebook than female participants (20%; χ^2 (1, N = 663) = 5.68, p = .02; ϕ = .09). Male

participants (22%) were also more likely to prefer Twitter than female participants (15%; χ^2 (1, N = 663) = 4.25, p = .05; ϕ = .08). However, female participants (64%) were more likely to prefer Instagram than male participants (50%; χ^2 (1, N = 663) = 13.19, p < .001; ϕ = .14).

5.2. Why do Individuals Prefer Each Social Media Site?

A repeated measures analysis examined if trust towards each of the sites varied as a function of one's preferred site and gender, with privacy concerns included as a covariate. A main effect of privacy concerns was observed (F (1, 617) = 8.25, p =.004; ηp^2 = .01). Privacy concerns were lower among people who reported more trust in SMSs overall (r (622) = -.13, p = .001). However, trust toward the different SMSs varied, (F (1.95, 1200.97) = 4.88, p =.008; ηp^2 = .01)[3]. Paired t-tests revealed that trust in Facebook (M = 6.05, SE = .16) was lower than trust in Twitter (M = 6.64, SE = .17; t (627) = -4.52, p < .001; d = .15) and Instagram (M = 7.19, SE = .18; t (627) = -7.63, p < .001; d = .27). In addition, trust in Twitter was lower than trust in Instagram (t (662) = -4.67, p < .001; d = .14). An interaction between preferred SMS and trust was observed (F (3.89, 1200.97) = 10.74, p <.001; ηp^2 = .03)[3]. To investigate this interaction, we split the file by preferred SMS and re-ran within-subjects analyses of trust in each SMS for participants who preferred each site separately. People who preferred Facebook did not differentiate between sites in terms of trust (F (2, 292) = .18, p = .83). People who preferred Instagram trusted each of the sites to a different degree (F (1.91, 700.09) = 37.67, p < .001; ηp^2 = .09)[3]. They indicated more trust in Instagram (M = 7.34, SE = .24) compared with Twitter (M = 6.29, SE = .22) and Facebook (M = 5.79, SE = .21) and more trust in Twitter than in Facebook (M = 5.79, SE = .21, ps < .004). People who preferred Twitter also trusted sites to varying degrees (F (1.98, 221.84) = 17.08, p < .001; ηp^2 = .13)[3], indicating more trust in Twitter (M =

[3] The current data violated the assumption of sphericity. Consequently, the Greenhouse-Geisser correction was used.

7.83, *SE* = .41) than in Facebook (*M* = 5.96, *SE* = .39) and more trust in Instagram (*M* = 7.32, *SE* = .44) relative to Facebook (*M* = 5.96, *SE* = .39; *p*s < .001). However, their trust in Twitter did not differ from their trust in Instagram (*p* = .10).

To assess why individuals preferred each SMS, we used qualitative and quantitative data. Qualitative categories were derived from participant's responses to the question, *what do you like about your favorite social networking site and why?* Codes with sufficiently high frequencies, visual medium, simplicity of the medium, and connecting with people you know, were then included in the following regression. Table 2 highlights the inductive qualitative codes obtained from students' responses to the question, *what do you like about your favorite social networking site and why?*

Table 2

Coding Schema for Responses to, "What do you like about your favorite social networking site and why?"

Category	*Code*	*Facebook*	*Instagram*	*Twitter*	*Responses (N)*
Medium	Visual	22%	54%	20%	270
	Simple/Easy	11%	9%	20%	77
	Text-Based	3%	2%	5%	17
Connecting with Others	Connecting with Others	70%	44%	47%	334

	Connecting with People You Know	40%	24%	22%	183
	Connecting with People You Don't Know	9%	9%	11%	61
Privacy	Privacy Reasons	1%	5%	3%	24
Self-Expression	Self-Expression	3%	19%	16%	98
News	News or Newsfeed	5%	3%	10%	32
Entertainment	Entertainment or Fun	9%	7%	12%	56

Note. Codes were not mutually exclusive; $n = 14$ answered *Don't Know* or did not answer, while $n = 67$ responses fit into the *Other* category. Each response was coded as 0 or 1. Percentages were based on the total number of participants who preferred each site (Facebook, Instagram, or Twitter).

A multinomial logistic regression predicted preferred SMS from age, gender, privacy concerns, visual medium, and connecting with people you know (Table 3). Age and gender were included in the model due to their significance in predicting social media site preference.

Table 3

Likelihood Ratio Tests for Multinomial Logistic Regression Analysis Predicting Social Media Site Preference from Age, Gender, Privacy Concern, Social Media Site Trust, Visual Medium, Simple Medium, and Connecting with People You Know

Predictor	-2 Log Likelihood	χ^2	*df*	*Significance*
Intercept	1102.31	.000	0	---
Age	1119.39	17.08	2	<.001*
Gender	1113.99	11.68	2	.003*
Privacy Concerns	1108.87	6.56	2	.04*
Preferred Site Trust	1105.00	2.69	2	.26
Visual Medium	1164.59	62.28	2	<.001*
Simple Medium	1104.55	2.24	2	.33
Connecting with People You Know	1117.29	14.98	2	.001*

Note. Cox and Snell R^2 = .176. Nagelkerke R^2 = .207. Qualitative responses for Visual Medium, Simple Medium, and Connecting with People You Know were coded as 0 or 1. Gender was coded as the binary, male (1) or female (2). An asterisk indicates significance at the .05 level.

Post hoc testing revealed that privacy concerns differed as a function of preferred site, F (2, 656) = 3.16, p = .04, with differences specifically between Facebook and Twitter preference (t (262) = 2.51, p = .01; d = .31). Those who preferred Facebook reported higher privacy concerns (M = 55.03, SD = 15.82) compared with those who preferred Twitter (M = 50.03, SD = 16.38; d = .39). No differences were found in privacy concerns between Instagram and Facebook (t (541) = 1.65, p = .10) or Twitter (t (509) = 1.42, p = .16). Given prior research suggesting that women express higher privacy concerns than men (Fogel & Nehmad, 2009), this same model was re-analyzed with gender included as a predictor. Women (M = 55.52, SD = 22.83) expressed higher privacy concerns than men (M = 46.84, SD = 29.76; F (1, 653) = 35.39, p < .001; ηp^2 = .05). An interaction between gender and site preference was not observed (p = .71).

Participants were more likely to indicate that they preferred Instagram due to its visual affordances (54%) relative to both Facebook (22%; χ^2 (1, N = 547) = 44.75, p < .001; ϕ = .29) and Twitter (20%; χ^2 (1, N = 513) = 41.94, p < .001; ϕ = .29). Participants were more likely to report that they preferred Facebook because they could connect with known others through it (40%) relative to Instagram (24%; χ^2 (1, N = 547) = 12.89, p < .001; ϕ = .15) and Twitter (22%; χ^2 (1, N = 266) = 9.25, p < .002; ϕ = .15).

5.3. Disclosure on Social Media Sites

Disclosure on one's preferred site was compared among participants who preferred each of the sites using a Kruskal-Wallis H test to predict total aggregated disclosure (the amount of public posting that each participant reported on their favorite site). Disclosure differed across the

sites (χ^2 (2) = 11.89, p = .003; η^2 = .02), with a mean rank score of 287.37 for Facebook, 336.63 for Instagram, and 365.03 for Twitter. Mann Whitney U tests revealed that disclosure was lower among people who preferred Facebook (*Mdn* = 11.00) when compared with both people who preferred Twitter (*Mdn* = 13.00; *U* = 6662.00, *p* = .001) and Instagram (*Mdn* = 12.00; *U* = 24981.50, *p* = .006), who did not significantly differ from one another (*U* = 20885.00, *p* = .147).

Privacy behavior was assessed with one item asking participants whether their profiles on their preferred site were open. Reported privacy behavior varied as a function of site preference (χ^2 (2) = 138.66, p < .001; ϕ = .47); people who preferred Twitter (87%) were more likely to report having an open profile on their preferred site relative to those who preferred Facebook (25%; χ^2 (1) = 94.27, p < .001; ϕ = .62) or Instagram (28%; χ^2 (1) = 122.43, p < .001; ϕ = .50). There were no differences in the likelihood of having an open profile between those who preferred Facebook or Instagram (χ^2 (1) = .56, p = .45).

5.4. Perceived Consequences of Social Media Site Use

After initial ANOVAs examining perceptions of bridging social capital and bonding social capital based solely on social media site preference, we conducted regressions examining predictors of each type of social capital. Bridging social capital was square root transformed. Therefore, lower transformed scores indicate higher bridging social capital. Bridging social capital differed by site preference (*F* (2, 660) = 4.79, *p* = .009; η^2 = .01) with significant differences between Facebook (*M* = 3.92, *SD* = .86) and Twitter (*M* = 3.59, *SD* = .98; (*t* (264) = 2.84, *p* = .005; *d* = .36) and between Instagram (*M* = 3.85, *SD* = .88) and Twitter (*t* (511) = 2.67, *p* = .008; *d* = .27).

A regression predicted (the square root transformed) bridging social capital variable from gender, age, privacy behavior (whether one kept a public profile), Twitter preference (included

because this was the variable driving site differences in bridging social capital), privacy concerns, trust in one's preferred social media site, and disclosure (Table 4). Age and gender were included in this model due to their significance in predicting social media site preference. Gender, age, and Twitter preference were not significant in the model. Exploratory analyses revealed that Twitter preference ceased being a significant predictor of bridging social capital when keeping a public profile on one's preferred SMS (far more common on Twitter than the other sites) was entered into the model.

Table 4

Regression Analysis Predicting Bridging from Gender, Age, Twitter Preference, Privacy Behavior, Privacy Concern, Trust in Preferred Social Media Site, and Disclosure

Variable	*B*	*SE B*	*β*	*p-values*
Gender	-.062	.077	-.033	.42
Age	.023	.021	.043	.28
Twitter Preference	-.108	.102	-.047	.29
Privacy Behavior	-.187	.081	-.104	.02*
Privacy Concerns	-.008	.002	-.148	<.001*

Trust in Preferred Social Media Site	-.027	.008	-.138	<.001*
Disclosure	-.021	.007	-.118	.003*

Note. R^2 = .08. Bridging was transformed using a square root transformation. Asterisk indicates significance at the $\leq$ .05 level.

Partial correlations (with the other variables in the regression accounted for) with the square root transformed bridging social capital variable (so the direction of effects remained reversed) revealed that heightened bridging social capital was associated with heightened privacy concerns (r = -.15, p <.001), heightened trust in one's preferred site (r = -.14, p < .001), keeping a public profile (r = -.09, p = .02), and with heightened disclosure (r = -.12, p = .003).

Bonding social capital also differed by site (F (2, 660) = 7.19, p = .001; η^2 = .02), with significant differences only apparent between Facebook (M = 28.99, SD = 6.57) and Instagram (M = 26.62, SD = 6.60; t (545) = 3.75, p < .001; d = .36). No differences were observed between Facebook and Twitter (M = 27.85, SD = 7.12; (t (264) = 1.35, p = .18) and between Instagram and Twitter (t (511) = -1.74, p = .08). A regression analysis predicted bonding social capital from gender, age, Facebook preference (included because a preference for Facebook relative to Instagram predicted differences in bonding social capital in the initial ANOVA), privacy behavior (public vs. private profile), privacy concerns, trust in one's preferred social media site, and total disclosure (Table 5). Only age was *not* a significant predictor in this model.

Table 5

Regression Analysis Predicting Bonding from Gender, Age, Facebook Preference, Privacy Behavior, Privacy Concern, Trust in Preferred Social Media Site, and Disclosure

Variable	*B*	*SE B*	*β*	*p-values*
Gender	2.690	.593	.181	<.001*
Age	.058	.162	.014	.720
Facebook Preference	2.444	.662	.146	<.001*
Privacy Behavior	1.318	.560	.094	.019*
Privacy Concerns	.033	.017	.080	.047*
Trust in Preferred Social Media Site	.161	.059	.106	.006*
Disclosure	.243	.056	.170	<.001*

Note. R^2 = .10. Asterisk indicates significance at the $\leq$ .05 level.

Partial correlations (controlling for the other variables in the regression) revealed that heightened bonding social capital was associated with being male (r = -.18, p < .001), preferring Facebook over the other sites (r = .15, p < .001), heightened privacy concerns (r = .08, p = .05),

more trust in one's preferred site (r = .11, p = .006), keeping a public profile (r = .10, p = .02), and with heightened disclosure (r = .17, p < .001).

6.0 Discussion

The current study explored *who* is drawn to each SMS, *why* young adults are drawn to specific SMSs, and the *consequences* of SMS preference. Among the college students who participated in this study, Instagram was overwhelmingly the favored SMS, particularly among women. As hypothesized, men were more likely to prefer Twitter than women. Contrary to our hypotheses, men were also more likely to prefer Facebook than women. Older students tended to prefer Facebook while younger students were drawn to Twitter. However, contradicting our original hypotheses, no associations between narcissism and SMS preference were observed.

When asked *why* they preferred their favorite SMS, students overwhelmingly focused on salient affordances of their preferred site, highlighting the dominant modality of communication and opportunities to connect with familiar others available on the SMS as key factors contributing to their preference. Contrary to our hypotheses, very few students (3.6% of the sample) focused on privacy concerns when explaining *why* they preferred their favorite SMS. However, heightened scores on a measure of online privacy concerns did predict a preference for Facebook (a site with a variety of customizable privacy settings) over Twitter (a site with very few privacy options). Findings suggest that people with heightened privacy concerns are drawn to Facebook partially due to the flexible privacy options it offers. However, they may feel ambivalent about their preference, perhaps due to media attention at the time of data collection indicating that Facebook is not always transparent about its use of user information. Consistent with this interpretation (and with our hypotheses), participants reported trusting Facebook less

overall than the other SMSs. Inconsistent with our hypotheses, *no* associations between perceived trustworthiness of an SMS and preference for that site were observed.

Although trust and privacy concerns were not salient factors that college students considered when explaining why they preferred an SMS, heightened trust in one's favorite SMS and heightened privacy concerns, but reduced privacy behaviors (i.e., having a public profile and engaging in high levels of disclosure on one's favorite SMS), predicted heightened perceptions of bonding and bridging social capital derived from one's favorite site. Prior research focusing solely on Facebook found that people who *restrict* their privacy settings to fit different audiences *self-disclose more* within flexibly curated sub-networks of their network and develop *more bonding and bridging social capital* (Ellison et al., 2011a; Stutzman et al., 2012b). Although disclosure was also positively associated with social capital in our study, our findings differ from Stutzman and colleagues' by demonstrating social capital benefits that are associated with having an open profile on one's favorite SMS. Our findings extend upon prior research by suggesting that tensions between privacy, disclosure, and social capital are increasingly context-specific when one considers the wider landscape of available SMSs.

Consistent with our hypotheses, a preference for Facebook was associated with heightened bonding social capital while a preference for Twitter was associated with heightened bridging social capital. However, participants who preferred Facebook reported *lower* levels of self-disclosure compared to those who favored Instagram or Twitter, but *higher* levels of bonding social capital in comparison to those who preferred Instagram. In contrast, participants who preferred Twitter reported heightened disclosure and relatively *lax* use of privacy settings, although they also reported *heightened* bridging social capital. Positive associations between preferring Twitter and bridging social capital were attributable to enhanced social capital derived

from keeping an open profile on one's favorite SMS. Our findings suggest that the affordances of specific SMSs intersect dynamically with user characteristics, including privacy concerns, to influence disclosure and promote social capital, while highlighting trust in SMSs as an underexplored factor that contributes to perceived social capital.

6.1. Who Prefers Each Social Media Site?

Although we expected to find that women would prefer Facebook more often than men while men would prefer Twitter more often than women (e.g., Pew Research Center, 2015b; Mislove et al., 2011), men in this study preferred Twitter and Facebook more than women, who resoundingly preferred Instagram. We had expected women to be drawn to Facebook by its customizable privacy settings and the opportunities to bond with close others that the site provides. Indeed, women did report heightened privacy concerns relative to men in the current study. However, as discussed previously, privacy concerns were not nearly as salient of a factor in determining SMS preference as we had originally expected. Future research should assess other factors that may attract young women in particular towards Instagram, such as the opportunities for young women to obtain the validation (via visual imagery) about their physical appearance that U.S. society encourages them to seek.

In the current study, age also predicted Facebook and Twitter preference. Participants who preferred Twitter were younger than those who preferred other sites. Given that we constrained the sample to only 18-25-year-old participants, the fact that age differences in SMS preference remained apparent in the constrained sample is particularly striking. A follow-up exploratory analysis in the unconstrained sample revealed that being younger was associated with both Twitter and Instagram preference while being older was associated with Facebook preference. The finding that older individuals prefer Facebook resonates with demographic

changes in Facebook use as new SMSs appear on the scene. Not surprisingly, emerging adults (18-29 years old) tend to be the earliest adopters of new SMSs. In 2013, young people were far more likely to use newer sites like Instagram (established in 2010) and Twitter (established in 2006) than older adults (aged 30-64), while age-related differences in Facebook (established in 2004) use were less apparent (Pew Research Center, 2013). Although the age gap favoring the young on Instagram and Twitter has become less pronounced over time, young people continue to flock from more established sites like Facebook to newer sites like Instagram and Snapchat (eMarketer 2017; Pew Research Center, 2017). Emerging adults who participated in this study may have gravitated to the newest site in our study, Instagram, because of its relative novelty and its focus on visual communication; young people today may rely on visual communication more than older people do (Gullberg, 2016).

We also expected Instagram to be particularly appealing to participants with heightened narcissistic traits. However, narcissism was not a significant predictor of SMS preference. In conjunction with prior research wherein narcissism has been associated, albeit inconsistently, with a range of ways and reasons for using Facebook, Twitter, and/or Instagram (Bibby, 2008; Mehdizadeh, 2010; Ong et al., 2011; Panek, Nardis, & Konrath, 2013; Ryan & Xenos, 2011; Sheldon & Bryant, 2016), our findings suggest that narcissistic desires might be satisfied on any SMS, particularly through self-disclosure opportunities. Although not a focus of analyses, disclosure was positively associated with narcissism in the current data set.

The current evidence of demographic predictors of site preference validate Hargittai's (2008) report that individuals who share aspects of identity (e.g., gender, age) gravitate to a common SMS. In the shifting landscape of available SMSs, the dynamic array of affordances provided by each site (e.g., modalities of communication, potential audiences, and privacy

settings) likely determines which individuals will aggregate on a specific site at a specific point in history.

6.2. Why Do Individuals Prefer Each Social Media Site?

Participants' explanations about why they preferred a specific SMS closely align with Marshall McLuhan's oft-quoted adage, "the medium is the message." The modes of communication and types of interactions available through a site were the most commonly cited reasons for site preference. People who preferred Instagram identified the visual imagery available on Instagram as a primary reason for their preference, whereas those who preferred Twitter or Facebook were less likely to indicate that visual images were a reason for their preference. Prior research provides indirect evidence that visual images, compared to text, may more effectively provoke feelings of closeness with others by demonstrating that happiness, life satisfaction, and loneliness were concurrently associated with the number of image-based SMSs participants used (Pittman & Reich, 2016). Given the tenuous link between image-based platforms and intimacy, it is perhaps not surprising that we found no evidence of such an association. Instead, the current study provides evidence that sites with heavier visual imagery such as Instagram, are *less effective* in supporting opportunities for users to develop strong, intimate connections with others when compared to sites that provide a variety of modalities for connection like Facebook. Indeed, people who preferred Facebook indicated that opportunities to connect with people they knew from offline environments drew them to Facebook, confirming prior reports that people who are seeking social connections may be more drawn to Facebook than sites such as Twitter (Hughes et al., 2012).

The current study also suggests that site preference may be guided by more general online privacy concerns. People with heightened privacy concerns may be more drawn to

Facebook due to the customizable privacy settings it offers. However, their attachment to Facebook may be an ambivalent one. Despite prior research demonstrating that Facebook was once viewed as more secure than Twitter (Kwon et al., 2014), our findings align with our hypotheses in suggesting that trust in Facebook may be shifting. Facebook was the least trusted SMS overall. Although participants generally trusted their own preferred SMS more than other sites, participants who preferred Facebook did *not* report heightened trust in Facebook.

Together, these findings suggest that people who prefer Facebook are drawn to the affordances Facebook provides, particularly opportunities to connect flexibly with people they care about using customizable privacy settings, but individuals may still doubt the trustworthiness of the site. Potentially dwindling trust in Facebook might reflect the recent negative media attention directed toward Facebook (e.g., Fox-Brewster, 2016; Kramer, Guillory, & Hancock, 2014). Future longitudinal research should examine if trust in Facebook is, in fact, decreasing, and if decreases are compounded by ongoing revelations about ways in which the company fails to protect consumer privacy. This includes evidence that was widely covered by the media in 2018 (although many aspects of this issue were known by Facebook since 2015) that the data mining firm Cambridge Analytica gained access to over 80 million Facebook users' information without their knowledge and sold this information to Donald Trump's presidential campaign to help them target their advertisements to people most likely to be responsive to particular kinds of persuasion tactics. This scandal has highlighted the unintended consequences of Facebook's business model, essentially focused on selling users' attention to advertisers which incentivizes Facebook's surveillance of user activity (Tufekci, 2018). Although Facebook CEO Mark Zuckerberg described the Cambridge Analytica revelations as a "breach of trust," he

argued that the advertising model allows the platform to be accessible to everyone regardless of income.

One might assume that scandals such as the one involving Cambridge Analytica would promote concerns over online privacy and erode users' willingness to use SMSs in ways that reveal personal information, which, as we found, is part of the process of building social capital online. However, the findings in the current study suggest that college students pay little attention to the corporations that own SMSs when forming perceptions of these sites. Although Facebook was the least trusted SMS, Instagram (which is owned by Facebook) was the *most* trusted SMS. In addition, trust in one's favorite SMS was *unrelated* to which SMS students preferred. Nevertheless, students did demonstrate lower levels of disclosure on the least trusted site (i.e. Facebook). Therefore, it remains possible that college students may pay increasing amounts of attention to issues surrounding privacy and trust on social media, especially given the intensity of ongoing media critiques of the conflicted contributions of SMSs to an open and just society. Given that trust in their preferred SMS did emerge as a key factor influencing college students' perceptions of the social capital they derived from that SMS, future research examining potential changes in trust towards specific SMSs in response to negative revelations and/or needed policy changes should evaluate if changes in trust in SMSs lead to changes in social capital. Such research should also examine potential adverse psychological consequences of tensions between one's desire to connect with others via SMSs and potentially decreasing trust in SMSs.

6.3. What Are the Perceived Consequences of Social Media Use?

The current study highlights the connected nature of trust, privacy concerns and behaviors, and SMS preference in predicting perceived social capital derived from a SMS.

Findings indicate that some social media users, particularly those preferring Twitter, disclose on social media without using strict privacy settings, and this audience-indiscriminate form of disclosure is associated with enhanced social capital. Certainly, the power accompanying the use of Twitter as a tool for self-disclosure and for fostering social capital with like-minded others has become evident in the current political climate (Ott, 2017).

Even so, the use of flexible privacy settings to self-disclose to select members of a social network has been associated with enhanced social capital in prior work focusing on Facebook use (Ellison et al., 2011a; Stutzman et al., 2012b). The use of segmented privacy settings can facilitate disclosure and social connection by resolving privacy concerns related to interpersonal context collapse, yet there may also be social capital consequences for restricting the audience of one's online self-expression. While Stutzman and colleagues (2012b) reported positive associations between using segmented privacy settings and social capital, their work also provided evidence suggestive of negative associations between having a private ("friends only") profile and both bonding and bridging social capital; however, such associations were not statistically significant in their sample. In the current data, maintaining a public profile and greater self-disclosure both uniquely predicted heightened bridging and bonding social capital. These results support prior research findings that more online self-disclosure can promote enhanced emotional closeness with select others (Henderson & Gilding, 2004; Jiang et al., 2011; Walther, 1996) and suggest that those who are willing to disclose and keep their profile open to the public are more likely to acquire social capital online (or at least, to view themselves as having more social capital).

The current findings are largely consistent with a privacy paradox, wherein social media users reveal personal information online (disclose), despite some concerns about privacy, in

exchange for social engagement (see Norberg, Horne, & Horne, 2007). However, prior research has shown that even strong privacy concerns may not result in stricter privacy behaviors (Debatin et al., 2009; Tufekci, 2008). Perhaps a more precise way to understand the privacy paradox is to examine how users negotiate privacy and social connection differently across various online cultural contexts.

Our participants who preferred Twitter seemed to be more individualistic--if we define individualism in terms of values for self-expression and choice (Inglehart & Welzel, 2005), and in terms of high relational mobility (the freedom to form and dissolve relationships) and greater trust in strangers (Thomson, Yuki, & Ito, 2015). Those who preferred Twitter were more likely to be young and engage in higher levels of self-expression in online public spaces. Those preferring Twitter were also more likely to report acquiring social capital from loose social ties (bridging social capital), replicating prior reports that people who used Twitter most frequently report the highest levels of bridging social capital (Phua et al., 2017). People who preferred Twitter in the current study were most likely to set their profile to public, and thus, prioritized self-expression and social connectivity within large amorphous webs.

In contrast, those with more privacy concerns preferred Facebook where it is more common to set one's profile to private and to use the site to connect with known others. Those who preferred Facebook might be thought of as less individualistic; they were older and engaged in lower levels of public self-expression while using their favored SMS to connect with tight-knit social ties (bonding social capital). Those who preferred Facebook in the current study seemed to negotiate the privacy paradox differently than those who preferred other sites, perhaps disclosing less online because of their privacy concerns and lack of trust in the site, but still using Facebook because people with whom they cultivated face-to-face relationships were also using the site.

The higher levels of bonding reported on Facebook again compliment prior comparisons of bonding across SMSs (Phua et al., 2017). Perhaps individuals who prefer Facebook are also more motivated to maintain social contacts through reciprocal communications rather than through self-disclosure in one-sided status updates. In contrast, the affordances of Instagram and Twitter encourage a one-to-many form of social interaction, and thereby may facilitate the formation and maintenance of looser, distal ties, or a mix of close and loose ties wherein reciprocity is more arbitrary. This interpretation of our results resonates with Binn's (2014) description of a "Twitter city" and "Facebook village" as distinct online environments that have emerged from online behaviors influenced by the architecture of the two SMSs.

In addition to social media preference, gender also predicted bonding social capital. Men were more likely to report having access to higher levels of bonding social capital online compared to women. Although this finding was surprising, it may fit within the intersection between social constructions of masculinity and the hyperpersonal affordances of computer-mediated communication (Walther, 2007). The asynchronous nature of computer-mediated communication allows users to edit and contemplate before transmitting a message, enhancing feelings of control in intimate communications that may be particularly useful for those who feel insecure about cultivating intimacy in face-to-face interactions. Previous longitudinal research illustrates how computer-mediated communication scaffolds adolescents' incipient intimacy skills, increasing their online disclosures, and generating greater friendship closeness (Valkenburg & Peter, 2009). Given that social constructions of masculinity in the U.S. are often emotionally restrictive (Mahalik et al., 2003), men may be more likely to feel inhibited when communicating their feelings in face-to-face interactions and have less practice in moment-by-moment self-disclosures. Perhaps men are more likely to benefit from the disinhibition effects of

computer-mediated communication, and thus, derive more bonding social capital from online activities compared to women. Supporting this speculation, previous research with adolescents found that boys with especially high social anxiety were more likely to use Internet communication to compensate for offline friendship quality (Desjarlais & Willoughby, 2010). Future research might consider how the potential for disinhibition and hyperpersonal communication might vary based on SMS preference by exploring how unique affordances of each site facilitate or hinder these models of communication.

7. Limitations

As a common social media research limitation (e.g., Phua et al., 2017), our sample suffered from an uneven distribution of gender where most participants were women. Furthermore, almost half of the sample (47%) identified as Caucasian. Additional studies should consider opportunities to replicate the current findings with an even sample of women and men, while also exploring whether the findings replicate with a larger sample of individuals who do not identify as Caucasian.

Due to the reliance on self-reporting via survey methods in the current study, participants may have unintentionally inflated or deflated the accounts of their behaviors on social media due to a lack of self-awareness surrounding one's behaviors. In addition, the use of a cross-sectional approach to data collection limits the inferences that can be drawn about how social media preference, privacy, trust, disclosure, and social capital may interrelate and change over time. Future research should also consider how one's media preferences might change, in addition to factors (such as media coverage of untrustworthy policies used by specific SMSs) that might contribute to potential changes in media preference.

In the current study, we used one item to measure privacy behavior, focusing on one's

profile setting as public vs. private. Stutzman and colleagues (2012b) explored profile privacy settings on Facebook by allowing participants to report their use of a friends-only privacy setting (public vs. private) and a segmented privacy item asking whether participants had ever changed their privacy settings so that only some of their friends could view specific types of content. The segmented privacy setting has been associated with social capital more consistently than the public vs private distinction used in the current study. Privacy behaviors should be considered a multifaceted variable that future research can more thoroughly disentangle based on profile settings, sharing settings, and content self-censorship. Similarly, SMS preference and reasons for preference were only measured using one item each. The text of the SMS preference question specifically listed three social media sites as examples (Facebook, Instagram, and Twitter), with the option to write in other responses. Participants may have chosen one of the initial, readily-available site options because they were prompted with those options. Therefore, future studies should consider a preference question with a more comprehensive list of preferred SMSs or opportunities for participants to rank their preferences. Although the current research begins to explore underlying motivations for SMS preference, future research might consider a more nuanced approach to assessing motivations and reasons for SMS preference. Additional studies could consider how specific opportunities for social capital or desires for intimacy with others might be hindered or enhanced through SMS affordances. Similarly, future research should explore whether these dynamic relationships change based on SMS *preference* vs. SMS *use*.

As an additional limitation of the current study, the predictor variables used in the regression analyses of the current report accounted for a relatively small amount of the variance in each regression model. The small R^2 values in these models suggest that adding additional predictors or refining the predictor variables might strengthen the regressions, thereby

accounting for a larger amount of the variance that is currently uncaptured in the models. For example, our privacy behavior variable measured through one item cannot capture the varied privacy behaviors users engage in on each SMS. Similarly, disclosure could be conceptualized as public or private and as occurring on a spectrum from limited disclosure to more extreme forms of online disclosure. Future studies should consider opportunities to refine the current models, with attention given to conceptualizing the complexities of the key variables (e.g., privacy, disclosure, trust, and social capital).

Finally, the current study sought to compare predictors of SMS preference across three of the most popular sites in the US: Facebook, Instagram, and Twitter. However, each of these sites allows for varied opportunities to share information, passively gather information about others, and actively connect with others. Each site also allows for varied types of disclosure that reflect the affordances of the site and may reflect user motivations for visiting the site. Nuanced opportunities for disclosure likely vary as a function of each preferred site. Types of disclosure likely reflect an individual's SMS preference and the curation of their online social network, including who in one's social network is likely to view a post. Future studies should consider expanded opportunities to explore types of disclosure in relation to SMS preference and characteristics of one's network, including the individuals that a user *anticipates* will view their post.

8. Conclusions

The current study revealed that personal characteristics, including gender and age, are associated with a preference for specific SMSs. College students appear to select a preferred SMS primarily based on the affordances of the site, specifically the available modalities of communication and potential interactants, with general concerns about privacy exerting a limited

influence on their social media preference. The overarching pattern of trust toward different SMSs, lowest for Facebook and highest for Instagram, suggests that college students' trust in their preferred SMS may be influenced by superficial media accounts of each site and students may not consider the structures of the corporations that own each site.

The current study also supports previous research (Phua et al., 2017) that different SMSs facilitate distinct types of social capital. Bonding social capital is more accessible on networks, such as Facebook, with flexible privacy settings and easy access to familiar friends. In contrast, bridging social capital is more accessible on public networks wherein users communicate with large audiences of people who they do not know from their day-to-day life (e.g., Twitter). Nevertheless, a set of factors including trust in one's preferred SMS, general concerns about privacy, and paradoxically, limited behaviors to protect privacy (e.g., lax privacy settings and heightened engagement in online disclosure) are associated with bonding and bridging social capital on SMSs.

The complex relationships between personal characteristics, priorities for privacy versus self-expression, and bonding and bridging social capital highlight the need for future studies that disentangle different strategies for balancing privacy and social connection given the unique affordances of sites as well as personal characteristics and motivations for online behaviors. Differences in the modalities of communication, types of social connections, and privacy settings available on specific SMSs may influence who is drawn to each site, how the site is used by the individual, and the types of social capital derived through interactions on the site.

These findings also have implications for longstanding discussions about the role of new media in human social networks and the generation of social capital (e.g., Putnam, 2005; Ellison et al., 2007). Participatory forms of media, in particular, can provide a public voice for an

increasing number of individuals who might also contribute to and have access to more diverse perspectives. Online opportunities to exchange information and opinions with diverse others could foster online networks that promote innovation. However, opportunities to engage with dissimilar viewpoints and opinions are limited by the algorithms used to tailor information provided by sites to user preferences (Pariser, 2011) and might be further complicated by the current results suggesting that those who feel more connected to social networks on SMSs also have contradictory motivations and feelings about their self-expression and privacy online. Individual strategies for reconciling these competing feelings, including making choices about the SMS(s) one decides to frequent (and relatedly, greater options in available choices), can greatly influence the social impact of new media use.

An important insight we learned from this research is that the proliferation of various SMSs may offer the potential for separate aggregations of like-minded individuals in specific Internet spaces, a scenario that facilitates self-expression and thus acquisition of social capital. Emerging loyalty to one's preferred site (e.g., heightened trust) amongst users could foster site-specific cultures and constitute a self-perpetuating cycle through which differences between populations of users are magnified by the affordances available on specific sites. Future research should examine the degree to which site-specific affordances contribute to site-specific cultures, which in turn contribute to "filter bubbles" wherein ideas intended to reach a broader audience are only effectively transmitted to like-minded others (Pariser, 2011).

As mentioned earlier in this paper, Putnam (1995) viewed social capital as essential for a functioning democracy. He also considered social trust and civic engagement to be interrelated aspects of social capital. Therefore, future research should extend upon our examination of privacy concerns, trust in SMSs, disclosure, and social capital (narrowly defined) by including

specific measures of civic engagement. Future research of this type may be particularly important in investigating tensions between ongoing successful initiatives by SMSs like Facebook to promote civic engagement (e.g., by encouraging users to vote through reminders on their platform), agentic ways that people build political movements through social media sites (e.g., the use of Facebook to spearhead massive worldwide protests such as the Women's March and the March for our Lives) and concerns about the ways that authoritarian leaders are harnessing opportunities provided by SMSs like Facebook to surveil citizens and target and harass their competitors (e.g., Etter, 2017). Such research could relate patterns of communication that emerge among people from specific cultural backgrounds on specific SMSs to trust in the SMS, privacy concerns, social capital, and civic engagement. Our findings are important to the fields of psychology and human computer interaction in that we have shown the social capital consequences of social media are not uniform; consequences depend on the individuals drawn to a specific platform and how individuals use affordances on the platforms to balance privacy concerns with desires for connection and self-expression.

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References

Ames, D. R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality, 40*(4), 440-450.

Aukett, R., Ritchie, J., & Mill, K. (1988). Gender differences in friendship patterns. *Sex roles, 19*(1-2), 57-66.

Barker, V. (2009). Older adolescents' motivations for social network site use: The influence of gender, group identity, and collective self-esteem. *Cyberpsychology & behavior, 12*(2), 209-213.

Bergman, S. M., Fearrington, M. E., Davenport, S. W., & Bergman, J. Z. (2011). Millennials, narcissism, and social networking: What narcissists do on social networking sites and why. *Personality and Individual Differences, 50*(5), 706-711.

Bibby, P. (2008). Dispositional factors in the use of social networking sites: Findings and implications for social computing research. *Intelligence and Security Informatics*, 392-400.

Binns, A. (2014). Twitter city and Facebook village: Teenage girls' personas and experiences influenced by choice architecture in social networking sites. *Journal of Media Practice, 15*(2), 71-91.

Bloglovin'. (2016). We asked, they answered: How micro-influencers really want to work with brands. Retrieved from: http://www.adweek.com/digital/influencers-instagram-is-the-most-engaging-platform-report/

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *The power broker: Robert Moses and the fall of New York* (pp. 241-258). New York, NY: Greenwood.

boyd, d. (2008). Why youth (heart) social network sites: The role of networked publics in teenage social life. In D. Buckingham (Ed.), *Youth, identity, and digital media* (pp. 119–142). Cambridge, MA: MIT Press.

Brittain, C., Parsons, K., Calic, D., & Brushe, M. (2017). *'Anti'-social media: Narcissism and self-control as predictors of Facebook self-disclosure.* Paper presented at The Australasian Conference on Information Systems 2017, Hobart, Australia.

Buchanan, T., Paine, C., Joinson, A. N., & Reips, U. D. (2007). Development of measures of online privacy concern and protection for use on the Internet. *Journal of the American Society for Information Science and Technology, 58*(2), 157-165.

Davenport, S. W., Bergman, S. M., Bergman, J. Z., & Fearrington, M. E. (2014). Twitter versus Facebook: Exploring the role of narcissism in the motives and usage of different social media platforms. *Computers in Human Behavior, 32*, 212-220.

Debatin, B., Lovejoy, J. P., Horn, A. K., & Hughes, B. N. (2009). Facebook and online privacy: Attitudes, behaviors, and unintended consequences. *Journal of Computer-Mediated Communication, 15*(1), 83-108.

Desjarlais, M. & Willoughby, T. (2010). A longitudinal study of the relation between adolescent boys' and girls' computer use with friends and friendship quality: Support for the social compensation or the rich-get-richer hypothesis? *Computers in Human Behavior, 26*, 896-905.

DeWall, C. N., Buffardi, L. E., Bonser, I., & Campbell, W. K. (2011). Narcissism and implicit attention seeking: Evidence from linguistic analyses of social networking and online presentation. *Personality and Individual Differences, 51*(1), 57-62

Ellison, N. B., Vitak, J., Steinfield, C., Gray, R., & Lampe, C. (2011a). Negotiating privacy concerns and social capital needs in a social media environment. In S. Trepte & L. Reinecke (Eds.), *Privacy online: Perspectives on privacy and self-disclosure in the social web* (pp. 19-32). New York, NY: Springer.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143-1168.

Ellison, N. B., Steinfield, C., & Lampe, C. (2011b). Connection strategies: Social capital implications of Facebook-enabled communication practices. *New Media & Society, 13*(6), 873-892.

eMarketer. (2017, August 23). Instagram, Snapchat adoption still surging in US and UK. Retrieved from https://www.emarketer.com/Article/Instagram-Snapchat-Adoption-Still-Surging-US-UK/1016369

Errasti, J., Amigo, I., & Villadangos, M. (2017). Emotional uses of Facebook and Twitter: Its relation with empathy, narcissism, and self-esteem in adolescence. *Psychological Reports, 120*(6), 997-1018.

Etter, L. (2017, December 7). What happens when the government uses Facebook as a weapon? Retrieved from https://www.bloomberg.com/news/features/2017-12-07/how-rodrigo-duterte-turned-facebook-into-a-weapon-with-a-little-help-from-facebook

Fogel, J., & Nehmad, E. (2009). Internet social network communities: Risk taking, trust, and privacy concerns. *Computers in Human Behavior, 25*(1), 153-160.

Fox-Brewster, T. (2016, June 29). Facebook is playing games with your privacy and there's nothing you can do about it. Retrieved from

https://www.forbes.com/sites/thomasbrewster/2016/06/29/facebook-location-tracking-friend-games/#5675aeec35f9

Gil de Zúñiga, H., Jung, N., & Valenzuela, S. (2012). Social media use for news and individuals' social capital, civic engagement and political participation. *Journal of Computer-Mediated Communication, 17*(3), 319-336.

Golbeck, J. (2013, December 13). On second thought… Facebook wants to know why you didn't publish that status update you started writing. Retrieved from http://www.slate.com/articles/technology/future_tense/2013/12/facebook_self_censorship_what_happens_to_the_posts_you_don_t_publish.html

Gullberg, K. (2016). Laughing face with tears of joy: a study of the production and interpretation of emojis among Swedish university students (Bachelor thesis). Retrieved from http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=8903284&fileOId=8903285

Hargittai, E. (2008). Whose space? Differences among users and non-users of social network sites. *Journal of Computer-Mediated Communication, 13*(1), 276-297.

Henderson, S., & Gilding, M. (2004). 'I've never clicked this much with anyone in my life': Trust and hyperpersonal communication in online friendships. *New Media & Society, 6*(4), 487-506.

Hutchby, I. (2001). Technologies, texts, and affordances. *Sociology, 35*, 441-456.

Hughes, D. J., Rowe, M., Batey, M., & Lee, A. (2012). A tale of two sites: Twitter vs. Facebook and the personality predictors of social media usage. *Computers in Human Behavior, 28*(2), 561-569.

Inglehart, R. & Welzel, C. (2005). *Modernization, cultural change, and democracy: The human development sequence.* Cambridge, MA: Cambridge University Press.

Instagram & TechCrunch. (n.d.). Number of monthly active Instagram users from January 2013 to September 2017 (in millions). In Statista - The Statistics Portal. Retrieved February 15, 2018, from https://www.statista.com/statistics/253577/number-of-monthly-active-instagram-users/.

Jiang, L., Bazarova, N. N., & Hancock, J. T. (2011). The disclosure–intimacy link in computer-mediated communication: An attributional extension of the hyperpersonal model. *Human Communication Research, 37*(1), 58-77.

Kim, D. H., Seely, N. K., & Jung, J. H. (2017). Do you prefer, Pinterest or Instagram? The role of image-sharing SNSs and self-monitoring in enhancing ad effectiveness. *Computers in Human Behavior, 70*, 535-543.

Kramer, A. D., Guillory, J. E., & Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences, 111*(24), 8788-8790.

Kwak, H., Lee, C., Park, H., & Moon, S. (2010, April). What is Twitter, a social network or a news media? In *Proceedings of the 19th International Conference on World Wide Web* (pp. 591-600), Raleigh, North Carolina: ACM Publications.

Kwon, S. J., Park, E., & Kim, K. J. (2014). What drives successful social networking services? A comparative analysis of user acceptance of Facebook and Twitter. *The Social Science Journal, 51*(4), 534-544.

Mahalik, J. R., Locke, B. D., Ludlow, L. Diemer, M. A., Scott, R. P. J., Gottfried, M., & Freitas, G. (2003). Development of the conformity to masculine norms inventory. *Psychology of Men and Masculinity, 4*, 3-25.

Manago, A. M., Graham, M. B., Greenfield, P. M., & Salimkhan, G. (2008). Self-presentation and gender on MySpace. *Journal of Applied Developmental Psychology, 29*(6), 446-458.

Marichal, J. (2016). *Facebook democracy: The architecture of disclosure and the threat to public life.* Abingdon, UK: Routledge.

Marwick, A. E., & boyd, D. (2011). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society, 13*(1), 114-133.

McLuhan, M. (1964). The medium is the message. In *Understanding media: The extensions of man* (pp. 23-35). New York, NY: Signet.

Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology, Behavior, and Social Networking, 13*(4), 357-364.

Mislove, A., Lehmann, S., Ahn, Y., Onnela, J., and Rosenquist, J. (2011). *Understanding the demographics of Twitter users.* In Proceedings of the Fifth International Conference on Weblogs and Social Media. Barcelona, Spain. Menlo, Park, CA: AAAI Press.

Muscanell, N. L., & Guadagno, R. E. (2012). Make new friends or keep the old: Gender and personality differences in social networking use. *Computers in Human Behavior, 28*(1), 107-112.

Norberg, P. A., Horne, D. R., & Horne, D. A. (2007). The privacy paradox: Personal information disclosure intentions versus behaviors. *Journal of Consumer Affairs, 41*(1), 100-126.

Ong, E. Y., Ang, R. P., Ho, J. C., Lim, J. C., Goh, D. H., Lee, C. S., & Chua, A. Y. (2011). Narcissism, extraversion and adolescents' self-presentation on Facebook. *Personality and Individual Differences, 50*(2), 180-185.

Ott, B. L. (2017). The age of Twitter: Donald J. Trump and the politics of debasement. *Critical Studies in Media Communication, 34*(1), 59-68.

Pan, Y., & Zinkhan, G. M. (2006). Exploring the impact of online privacy disclosures on consumer trust. *Journal of Retailing, 82*(4), 331–338.

Panek, E. T., Nardis, Y., & Konrath, S. (2013). Mirror or megaphone? How relationships between narcissism and social networking site use differ on Facebook and Twitter. *Computers in Human Behavior, 29*(5), 2004-2012.

Pariser, E. (2011). *The filter bubble: How the new personalized web is changing what we read and how we think.* London, UK: Penguin.

Pentina, I., Zhang, L., & Basmanova, O. (2013). Antecedents and consequences of trust in a social media brand: A cross-cultural study of Twitter. *Computers in Human Behavior, 29*(4), 1546-1555.

Pew Research Center. (2013, September 12). It's a woman's (social media) world. Retrieved from http://www.pewresearch.org/fact-tank/2013/09/12/its-a-womans-social-media-world/

Pew Research Center. (2015a, April 9). Teens, social media, and technology overview 2015: Mobile access shifts social media use and other online activities. Retrieved from http://www.pewinternet.org/2015/04/09/mobile-access-shifts-social-media-use-and-other-online-activities/

Pew Research Center. (2015b, August 8). Men catch up with women on overall social media use. Retrieved from http://www.pewresearch.org/fact-tank/2015/08/28/men-catch-up-with-women-on-overall-social-media-use/

Pew Research Center. (2017, January 12). Social media fact sheet. Retrieved from http://www.pewinternet.org/fact-sheet/social-media/

Phua, J., Jin, S. V., & Kim, J. J. (2017). Uses and gratifications of social networking sites for bridging and bonding social capital: A comparison of Facebook, Twitter, Instagram, and Snapchat. *Computers in Human Behavior, 72,* 115-122.

Pittman, M., & Reich, B. (2016). Social media and loneliness: Why an Instagram picture may be worth more than a thousand Twitter words. *Computers in Human Behavior, 62*, 155–167.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of democracy, 6*(1), 65-78.

Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology, 54,* 890–902.

Ryan, T., & Xenos, S. (2011). Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior, 27(*5), 1658-1664.

Sheldon, P., & Bryant, K. (2016). Instagram: Motives for its use and relationship to narcissism and contextual age. *Computers in Human Behavior, 58*, 89-97.

Smith, K., Mendez, F., & White, G. L. (2014). Narcissism as a predictor of Facebook users' privacy concern, vigilance, and exposure to risk. *International Journal of Technology and Human Interaction (IJTHI), 10*(2), 78-95.

Stieger, S., Burger, C., Bohn, M., & Voracek, M. (2013). Who commits virtual identity suicide? Differences in privacy concerns, internet addiction, and personality between Facebook users and quitters. *Cyberpsychology, Behavior, and Social Networking, 16*(9), 629-634.

Stoycheff, E., Liu, J., Wibowo, K. A., & Nanni, D. P. (2017). What have we learned about social media by studying Facebook? A decade in review. *New Media & Society, 19*(6), 968-980.

Stutzman, F., Gross, R., & Acquisti, A. (2012a). Silent listeners: The evolution of privacy and disclosure on Facebook. *Journal of Privacy and Confidentiality, 4*(2), 2.

Stutzman, F., Vitak, J., Ellison, N. B., Gray, R., & Lampe, C. (2012b). *Privacy in interaction: Exploring disclosure and social capital in Facebook*. In Proceedings from ICWSM '12: The International Conference on Weblogs and Social Media. Dublin, Ireland: AAAI Press.

Taddicken, M. (2014). The 'privacy paradox' in the social web: The impact of privacy concerns, individual characteristics, and the perceived social relevance on different forms of self-disclosure. *Journal of Computer-Mediated Communication, 19*(2), 248-273.

Thomson, R., Yuki, M., & Ito, N. (2015). A socio-ecological approach to national differences in online privacy and concern: The role of relational mobility and trust. *Computers in Human Behavior, 51*, 285-292.

Tufekci, Z. (2008). Can you see me now? Audience and disclosure regulation in online social network sites. *Bulletin of Science, Technology & Society, 28*(1), 20-36.

Tufekci, Z. (2018, April 6). Why Zucherberg's 14-Year Apology Tour Hasn't Fixed Facebook. Retrieved from https://www.wired.com/story/why-zuckerberg-15-year-apology-tour-hasnt-fixed-facebook/

Utz, S., & Krämer, N. C. (2009). The privacy paradox on social network sites revisited: The role of individual characteristics and group norms. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 3*(2).

Valkenburg, P.M. & Peter, J. (2009). The effects of instant messaging on the quality of adolescents' existing friendships: A longitudinal study. *Journal of Communication, 59*, 79-97.

Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research, 23*(1), 3-43.

Walther, J.B. (2007). Selective self-presentation in computer-mediated communication: Hyperpersonal dimensions of technology, language, cognition. *Computers in Human Behavior, 23*, 2538-2557.

Waterloo, S. F., Baumgartner, S. E., Peter, J., & Valkenburg, P. M. (2017). Norms of online expressions of emotion: Comparing Facebook, Twitter, Instagram, and WhatsApp. *New Media & Society*, 1-18.

Williams, D. (2006). On and off the 'Net: Scales for social capital in an online era. *Journal of Computer-Mediated Communication, 11*(2), 593-628.

Whitty, M. T., Doodson, J., Creese, S., & Hodges, D. (2017). A picture tells a thousand words: What Facebook and Twitter images convey about our personality. *Personality and Individual Differences.* http://doi:10.1016/j.paid.2016.12.050.