Anything But Me: How Concerns Over Privacy Moderate Online Social Capital Creation and Social Media Use

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This study examines how SNS use intensity, specifically *social routine integration* and *social integration and emotional routine,* correlate with social capital and how privacy concerns impact the relationship between SNS use intensity and social capital. Findings support that social capital correlates with both factors on the use intensity scale. Only the *accuracy* factor was a significant predictor of bridging capital while both *accuracy* and *control, and collection* proved significant for bonding capital.

Keywords: Social Networking Sites, Privacy Concerns, Social Capital, Use Intensity

I n the age when the internet has become a way for people to communicate, social networking sites (SNS) such as Facebook, Twitter, and Instagram have become one of the most popular places for users to engage in social interactions. These online communities are places where people with common views, experiences, and past-time activities gather to share pictures, and videos, and interact with each other (Salloum et al., 2017). For the past 5 years, approximately seven in ten Americans report that they regularly use social media sites. The majority say that they use YouTube and Facebook, while younger adults under 30 prefer Instagram, Snapchat, and TikTok (Auxier & Anderson, 2021).

In addition to sharing information and creating content, SNSs are important for people to communicate, create relationships, and maintain their social capital (Phua & Jin, 2011). Such social interactions usually entail positive outcomes, including self-esteem, well-being, life satisfaction, and health (Lee et al., 2015). Increasing one's social capital also helps develop norms of trust and reciprocity, in turn making the community more

interconnected and providing better access to new information and opportunities (Valenzuela et al., 2009).

Researchers have discovered that SNS users create various relationships through social media platforms such as strong ties with close friends and family, to weak ties with acquaintances (Ellison et al., 2009; Steinfield et al., 2009). However, research has found that privacy concerns, specifically concerns over how users' information is collected and stored, might lead to limiting profile visibility and could impact users' decisions on friending (Chen & Chen, 2015), as well as their willingness to disclose personal information on social media (Buchanan et al., 2007; Young & Quan-Haase, 2009). Studies looking at how people use SNSs have found that the intensity of social media use significantly predicted social capital (Ellison et al., 2007; Phua & Jin, 2011; Valenzuela et al., 2009). However, few studies have delved deeper into different levels of SNS use intensity and how they may correlate with social capital, as well as how privacy concerns might impact the relationship between SNS use intensity and social capital. The purpose of this study is to examine how SNS use intensity, specifically *social routine integration* and *social integration and emotional routine,* concepts formally defined by Jenkin-Guarnieri et al. (2013), correlate with bridging and bonding capital, as well as to explore how privacy concerns impact the relationship between SNS use intensity and social capital. Results will further the knowledge of how users use social media sites, and what role use intensity and privacy concerns may play in users' development of weak and strong ties on social media.

LITERATURE REVIEW
Social Capital

Social capital is defined by Putnam (1995) as "features of social organizations such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (p. 67) and by Bourdieu (1985) as "means by which people get access through social connections to economic and cultural resources." (p. 248). In other words, social capital is both the connections people make through social interactions and the resources and benefits they gain through these interactions. Individuals increase their social capital by engaging in daily interactions with their networks — personal,

professional, or familial — and these interactions usually have positive outcomes, such as increased self-esteem, well-being, life satisfaction, and health (Lee et al., 2015). Valenzuela et al. (2009) argued that people are social creatures and need social interactions to live a healthy lifestyle, which means that the greater and more diverse network of contacts someone has, the more social capital is present.

However, not all social capital is the same, and researchers have identified two types: bonding and bridging. Bonding capital refers to resources from strong ties, such as social and emotional support, and they are characterized by high trust and intimacy levels within close friends and family. On the other hand, bridging capital refers to benefits from weaker ties, such as access to information and instrumental resources. These resources are gained from weak ties in the form of workers, classmates, and acquaintances (Kim & Kim, 2017), acting as bridges between networks that connect them to allow the diffusion of information (Chen & Li, 2017).

Early research on social capital conducted by Granovetter (1973) found that bridging social capital is perhaps more valuable because it is less redundant and presents a greater impact on information flow between networks. Within a close circle of acquaintances, losing a strong tie does not necessarily impede the continued flow of information. However, losing a weak tie often means losing a connection to more distant social networks, and hence more diversity of information. Subsequent studies over the years have supported Granovetter's argument (Brown & Konrad, 2001; Friedkin, 1982; Weng et al., 2018).

Social Media Use and Social Capital

As society becomes more and more interconnected its members develop social capital in new ways. For example, social media is used to build interpersonal relationships and develop one's social capital through participation in social communities (such as groups), interactions such as messaging, liking, commenting, posting, and providing emotional support to one's network (Lee et al., 2014).

Research specifically looking into SNS use and social capital has found several consistent themes. First, studies have found that SNS users create various relationships through social media platforms spanning from bonding to bridging social capital (Ellison et al., 2009; Steinfield et al., 2009). For example, Ellison et al. (2014) found that simple

relationship behaviors such as congratulating and sympathizing with others increased bridging social capital on Facebook. Second, studies also have found that SNSs blend online and offline behavior rather than operating in two different social arenas (Ellison et al., 2009; Ellison et al., 2010; Mayer & Puller, 2007). For example, SNS users may use the sites to interact with people they already know offline or meet face-to-face with connections they met online (Ellison et al., 2010).

Studies looking at SNS use intensity have found that the intensity of Facebook use significantly predicted both bridging and bonding capital (Ellison et al., 2007; Phua & Jin, 2011; Valenzuela et al., 2009), while Phua et al. (2017) found that different social media platforms impact social capital in different ways. In this study, Twitter[1] users reported the highest bridging social capital, while Snapchat reported the highest bonding capital (Phua et al., 2017). While many studies have looked at SNS use intensity and social capital, few studies have delved deeper into different levels of SNS use intensity and how they may correlate with social capital.

One purpose of this study is to examine how SNS use intensity, specifically *social routine integration* and *social integration and emotional routine,* concepts formally defined by Jenkin-Guarnieri et al. (2013), correlates with bridging and bonding capital on SNSs. Previous research supports that the intensity provides a more insightful measure of social media use than time spent on social media platforms alone (Ellison et al., 2007; Kalpidou et al., 2011). Jenkin-Guarnieri et al. (2013) developed a scale for measuring the intensity of SNS use. In their framework, the *social routine integration* dimension measures to what degree an SNS user regularly interacts with platforms' different functions as a part of their daily routine. The *social integration and emotional connection* dimension refer to the level of relationship building, integration into an online community, emotional rewards related to SNS use, and the negative cognitive impact on a user if they cannot use social media. The authors argue that measuring use intensity through *social routine integration* and *social integration and emotional routine* will result in a clearer understanding of social media use intensity. Therefore, we propose the following hypotheses:

  H1: Bridging social capital will positively correlate with:

    A. The routine integration subscale

    B. The emotional connection subscales

  H2: Bonding social capital will positively correlate with:

    A. The routine integration subscale

    B. The emotional connection subscales

Privacy Concerns and Social Capital

The term privacy concern in this paper is related to the concept of information privacy, which is defined as "the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others" (Westin, 1967, 7). However, social networking sites often violate this privacy when they "collect, store, manipulate or transmit personal information unbeknownst to the individual" (Hann et al., 2007, 15), raising privacy concerns about SNSs collection and use of their personal information (Campbell, 1997). Previous research on privacy concerns has found the existence of a privacy paradox where social media users say that they have concerns about their privacy but they still share plenty of information about themselves online and take little action to protect it (Acquisti & Gross, 2006), while other have found that users with high privacy concerns, especially concerns over unauthorized use and improper access, tend to disclose less personal information on social media (Buchanan et al., 2007; Young & Quan-Haase, 2009).

Decisions about whom to connect with are particularly important when it comes to social capital. Previous research has demonstrated that high privacy concerns lead to limiting profile visibility and could impact users' decisions on friending (Chen & Chen, 2015). The second aim of this study is to examine how social media concerns, specifically concerns over accuracy and collection and control of information, affect the relationship between social media use intensity and social capital. While previous research has shown strong empirical support for the claim that the greater use of SNSs is associated with different types of social capital benefits and, in general, increased both bridging and bonding capital (Ellison et al., 2007; Steinfeld et al., 2009), research has not looked at

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[1] This study was conducted when the now X was called Twitter.

what role privacy concerns might play in this relationship. Therefore, this study examines the following research questions:

RQ1. How do social media privacy concerns affect the relationship between social media use intensity and online bridging social capital?

RQ2. How do social media privacy concerns affect the relationship between social media use intensity and online bonding social capital?

METHODS

To answer these hypotheses and research questions, a survey was chosen as a method because it allows the collection of large amounts of data quickly (Baker, 1989). Social media users were asked to fill out an online questionnaire created through Qualtrics online questionnaire software. The scales used for this study were developed for use in a survey instrument (Jenkins-Guarnieri et al., 2013; Koohang, 2017; Williams, 2006), making it an ideal method for the present study.

Sample

Respondents were contacted to participate in this study through Amazon's Mechanical Turk service (MTurk), which is a service that offers a diverse group of respondents (Casler et al., 2013; Clifford et al., 2015; Mason & Suri, 2012). Previous research has supported the MTurk sample, and studies have found that a sample generated this way, when appropriately designed, compares favorably with the general demographic characteristics of the United States (Huff & Tingley, 2015).

Respondents were invited to participate in this study through an MTurk Human Intelligence Task (HIT) request posted on the MTurk site. Respondents were awarded an allowance of $0.75 for their time spent completing the survey, which equaled to roughly minimum wage (Williamson, 2016). Respondents were presented with a consent question at the beginning of the survey. They also had to confirm that they were at least 18 years old, a resident of the United States, and a social media user to take the survey and receive compensation.

The questionnaire was available for the respondents to fill out during the final two weeks of November 2019. Data were cleaned in Microsoft Excel, while the statistical analysis was completed in RStudio. For this present study, only answers on the Likert

batteries measuring privacy concern, social media use intensity, bridging capital, and bonding capital were used. The total *n* was 423 before cleaning and 307 after. Duplicates, incompletes, and responses that answered "no" to the consent question or any of the screening questions were removed.

Based on prior research by Hamby and Taylor (2016) and a review of existing literature on obtaining reliable answers on questionnaires administered through MTurk (Kees et al., 2017), items in the *Social Media Use Intensity Scale* and the *Bonding Social Capital Scale* were reverse coded. These items were reoriented before analysis so that the direction of their agreement matched other items to assess reliability.

Pearson correlation testing was used to answer both research questions asked in this study. An a priori power analysis indicated that a sample size of n = 194 was needed to attain the sensitivity required to detect moderately small effect sizes (r = .20) at a = .05 and 1-ß = .90 (Cohen, 1988). Additionally, multiple linear regression will be used for testing all hypotheses. An a priori power analysis indicated a sample size of n = 284 was needed to attain the sensitivity required to detect moderately small effect sizes (f^2 = .05) at α = .05 and 1-ß = .90 (Cohen, 1988). For this study, the final sample of n = 307 satisfied both benchmarks.

Independent Variables

Privacy Concerns. The privacy concern scale using 15 items (α = .96) was adapted from Koohang's (2017) work on a privacy concern scale. These 15 items (Table 1) represent two subscales, an *accuracy subscale (AS, α = .89)* and the *collection and control subscale (CCS, α = .96)*. For the entire scale, mean = 83.97 (SD = 17.43).

Table 1
Privacy Concern Scale Items

	Statement	Mean	SD
1.a	It bothers me when social media sites ask me to provide personal information.	5.37	1.45
2.a	When social media sites ask me for personal information, I sometimes think twice before providing it.	5.83	1.31
3.a	I am concerned that social media sites are collecting personal information about me.	5.72	1.36
4.a	I am concerned that social media sites would use my stored personal information for their own advantage/profit.	5.85	1.33
5.a	I am concerned that social media sites would sell my stored personal information in their databases to other companies.	5.86	1.37
6.a	I am concerned that social media sites would share my stored personal information in their databases with other companies without my authorization.	5.87	1.41
7.b	I am concerned that social media sites do not take enough steps to make sure that my personal information in their files is accurate.	5.36	1.63
8.b	I am concerned that social media sites do not have adequate procedures to correct errors in my personal information.	4.98	1.65
9.b	I am concerned that social media sites do not devote enough time and effort to verifying the accuracy of my personal information in their databases.	4.84	1.73
10.a	I am concerned that social media site databases that contain my personal information are not protected from unauthorized access.	5.71	1.43
11.a	I am concerned that social media sites do not devote enough time and effort to preventing unauthorized access to my personal information.	5.56	1.49
12.a	I am concerned that social media sites do not take enough steps to make sure that unauthorized people cannot access my personal information on their computers.	5.64	1.46
13.a	It usually bothers me when I do not have control of personal information that I provide to social media sites.	5.79	1.36
14.a	It usually bothers me when I do not have control or autonomy over decisions about how my personal information is collected, used, and shared by social media sites.	5.82	1.38
15.a	I am concerned when control of my personal information on a social media site is lost or unwillingly reduced because of marketing transactions with other companies.	5.77	1.33

Social media use intensity. Scores on a scale of social media use intensity ($a = .91$). The subsequent subscales, *social routine integration* (SRI, $a = .85$) and *social integration and emotion connection* (SIEC, $a = .90$), were used as one of the variables in correlation testing and independent variables in our regression models. This scale (Table 2) was

adapted from previous work on a scale to measure social media use intensity (Jenkins-Guarnieri et al., 2013). For the SRI subscale, the total mean = 14.98 (SD = 3.79). The mean = 16.75 (SD = 6.13) for the SIEC subscale.

Table 2

Social Media Use Intensity Scale Items

	Statement	Mean	SD
1.[a]	I feel disconnected from friends when I have not logged into my social media sites.	2.61	1.28
2. [a]	I would like it if everyone used social media sites to communicate.	2.78	1.20
3. [a]	I would be disappointed if I could not use social media sites at all.	3.14	1.39
4. [a]	I get upset when I can't log on to my social media sites.	2.57	1.30
5. [a]	I prefer to communicate with others mainly through social media sites.	2.58	1.26
6. [a]	Social media sites play an important role in my social relationships.	3.07	1.32
7. [b]	I enjoy checking my social media site accounts.	3.80	1.06
8. [b]	I don't like to use social media sites.*	3.71	1.25
9. [b]	Using social media sites is part of my everyday routine.	3.80	1.15
10. [b]	I respond to content that others share using social media sites.	3.67	1.087

Notes. a – Part of social routine integration subscale
b – Part of social integration and emotional connection subscale
* – Scale reverse code

Dependent Variables

Scales used to measure bonding and bridging social capital online were constructed based on scales (Table 3 and 4) validated by Williams (2006) and used by Ellison et al. (2007) and again by Ellison et al. (2014) in measuring bridging and bonding social capital generated from the use of social networking platforms. Both scales consist of ten items in the form of statements regarding bonding or bridging capital. Respondents were asked to what level on a scale of 1 to 5 they agreed with each statement. After testing each scale for reliability (Bonding Social Capital Scale $\alpha = .93$, Bridging Social Capital Scale $\alpha = .93$), the scales were summed to create an overall score for each respondent. These scores created the overall measures of online bonding or bridging capital, serving as the target variables for the regression models used to test each hypothesis. For the Bonding Social Capital Scale, the total mean = 30.64 (SD = 10.17), and for the Bridging Social Capital Scale, the total mean = 38.67 (SD = 8.15).

Table 3

Online Bonding Social Capital Scale (n = 307)

	Statement	Mean	SD
1.	There are several people online I trust to help solve my problems.	3.21	1.31
2.	There is someone online I can turn to for advice about making very important decisions.	3.33	1.36
3.	There is no one online that I feel comfortable talking to about intimate personal problems.*	3.14	1.45
4.	When I feel lonely, there are several people online I can talk to.	3.54	1.23
5.	If I needed an emergency loan of $500, I know someone online I can turn to.	2.53	1.47
6.	The people I interact with online would put their reputation on the line for me.	2.84	1.23
7.	The people I interact with online would be good job references for me.	3.20	1.32
8.	The people I interact with online would share their last dollar with me.	2.52	1.26
9.	I do not know people online well enough to get them to do anything important.*	3.00	1.35
10.	The people I interact with online would help me fight an injustice.	3.33	1.15

Notes. *Item is inverted for validity check as written. Score reversed to match alignment of other items.

Table 4

Online Bridging Social Capital Scale (n = 307)

	Statement	Mean	SD
1.	Interacting with people online makes me interested in things that happen outside of my town.	3.96	.93
2.	Interacting with people online makes me want to try new things.	3.93	1.01
3.	Interacting with people online makes me interested in what people unlike me are thinking.	3.75	1.06
4.	Talking with people online makes me curious about other places in the world.	4.06	.97
5.	Interacting with people online makes me feel like part of a larger community.	3.89	1.10
6.	Interacting with people online makes me feel connected to the bigger picture.	3.82	1.08
7.	Interacting with people online reminds me that everyone in the world is connected.	3.79	1.03
8.	I am willing to spend time to support general online community activities.	3.67	1.04
9.	Interacting with people online gives me new people to talk to.	3.98	.98
10.	Online, I come in contact with new people all the time.	3.81	1.09

RESULTS

Hypothesis 1 predicted that online bridging social capital would positively correlate with (A) *social routine integration* and (B) *social integration and emotional connection.* Results of a Pearson product-moment correlation test indicated that there was a significant positive association between bridging social capital and SRI, ($r = .53$, $n = 307$, $p < .01$) with a medium effect size (Cohen, 1988) and a significant positive correlation between bridging social capital and SEIC ($r = .33$, $n = 307$, $p < .01$) with a medium effect size. This supports both H1a and H1b. Whether specifically pertaining to the SRI dimension of social use intensity or SEIC, respondents indicated a greater amount of online bridging social capital as scores in both areas increased. This supports the notion that social media use intensity and the generation of online bridging social capital are in some way linked to one another.

Hypothesis 2 predicted that online bonding social capital, like bridging capital in H1, would positively correlate with (A) *social routine integration* and (B) *social integration and emotional connection.* Results of a Pearson product-moment correlation test indicated that there was a significant positive association between bonding social capital and SRI, ($r = .42$, $n = 307$, $p < .01$) with a medium effect size (Cohen, 1988) and a significant positive correlation between bridging social capital and SEIC ($r = .39$, $n = 307$, $p < .01$) with a medium effect size, confirming both H1a and H1b. As with the case of online bridging social capital, increased social media use intensity correlates to an indication of greater online bonding social capital, supporting a link between use intensity and this type of social capital.

Research Question 1 asks whether social media privacy concerns moderated any association between dimensions of social media use intensity and online bridging social capital. To answer this question, four multiple regression tests were conducted using dimensions of privacy concerns found, the *accuracy subscale* and the *collection and control subscale*, as well as the SRI and SEIC factors of use intensity (Table 5). In models that did not meet normality assumptions, bootstrapping was used (10,000 replications) to produce error-corrected confidence intervals (Efron, 1979). As might be expected based on H1, a significant positive association was found between online bridging social capital and the SRI and SIEC factors. The *accuracy subscale* was found to have a small but significant

positive association in two of the models, one including SIEC (β = .15, $p < .01$) and one including SRI (β = .13, $p < .01$). However, none of the privacy concern factors seems to moderate the association of any of the social media use intensity factors. Ultimately, the results don't support privacy concerns affecting the positive association between social media use intensity and increased online bridging social capital.

Table 5 *Regression Results for Bridging Capital Models with Moderating Variables*

Target Variable	IV	B	SE	95% CI		β	p
				LL	UL		
Bridging Capital*							
	SIEC	3.04	.50	2.14	4.04	.34	<.01
	CCS	.35	.47	-.63	1.41	.04	.46
	SIEC*CCS	-.25	.52	-1.18	.94	-.03	.62
F	12.67						<.01
Adjusted R²	.10						
Bridging Capital*							
	SRI	4.87	.45	3.84	5.98	.54	<.01
	CCS	.33	.42	-.52	1.14	.04	.43
	SRI*CCS	-.37	.43	-1.31	.71	-.04	.39
F	39.75						<.01
Adjusted R²	.28						
Bridging Capital*							
	SIEC	3.02	.48	2.08	3.98	.34	<.01
	AS	1.32	.47	.38	2.28	.15	<.01
	SIEC*AS	-.44	.53	-1.56	.67	-.05	.40
F	15.80						<.01
Adjusted R²	.13						
Bridging Capital*							
	SRI	4.73	.44	3.74	5.88	.52	<.01
	AS	1.16	.42	.33	1.99	.13	<.01
	SRI*AS	-.31	.39	-1.21	.77	-.04	.42
F	43.18						<.01
Adjusted R²	.30						

Notes. SIEC = Social Integration and Emotional Connection; SRI = Social Routine Integration
CCS = Collection and Control Subscale Factor; AS = Accuracy Subscale Factor
*Confidence Interval was bias corrected through bootstrapping

Research Question 2 asks about the context of social media, privacy concerns moderation of social media use intensity and online bonding social capital. Four multiple regression tests were conducted again using the *accuracy subscale* and the *collection and control subscale* in relation to privacy concerns and the SRI and SEIC factors of use intensity (Table 6). Bootstrapping was used (10,000 replications) in order to produce error-corrected confidence intervals in models that did not meet normality assumptions (Efron, 1979). A significant positive association was found between online bridging social capital and the SRI and SIEC factors. Both privacy concern factors were found to have small but significant associations as well. For CCS, in the model including SIEC (β = -.13, $p <$ .05) and the model including SRI (β = -.15, $p <$ .05) demonstrated a negative association. For AS, in the model including SIEC (β = .12, $p <$ .05) and the model including SRI (β = .11, $p <$ .05). demonstrated a positive association.

Table 6 *Regression Results for Bonding Capital Models with Moderating Variables*

Target Variable	IV	B	SE	95% CI		β	p
				LL	UL		
Bonding Capital							
	SIEC	3.96	.60	2.78	5.14	.36	<.01
	CCS	-1.36	.57	-2.49	-.24	-.13	<.05
	SIEC*CCS	.20	.63	-1.04	1.45	.02	.75
F	19.84						<.01
Adjusted R²	.16						
Bonding Capital*							
	SRI	4.40	.59	3.20	5.50	.39	<.01
	CCS	-1.66	.55	-2.56	-.29	-.15	<.01
	SRI*CCS	.77	.56	-.38	2.05	.07	.17
F	25.93						<.01
Adjusted R²	.20						
Bonding Capital							
	SIEC	4.45	.58	3.31	5.60	.40	<.01
	AS	1.30	.57	.18	2.41	.12	<.05
	SIEC*AS	-1.32	.64	-2.58	-0.06	-.11	<.05
F	21.62						<.01
Adjusted R²	.18						
Bonding Capital*							
	SRI	4.71	.58	3.58	5.84	.42	<.01
	AS	1.20	.56	.08	2.36	.11	<.05
	SRI*AS	.04	.53	-.96	1.15	.00	.95
F	23.56						<.01
Adjusted R²	.18						

Notes. SIEC = Social Integration and Emotional Connection; SRI = Social Routine Integration; CCS = Collection and Control Subscale; AS = Accuracy Subscale; *Confidence Interval was bias corrected through bootstrapping

Greater concerns about the accuracy of the information collected were also found to have a small but significant negative moderation effect on SRI's predictive power of online bonding social capital (β = -.11, p < .05). Figure 1 demonstrates the attenuation effect of a higher score on the AS. The black line represents one standard deviation below the average score for AS, and the green dotted line represents one standard deviation above. While increasing emotional connection predicted greater bonding capital, greater concerns over accuracy moderated this effect, predicting lower scores in bonding social capital than those who had less concern about accuracy. In answer to RQ2, these findings support that increased concerns about the accuracy of private information decrease the predictive power of the intensity of the social integration of and emotional connection to a social media platform and increased online bonding social capital.
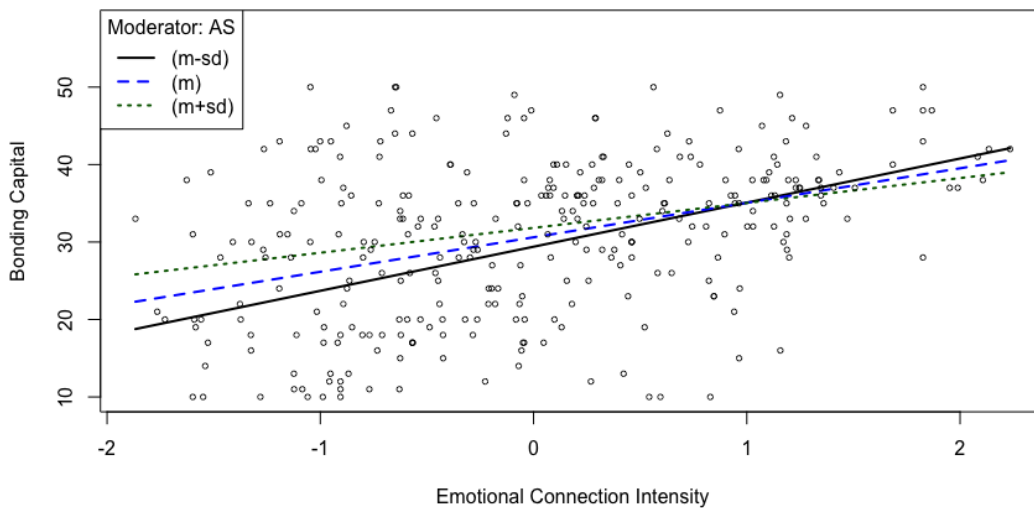

Figure 1. Moderation Effect of Accuracy Concerns on SIEC Scale. The effect on the SIEC Scale score when Accuracy Concerns are introduced can be seen.

DISCUSSION

Hypotheses 1 and 2 stated a connection between online bridging and bonding social capital, respectively, and social media use intensity should exist. Previous research has demonstrated a link between social media use and both bridging and bonding social capital in general (Ellison et al., 2007) and online bridging and bonding capital specifically (Williams, 2006). As social media use intensity presents a more refined measure of how much a person uses social media versus measuring time spent on the sites alone (Jenkins-Guarnieri et al., 2013; Kalpidou et al., 2011), we expected to see a relationship between

use intensity and online social capital. However, this study provides further refinement in understanding the relationship between social media use and social capital by separating social media use intensity into two areas, *social routine integration* and *social integration and emotional connection*. The findings indicate that whether a respondent's use of social media was simply a part of his or her daily routine or to maintain a social and emotional connection with others in their social networks, increased use of these platforms correlates with higher reporting of social capital.

These findings also relate to strong and weak ties, as bonding and bridging social capital is the fuel for these connections (Chen & Li, 2017; Kim & Kim, 2017). These results argue that both dimensions of social media use intensity, SRI and SIEC, possibly create and strengthen strong ties online via their correlation with bonding capital, providing more intense users with deeper connections in their relationships. Likewise, a similar relationship to weak ties is seen via increased bridging capital, allowing the intensity of social media use to lead to a greater level of information diffusion from a wider range of interpersonal networks. In other words, whether users used SNS platforms as a routine tool in one's life or engaged in creating deeper, more meaningful connections, the results indicate that the users benefited from ultimately increasing both their bridging and bonding capital.

Both research questions asked whether privacy concerns might attenuate any predictive power social media use intensity had regarding online bridging and bonding social capital. Given the two areas of online social capital under consideration, the number of factors contributing to social media use intensity and privacy concerns are divided into two factors: *accuracy and control,* and *collection* – models affecting bonding capital and those affecting bridging capital were handled in separate questions. Considering the moderation effect the CCS and AS privacy concern variables might have on SRI and SIEC, both were also added as predictors in regression models targeting online bridging and bonding capital. Only the *accuracy* factor was found to be a significant predictor of online bridging social capital. For online bonding social capital, *accuracy* and *control and collection* proved significant predictors.

CCS demonstrated a negative association when significant. Respondents who were concerned about the control and collection of their private information on social media

were less likely to engage in meaningful relationships on social media, or in other words failed to increase their bonding social capital. This result was not unexpected, as previous research supports the notion that privacy concerns lead to less social media use (Buchanan et al., 2007; Young & Quan-Haase, 2009) and diminished creation of social capital via social media (Ellison et al., 2007; Williams, 2006). Curiously though, AS showed a positive association; the more a respondent was concerned about the accuracy of his or her information, the higher he or she scored in both online bonding and bridging social capital. This means that increased concerns over the accuracy of their information on social media did not weaken the weak and strong relationships the respondents created on these platforms.

While we can only speculate on what contributed to these results, some logical assumptions can be made based on the areas of privacy concern CCS and AS represent. The control and collection aspect of privacy concerns happen within the context of the relationship between a social media platform user and the platform itself, namely the questions "What is the platform going to know about me, and what rights do I have to that information once they have it?" Accuracy concerns might involve concern over how accurately a platform company records personal information and how accurate the presentation of a user's personal information is to other users. If this is indeed the case, perhaps the positive impact of accuracy concerns on online social capital could be explained because those more likely to turn to social media to build online social capital are also more likely to have concerns about how accurately their social media presence is presented to others on these platforms. Even in the case of online bonding social capital, where CCS concern predicted lower scores, concerns over the presentation accuracy might matter enough to lead to an opposite relationship with bonding social capital than that seen with CCS concern.

Aside from the function of the privacy concern factors as predictors of online social capital, the RQs focused on whether these concerns would moderate the association between social media use intensity and online social capital. As expected, and further supported by the results of H1 and H2, both SRI and SEIC were significant positive predictors of online bridging and bonding social capital. In RQ1, which concerned itself with online bridging social capital, neither privacy concern variable showed a moderating

influence on SRI and SIEC. While *accuracy* concerns did prove a positive predictor, these concerns showed no moderating effect on either SIEC or SRI's predictive power in the model. Privacy concerns as a moderating factor did not affect the relationship between social media use intensity and online social capital.

For RQ2, which asked the same question but of online bonding social capital, the same was not true. In the model using the SIEC and AS variables, *accuracy* did have a significant negative moderating effect on the predictive power of the *social integration and emotional connection* factor of the social media use intensity scale. The more concerned a user was about accuracy, even the one who scored high on social media use intensity, the less likely that user was to exhibit increased strong ties on social media. As discussed above, perhaps because there is an external dimension to the accuracy of personal information, i.e., personal details are the backbone of social media content whether they are accurate or not, this factor in privacy concern may matter more as it relates to social capital, as social capital is about the value inherent in relationships with other people. That accuracy of representation seems to reduce the power of emotional connection might be telling, especially when noting it didn't have the same effect on the use of social media as part of a social routine. It's possible that if SNS users are concerned about being represented accurately on social media, they simply don't spend as much time nursing those deeper connections online. These results are an indication of privacy concerns impacting user engagement and the creation of personal networks on social media, which may pose a problem if one considers an increased social capital to have positive outcomes, such as increased self-esteem, well-being, life satisfaction, and health (Lee et al., 2015). If social media sites want to continue to be the place where users increase their social capital, then better consideration is needed to address their privacy concerns, especially regarding the accuracy of user's information.

Limitations

While previous research has supported that Amazon's mTurk service can provide more representative samples than other convenience sampling methods (Mason & Suri, 2012), the sample still can't be considered random. The sample for this study also leans somewhat male and more educated than the general population. African American

respondents were underrepresented as well. A sample more representative of these groups would be useful to substantiate these findings further.

The *accuracy* factor of the privacy concern scale proved an important variable in the results of this section. Aside from being the only variable to moderate any of the social media use intensity factors, it also seemed to predict more online social capital as concerns about it grew, which seems counterintuitive to the expected effect of privacy concerns on both social media use and online social capital. We made some informed assumptions as to why information accuracy concerns could have played the role they did. Still, as the privacy concern scale is written, it cannot be discerned whether or not respondents are concerned that their information is accurate so that the social media platform has the correct information recorded, that other users of a social media platform are seeing accurate information about the respondent, or some combination of both. It would be informative for future research to answer this question because the implications of accuracy matters are important. Does a social media platform user care about accurate representation more because of concern over what the platform's owner knows about them or their connections online? The answer to this would help explain better whether social media users fear the companies who own these platforms or the user's peer networks more when it comes to erroneous private data.

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