

Exploring the roles of narcissism, uses of, and gratifications from microblogs on affinity-seeking and social capital

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The purpose of this study is to examine how the uses and gratifications of microblogs (i.e. Sina Weibo) can influence interpersonal relationships, especially in affinity-seeking and perceived social capital. Data were gathered through an online questionnaire with a sample of 431 Weibo users surveyed throughout mainland China. Results show that (i) narcissism, content-, and social-gratification were positively related to intensity of Weibo use, (ii) intensity of Weibo use and process-gratification were positively related to strategic performance, whereas only content-gratification positively predicted affinity competence. (iii) content- and social-gratification positively predicted bridging social capital, whereas convenience-gratification and affinity-seeking predicted bonding social capital, and (iv) intensity of Weibo use was positively related to both types of social capital only when Weibo gratifications were not included in the regression equations. Implications and suggestions for future research are discussed.

Key words: affinity-seeking, microblog, narcissism, Sina Weibo, social capital, uses and gratifications.

Introduction

A microblog is an online social networking service (SNS) that enables users to send and receive text-based messages of up to 140 characters, known as tweets. Launched in 2006, Twitter was the first microblog in the world and has since attracted 517 million users worldwide and 141 million in the USA alone (Lunden, 2012). In 2012, registered users on average posted 340 million tweets per day. Sina Weibo (literally means new-wave microblog and is the Twitter equivalent in China) was launched in August 2009 and considered the most significant Internet phenomenon in China in 2010. According to the report of the China Internet Network Information Centre (CNNIC), the number of Sina Weibo users has reached 281 million in December 2013 (China Internet Network Information Center, 2013). Facebook and Twitter are the primary representatives of social media, with Facebook representing SNS and Twitter representing microblogs.

Considering that microblogs can be used as a social tool to create new connections and maintain existing relationships within a personal social network, it is of great importance to examine why people engage in microblogging, what needs are satisfied by using microblogs, and to explore its effect on interpersonal relationships. Past research has relied on uses and gratifications (U&G) theory

to investigate why people use different media (e.g. Author, 2013; Rubin, 1983) and assumes that the audience actively, rather than passively, chooses media and content to gratify their social and psychological needs. Although previous studies have focused on the gratifications of various Internet application uses (e.g. Ross *et al.*, 2009 on Facebook), research attention on the effect of gratification from microblog use is scarce. This study contributes to the literature by filling the gap between gratification sought in microblog use and the social outcomes. In particular, it explores what gratification from microblog use may facilitate the ability to develop and maintain interpersonal relationships, especially from the notion of affinity-seeking (AS) and social capital.

Prior studies have demonstrated the relationship between new media use and social capital (Ellison, Steinfield, & Lampe, 2006; Valenzuela, Park, & Kee, 2009). However, little is known about the ways in which individuals gain social capital via microblogging. AS, characterized as 'the process by which individuals attempt to get other people to like and to feel positive toward them' (Bell & Daly, 1984), may be one way people used to accumulate their online social capital. Previous studies have examined AS in dyadic interpersonal communication (Bell & Daly, 1984; Rubin, Rubin, & Mattew, 1993). However, little research has been conducted into how people gain affinity, a basic function of human communication, using new media. Today, as friendships and other social relationships can be developed and maintained through social media, more interpersonal conversations occur through social media than face-to-face. Therefore, it is of great value to study the role of microblog in AS.

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Furthermore, past research has found that people with strong narcissistic tendencies generally report a greater use of social media (Ong *et al.*, 2011). As narcissism is inherently manifested in social media, its reciprocal relationship with SNS use is discussed in recent studies (Buffardi & Campbell, 2008; Mehdizadeh, 2010; Ong *et al.*, 2011). However, the relationship between narcissism and various gratification sought in microblog use is under explored. Therefore, another aim of this study is to identify the specific gratification narcissists seek from microblog use.

Theoretical background

Uses and gratifications (U&G) theory

U&G theory incorporates social context and psychological motives to analyze people's media behaviour (Katz, Blumler, & Gurevitch, 1974). Their use of media can be conceived as goal-oriented and purpose-driven. All types of media compete with each other to satisfy users. Individuals are aware of, and can state, their own motives for using media. According to Papacharissi and Rubin (2000), Internet gratifications include information seeking, a way to pass time, entertainment, convenience, and interpersonal utility. However, social media is different because it creates a platform for reciprocal communication that blurs the boundary between senders and receivers. Wunsch-Vincent and Vickery (2007) noted that a unique characteristic of social media is that it is a convenient way of consuming and sharing user-generated content (UGC). They argued that the reasons for people to use UGC are fulfilling the needs of producing (for self-expression and self-actualization), participating (for social connections), and consuming (for information, entertainment, and mood management). Similarly, Author (2013) found that content generation using social media satisfied five sociopsychological needs: showing affection, venting negative feelings, gaining recognition, getting entertainment, and fulfilling cognitive needs. In another study, Joinson (2008) identified social connection, photographs, share identities, status updates, content, social network surfing, and social investigation as key gratifications for using Facebook.

Drawing on the three motivations of Internet use found by Stafford, Stafford, and Schkade (2004), Liu, Cheung, and Lee (2010) studied Twitter use by adding technology gratification. They structured Twitter gratifications into four categories: process gratification (for entertainment, passing time, and self-expression), convenience gratification (for medium appeal and convenience), content gratification (for self-documentation and information sharing), and social gratification (for interactive relationship). Process gratification refers to actual use of the medium itself and being involved in the process of behaviour (Cutler

& Danowski, 1980). Content gratification concerns the information carried by the medium. Social gratification involves the interactivity with other parties through media (Williams, Rice, & Rogers, 1988). Technology gratification relates to the convenience and suitability of the environment (smart phone application and interface of the system) in which people use the media (Venkatesh, Morris, Davis & Davis, 2003). The difference between content gratification and process gratification is that content gratification is derived from the use of mediated messages for intrinsic value, whereas process gratification is derived from the use of mediated message for extrinsic value.

Grounded in U&G theory, this research seeks to extend previous studies by asking the following research question in relation to mainland China:

RQ1: What gratifications will be the strongest predictors of Weibo use?

Narcissism

Narcissism is characterized as a highly inflated, positive, but unrealistic self-concept (Campbell & Foster, 2007). Individuals with a narcissistic personality tend to be attention seekers, often involved in superficial and empty relationships (Campbell, 1999), be very focused on physical appearances (Ong *et al.*, 2011; Vazire, Naumann, Rentfrow, & Gosling, 2008), and often engage in self-regulatory strategies to affirm their positive self-views (Campbell & Foster, 2007). Narcissists are often skilled in dealing with new social settings and starting new relationships, using them to seek networks that can enhance their status and social attractiveness (Campbell & Foster, 2007; Ong *et al.*, 2011).

With the unique characteristics of many computer-mediated communication tools, narcissism has been a newly introduced psychological attribute to analyze media behaviours. This psychological attribute is manifested specifically in social media. Buffardi and Campbell (2008) found that narcissism predicted a higher intensity of online social activity and more self-promoting content. As Buffardi and Campbell pointed out, the prevalence of narcissistic individuals on Facebook might lead to a rise in narcissistic behaviour among users in general. Bibby (2008) also indicated that SNS cater to attention-seeking and self-disclosing characteristics. More specifically, two studies have tested the relationship between narcissism and Facebook usage. Ryan and Xenos (2011) found that a preference for photos is positively related to narcissism and a preference for the status update feature is positively related to exhibitionism, a subfactor of narcissism. Furthermore, Ong *et al.* (2011) demonstrated that narcissism predicted higher self-generated content (profile picture rating and status update frequency) over and above extroversion, but not system-generated content (social network size). Drawing on this literature, this study hypothesizes:

H1a: The higher subjects score in narcissism, the more they will use Weibo.

H1b: The higher subjects score in narcissism, the more they will find Weibo gratifying.

Affinity-seeking (AS)

AS is mainly used in interpersonal communication, as McCroskey and Wheelless (1976) noted that obtaining affinity is one of the basic functions of human communication. Through communicating with others, people actively manipulate their social behaviours to increase others' liking of them. Therefore, many communication scholars have examined the social behaviours expressed, or strategies adopted, during interpersonal communication. McCroskey and Wheelless (1976) identified seven categories of strategies that people used to gain affinity: control physical appearance, increase positive self-disclosure, stress areas of positive similarity, provide positive reinforcement, express cooperation, comply with other person's wishes, and fulfill other person's needs. Following up on this work, Bell and Daly (1984) expanded the strategies to 25 categories and further explored the influence of dispositional difference and situational contingency on the strategies people used.

According to Bell and Daly (1984), two assumptions guided their model of AS. First, it is an important communication skill and second, it is a strategic activity. Based on these two assumptions, they developed the affinity-seeking instrument (ASI), which includes two dimensions, AS competence and strategic performance. AS competence refers to a person's ability to develop positive relationships effectively and appropriately, the ability to communicate in a way that makes one seem attractive to others. Strategic performance is 'the ability to play roles, even to the point of misrepresenting one's self, to gain the liking and approval of others' (Bell & Daly, 1984). Woltjen and Zakahi (1987) distinguished the two dimensions by noting that AS competence includes habitual social routines, whereas strategic performance involves premeditated social acts. Drawing on this instrument, Bell, Tremblay, and Buerkul-Rothfuss (1987) found that ASI scores were related to affinity behaviours (e.g. making new friends, being asked for a date). Therefore, they indicated that the competence or skills measured in ASI could bring about positive social outcomes, such as friendship. The study also showed that, in dyadic communication, AS competence was positively associated with partners' liking of the subject, and strategic performance was positively related to the subject's own communicator image, animation, and dramatic nature. Woltjen and Zakahi (1987) examined the relationship among communication apprehension, loneliness, and AS. Results showed that communication apprehension is negatively related to both AS

competence and strategic performance; loneliness is only negatively related to AS competence. Consistent with Woltjen and Zakahi (1987), Rubin *et al.* (1993) found a linear relationship between self-disclosure and AS. In certain contexts, when compared with non-narcissistic individuals, narcissistic individuals find it easier to be liked as friends or acquaintances (Oltmanns, Friedman, Fiedler, & Turkheimer, 2004). Their extraverted behaviour and desire to be liked leads them to act out AS behaviour and makes them enjoyable to work with initially. Therefore, it is logical to expect that:

H2a: Narcissism and AS are positively related.

McCroskey and Wheelless (1976) showed that AS primarily occurred in dyadic communication. Since the microblog is a platform that allows not only 'one-to-one' but also 'one-to-many' communication, it is reasonable to expand the result to 'one-to-many' communication, articulating that, on a microblog, people will express in their behaviour a desire to seek affinity not only with another specific individual (one) but also with others (many). This notion is indirectly supported by Jones' (1990) study. He integrated impression maintenance strategies (ingratiation, competence, or self-promotion, etc.) into self-presentation on a blog. Such impression maintenance strategies have some overlap with the AS strategies suggested by Bell and Daly (1984). Hence, as people become familiar with the microblog (i.e. accumulating experience of how to use this new tool), the more they will be gratified. As microblog users are gratified in the use of the microblog, they will use it more and, in turn, they will be more competent to seek affinity from others on the platform. Thus, we hypothesize the following and propose two research questions:

H2b: The more people use Weibo, the more AS (especially competence) they will have.

H2c: Gratifications sought from Weibo use are positively related to AS.

RQ2: How do demographics, narcissism, and gratifications from Weibo predict intensity of Weibo use?

RQ3: To what extent can demographics, narcissism, gratifications, and intensity of Weibo use predict AS?

Social capital

Putnam (2000) defined social capital as social networks and their associated norms of reciprocity and distinguished two subtypes of social capital, bridging and bonding. Bridging social capital refers to weak ties between individuals, stressing the breadth of connection. Individuals in weak ties are from different backgrounds because the loose connection that lacks depth may broaden social networks to absorb useful information and resources. Alternatively, bonding social capital refers to the strong ties between individuals, stressing the depth of connection, such as family and close

friends. The characteristics of individuals in a bonding relationship are more homogeneous and therefore form stronger and deeper connections to exchange emotional and substantive support.

The identity of social capital is still not clearly defined, as it may serve as either a cause or an effect (Resnick, 2001; Williams, 2006). In the scale developed by Williams (2006), the operationalization of social capital is an outcome rather than the network itself. Such definition simply suggests that 'the networks are the causal agents or moderators of the social capital measured by the scales' (Williams, 2006). In this sense, this study adopted Williams' operationalization of social capital and regarded social capital as the outcome of the networks on a microblog.

As SNS becomes popular, researchers have studied the relations between SNS and social capital. Valenzuela *et al.* (2009) found positive relationships between intensity of Facebook use and indicators of social capital, such as life satisfaction, social trust, civic engagement, and political participation. Since SNS serve to create and maintain larger, loose networks of relationships from which they could potentially draw resources, it may be desirable to augment social capital (Donath & Boyd, 2004). They stated that although SNS might not increase strong ties, they could greatly increase the weak ties one could form and maintain in an easy and cheap way. Moreover, the findings of Ellison *et al.* (2006) showed that students who use Facebook more intensely report higher bridging social capital as well as higher bonding social capital, suggesting that Facebook is used to maintain both acquaintances and close friends. Pfeil, Arjan, and Zaphiris (2008) further explored potential differences in social capital among older people compared to teenagers, showing that teenagers have larger networks of friends compared to older users of MySpace, while the majority of teenage users' friends are in their own age range; older people's networks of friends tend to have a more diverse age distribution.

In summary, previous literature focused on the relationship of social capital and Facebook, theorizing that Facebook use helps adolescents increase social capital. However, whether it is the case in the context of the microblog, and which gratification of using a microblog may affect social capital, are understudied. Furthermore, it is logical to assume that individuals who have a high desire to get people to like them are those who would have accumulated a larger body of resources through interpersonal social networks such as in Weibo or Facebook. Therefore, based on prior works, the following hypotheses and questions are raised:

H3a: The more subjects use Sina Weibo, the more social capital they will report.

H3b: The higher subjects score on AS, the higher social capital they will report.

RQ4: To what extent can demographics, narcissism, AS, and gratifications of Weibo use predict social capital?

Method

Data collection

Data were collected via an online survey with a sample of 431 Internet users in mainland China. The self-administered online survey was hosted on Sojump (<http://www.sojump.com>), a professional online survey platform in China, during March 2012. Sojump manages a large sample pool consisting of 2.6 million users who have filled in questionnaires on Sojump and have provided their basic information (e.g. age, gender, education, and income). Respondents were randomly recruited from the existing online sample pool by the system. Then invitation e-mails were sent to the respondents with a link to the questionnaire.

The sample consisted of 44.4% males; over 41% of the respondents were in the age range of 21–25, 28% were 26–30, and 23.5% were 31–40. More than 68% were undergraduates or bachelor degree holders and about 12.5% were postgraduates. The education distribution supported the industry analysis that most Sina Weibo users were undergraduates and experienced Internet users (Mou, 2011). In terms of income, the median was between 3001 and 5000 RMB per month. This online survey method was considered an appropriate and efficient way to access the target population, who are frequent users of Weibo. The use of such an online pool sample was validated by prior studies (Peter & Valkenburg, 2006).

Measurement

Gratification from Weibo. Gratification sought items were adopted from Liu *et al.* (2010) with additional items solicited from a focus group to collect new ideas and to refine the gratification items from previous studies. The final instrument consisted of eight gratification statements with a 7-point Likert scale (where 1 = strongly disagree and 7 = strongly agree). Table 1 shows the results of the principal component factor analysis, which yielded four factors including social, convenience, content, and process needs. The factor structure explained 62.74% of the variance with reliability alphas of 0.87, 0.75, 0.89, and 0.74 respectively.

Intensity of Weibo use. The amount of Weibo use was measured by a single question: in the past week, how much time did you spend on Sina Weibo per day? Answers to the question were reported on a nine-point scale (where 1 = less than 15 min to 9 = more than four hours).

Table 1 Exploratory factor analysis of gratification sought from Weibo use

I use Weibo:	Factors				Mean	SD
	1	2	3	4		
Social need						
1. to meet new friends	0.89				5.17	1.34
2. to get to know people with shared interests	0.82				5.23	1.26
Convenience need						
3. because it is convenient to get in contact		0.85			5.53	1.27
4. because I can express ideas ubiquitously		0.80			5.71	1.09
Content need						
5. to solicit information			0.82		5.43	1.17
6. to share information with others			0.75		5.49	1.18
Process need						
7. to pass time				0.86	5.04	1.40
8. to be entertained				0.77	4.97	1.37
Eigenvalue	4.60	0.94	0.76	0.54		
Variance explained	57.47	11.75	9.49	6.70		
Cronbach's alpha	0.87	0.75	0.89	0.74		

Scale used: 1 = strongly disagree and 7 = strongly agree; *N* = 431.

Table 2 Exploratory factor analysis of affinity seeking

	Factors		Mean	SD
	1	2		
Strategic performance				
1. When necessary, I can put on an act to get important people to approve of me	0.94		4.58	1.45
2. I am very good at putting on a show to impress others	0.80		3.90	1.50
3. I can present myself as more likable than I really am	0.77		4.41	1.40
AS competence				
4. I know what to say and do to let others like me		0.97	4.64	1.16
5. I know what to say and do to make myself popular with others		0.94	4.82	1.15
Eigenvalue	3.04	0.97		
Variance explained	60.87	19.41		
Cronbach's alpha	0.81	0.91		

Scale used: 1 = strongly disagree and 7 = strongly agree; *N* = 431.

Narcissism. To assess narcissism, the nine-item short version of the Narcissism Personality Questionnaire developed by Zhou, Zhang, Chen, and Ye (2009) was adopted in this study. A 6-point Likert scale was used (where 1 = strongly disagree and 6 = strongly agree). Sample items included the following: I want to be a leader, I like to take responsibility for decision making, I love to be the centre of people's attention, I like to look in the mirror, I seldom rely on others to do things, and I feel better than others do. The Cronbach's alpha was high at 0.89.

Affinity-seeking. AS was measured using a short version of ASI developed by Bell *et al.* (1987). Five items were adopted from the original 13-item scale. A 5-point Likert

scale was used (where 1 = strongly disagree and 7 = strongly agree). An exploratory factor analysis was run to characterize the two dimensions of AS, AS competence and strategic performance. Table 2 shows the result of the factor analysis of AS and the reliability was acceptably high.

Social capital. To assess perceptions of social capital, the Social Capital Scale (SCC: Williams, 2006) was used. However, only six of the 20 items in the scale were adopted, with wording changed to reflect the context of the study in China. The SCC is comprised of two parts, measuring two types of social capital, bridging and bonding. The items used a 5-point Likert scale (where 1 = strongly disagree and

Table 3 Exploratory factor analysis of social capital

	Factors		Mean	SD
	1	2		
Bridging social capital				
1. Interacting with people makes me want to try new things, new people	0.84		4.02	0.68
2. Interacting with people makes me interested in what people unlike me are thinking	0.86		4.07	0.66
3. Talking with people makes me keep in contact with outside world	0.80		4.04	0.72
Bonding social capital				
4. There are several people I trust to help solve my problems		0.76	3.95	0.66
5. When I feel lonely, there are several people I can talk to		0.83	3.92	0.75
6. The people I interact with would be good job references for me		0.77	3.58	0.83
Eigenvalue	3.04	1.13		
Variance explained	50.73	18.97		
Cronbach's alpha	0.73	0.82		

Scale used: 1 = strongly disagree and 5 = strongly agree; $N = 431$.

Table 4 Bivariate correlation of all variables

	Intensity of use	Narcissism	Process need	Convenience need	Content need	Social need	AS- strategic	AS- competence	SC- bonding	SC- bridging
Intensity of use										
Narcissism	0.36***									
Process need	0.40***	0.32***								
Convenience need	0.38***	0.27***	0.53***							
Content need	0.50***	0.29***	0.60***	0.61***						
Social need	0.50***	0.42***	0.48***	0.49***	0.68***					
AS-strategic	0.39***	0.53***	0.27***	0.22***	0.27***	0.36***				
AS-competence	0.32***	0.53***	0.32***	0.20***	0.27***	0.30***	0.49***			
SC-bonding	0.32***	0.35***	0.28***	0.39***	0.41***	0.38***	0.30***	0.34***		
SC-bridging	0.29***	0.38***	0.34***	0.36***	0.45***	0.44***	0.20***	0.29***	0.45***	

Notes: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$; $N = 431$.

5 = strongly agree). Table 3 shows an exploratory factor analysis of social capital with eigenvalues greater than 1.0 and reasonably acceptable reliability scores. Table 4 shows a correlation matrix for all key variables.

Findings

Hypothesis testing

H1a and H1b hypothesized that the higher individuals score in narcissism, the more intensively they will use Weibo and will find Weibo gratifying. Table 5 indicates that intensity of Weibo use was significantly linked to narcissism personality traits ($\beta = 0.14$, $p < 0.01$). As shown in Table 6, results also show that the four gratifications from Weibo after controlling for demographics: process ($\beta = 0.34$, $p < 0.001$), convenience ($\beta = 0.29$, $p < 0.001$), content ($\beta = 0.28$, $p < 0.01$), and social ($\beta = 0.42$,

$p < 0.001$), were all significantly related to narcissism. These relationships support the notion that the more narcissistic individuals are, the more they will use Weibo and find Weibo experience gratifying. Thus, H1a and H1b were fully supported.

H2a and H2b hypothesized that narcissism and Weibo use are positively related to AS. Results in Table 5 demonstrate that the relationships between narcissism and two dimensions of AS were significant and positive ($\beta = 0.44$, $p < 0.001$ and $\beta = 0.41$, $p < 0.001$) for competence and strategic performance respectively). However, use of Weibo was found only significant to strategic performance of AS ($\beta = 0.18$, $p < 0.001$). Thus, H2a was fully supported and H2b was partially supported. H2c hypothesized that gratifications sought through Weibo use are significantly and positively related to AS. Regression results in Table 5 show that, after controlling for demographics and narcissism, only content gratification and AS competence ($\beta = 0.16$,

Table 5 Hierarchical regression of intensity of Weibo use and affinity seeking

Predictors	Intensity of Weibo use β	Affinity seeking	
		Competence β	Strategic performance β
Block 1: demographics			
Gender	0.00	0.05	0.02
Education	0.03	-0.03	-0.03
Age	0.07	0.13***	0.07
Salary	0.09	0.06	0.07
ΔR^2	0.04	0.05***	0.04
Block 2: narcissism			
	0.14**	0.44***	0.41***
ΔR^2	0.10***	0.25***	0.22***
Block 3: gratification from Weibo			
Process	0.10	0.05	0.22***
Convenience	0.05	0.04	-0.06
Content	0.24***	0.16**	0.09
Social	0.21***	0.03	0.08
ΔR^2	0.23***	0.02***	0.06***
Block 4: intensity of Weibo use			
	-	0.08	0.18***
ΔR^2	-	0.00	0.01**
R^2	0.37	0.32	0.33
Adjusted R^2	0.33	0.31	0.32

Note: Figures are standardized beta coefficients from final regression equation with all blocks of variables included for the entire sample. * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$; $N = 431$.

Table 6 Multiple regressions of gratifications from Weibo use

Predictors	Gratifications from Weibo			
	Process	Convenience	Content	Social
Gender	-0.16**	-0.12*	-0.16**	0.01
Education	0.03	0.01	0.01	-0.09
Age	-0.08	-0.02	-0.01	0.09
Salary	-0.01	-0.02	0.11	0.05
Narcissism	0.34***	0.29***	0.28**	0.42***
R^2	0.13	0.09	0.12	0.20
Adjusted R^2	0.12	0.07	0.11	0.19

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$; $N = 431$.

$p < 0.01$), and process gratification and AS strategic performance ($\beta = 0.22, p < 0.001$) were significant. Thus, H_{2c} was only partially supported.

H_{3a} hypothesized that the more intensely subjects use Weibo, the greater social capital they receive. However, as shown in Table 7, after controlling for demographics

Table 7 Hierarchical regression of social capital

Predictors	Social Capital	
	Bridging β	Bonding β
Block 1: demographics		
Gender	-0.02	0.01
Education	0.01	0.04
Age	-0.02	-0.04
Salary	-0.03	0.05
ΔR^2	0.00	0.02
Block 2: narcissism		
	0.24**	0.14**
ΔR^2	0.14***	0.11***
Block 3: intensity of Weibo use		
	-0.02	0.06
ΔR^2	0.03	0.04
Block 4: gratification from Weibo		
Process	0.05	-0.07
Convenience	0.09	0.19**
Content	0.29***	0.12
Social	0.15*	0.05
ΔR^2	0.11***	0.09***
Block 5: affinity-seeking		
Competence	0.06	0.15**
Strategic Performance	0.08	0.11*
ΔR^2	0.00	0.02***
R^2	0.28	0.28
Adjusted R^2	0.27	0.26

Note: Figures are standardized beta coefficients from final regression equation with all blocks of variables included for the entire sample.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$; $N = 431$.

and narcissism, no significant relationship between Weibo use and social capital was found. Thus, H_{3a} was allegedly not supported. However, the hierarchical regression results reported in Table 7 were from the final regression equation including all predictors, especially variables from gratifications of using Weibo. Such results diminished the effects from intensity of Weibo use on social capital. In fact, in a separate regression analysis, after controlling for only demographics and narcissism, intensity of Weibo use significantly predicted both bridging ($\beta = 0.18, p < 0.001$) and bonding ($\beta = 0.23, p < 0.001$) social capital without the effect from gratifications from Weibo use (not shown in Table 7). Thus, H_{3a} was fully supported.

H_{3b} hypothesized that the higher individuals score in AS, the higher social capital they will report. Results in Table 7 show that the affinity competence ($\beta = 0.15, p < 0.01$) and strategic performance ($\beta = 0.11, p < 0.05$) significantly predicted bonding social capital but not bridging social capital. Thus, H_{3b} was partially supported.

Gratifications sought from and intensity of Weibo use

To answer RQ1 regression results in Table 5 show that, after controlling for demographics and narcissism, the strongest predictors of Weibo use was content ($\beta = 0.24$, $p < 0.001$), followed by social gratifications ($\beta = 0.21$, $p < 0.001$). This indicates that the more individuals were motivated by content and social gratifications, the more they will use Weibo. Process and convenience were not found significant. This indicates that, as a social medium, people do not use Weibo to pass time, be entertained, or because it is convenient, but primarily for meeting people with common interests and to solicit and share information with others.

Predicting AS

To examine the relative influence of demographics, narcissism, uses, and gratifications from Weibo on AS, two parallel hierarchical regressions were run (see Table 5). Using AS competence as a dependent variable, age was the only significant predictor ($\beta = 0.13$, $p < 0.001$) in the first block, which accounted for 5% of the variance. When narcissism was entered into the second block, it was found to be a significant predictor ($\beta = 0.44$, $p < 0.001$). This indicates that the more narcissistic people are, the more competent in AS they will be. The second block accounted for 25% of the variance. The third block was gratification from Weibo. The results showed that content gratification significantly predicted AS competence ($\beta = 0.16$, $p < 0.01$), which accounted for 2% of the variance. Finally, the intensity of Weibo use was entered and shown to be insignificant. The equation accounted for 31% total variance.

No significant predictor was found in the first demographic block for strategic performance of AS. In the second block, narcissism ($\beta = 0.41$, $p < 0.001$) significantly predicted strategic performance of AS, which accounted for 22% of the variance. When entering gratification from Weibo use in the third block, only process gratification was significantly related to strategic performance ($\beta = 0.22$, $p < 0.001$), which accounted for 6% of the variance. In the final block, intensity of Weibo use was shown to have a unique effect on strategic performance ($\beta = 0.18$, $p < 0.001$), which accounted for 1% additional variance, for a total of 32%.

Predicting social capital

Similarly, two parallel hierarchical regressions were run to examine the relative influence of demographics, narcissism, Weibo use, Weibo gratifications, and AS on social capital (see Table 7). In predicting bridging social capital, the demographic block did not significantly explain any

variance. However, when narcissism ($\beta = 0.24$, $p < 0.01$) entered into the second block, it accounted for 14% of the variance. When entering the intensity of Weibo use in the third block, the results show that Weibo use was not significant in predicting bridging social capital. However, when the four Weibo gratifications were entered next, content gratification ($\beta = 0.298$, $p < 0.001$) and social gratification ($\beta = 0.15$, $p < 0.05$) were significant. This block explained 11% of the variance. The final block of AS did not explain any variance to a significant level. The equation accounted for 28% of the variance in total.

In predicting bonding social capital, no significant predictor was found in the demographic block. When narcissism was entered into the second block, it was found to be a significant predictor ($\beta = 0.14$, $p < 0.01$) and accounted for 11% of the variance. When entering the intensity of Weibo use in the third block, intensity of Weibo use did not show any significant effect on bonding capital. Four Weibo gratifications were entered next in the fourth block, but only convenience gratification ($\beta = 0.19$, $p < 0.01$) was significant, which accounted for 9% of the variance. In the final block, competence ($\beta = 0.15$, $p < 0.01$) and strategic performance ($\beta = 0.11$, $p < 0.05$) were both significant predictors. This block explained 2% of the variance, for a total of 28% for the regression equation.

Discussion and conclusions

Narcissism, intensity of Weibo use, and gratifications

One goal of this study was to explore the relationships between narcissism, uses, and gratification from Weibo. The result supports Bibby's (2008) findings that narcissists are more likely to be heavy users of Weibo. This may be explained by considering narcissists are attention-seekers who tend to self-promote and self-disclose by posting on Weibo. Another goal of this study was to understand the gratification people sought from using Weibo. Results indicate that content and social gratification both significantly predicted the intensity of Weibo use. The findings imply that Weibo fulfills users' needs for self-documentation, information sharing, and social interaction. In particular, results show that the coefficient of content gratification is greater than that of social gratification, which consistently supports the notion that Weibo serves more of an information function than a social function. Unexpectedly, the process and convenience gratifications did not exhibit any significant impact on the intensity of Weibo use. Because Weibo is a microblog, primarily a medium for information exchange and socialization, it does not develop functions for fun. Therefore, the process gratification was not a significant predictor of intensity of Weibo use.

Turning to the relationship between narcissism and gratifications sought in Weibo, this study found that the more narcissistic individuals are, the more they will find Weibo gratifying. More specifically, as shown in Table 6, the relationship between narcissism and process gratification is greater than that with content gratification, indicating that narcissists find the process more gratifying than the content. According to the definitions from Cutler and Danowski (1980), process gratification refers to actual use of the medium itself for extrinsic value (i.e. being involved in the process of behaviour such as using Weibo to pass time or express oneself), while content gratification concerns the intrinsic value of the information carried by the medium. Therefore, it can be concluded that narcissists are more concerned with the extrinsic value of the information (i.e. the use of Weibo for some extrinsic purposes, like showing off, having fun, or passing time) rather than the content of information itself.

Intensity of Weibo use, gratifications, and AS

Another aim of this study was to explore the effect of Weibo on how to develop interpersonal relationships in the context of AS and social capital. In terms of people with the knowledge and skills to master interpersonal relationships, and that the social network may vary on the level of personality, cognitive, and motivational attributes, this study focused on what gratifications from Weibo (motivational attributes) is related to building interpersonal relationships after controlling for the effect of narcissism. For competence of AS, according to the regression analysis, it is interesting to note that those who use Weibo to satisfy their content needs are more likely to exhibit a high competence of AS, rather than those who seek social gratification via Weibo use. This finding may be explained by the nature of Weibo. As a counterpart of Twitter in China, Sina Weibo was designed as a medium for people to exchange information. Weibo and Twitter, as social media, are slightly different in nature from Facebook and Renren (the Facebook equivalent in China), which are SNS. The primary activities on Weibo are information-oriented, involving updating personal status, expressing a personal view or forwarding others' opinions, whereas SNS activities are primarily social (e.g. updating photos). Therefore, those who know how to take advantage of the content-driven nature of Weibo and how to embellish personal images would be regarded to have a high level of competence to gain affinity. Further, we can infer that the strategy to increase affinity through Weibo is through more sharing of useful information with others, making them beneficial or acting as experts to others, rather than having fun.

As for strategic performance of AS, regression results show that, instead of content, process gratification was

positively related to strategic performance. People with stronger need for extrinsic value of messages on Weibo are more likely to act out in some premeditated or pretending performance to attract others. This may be because those with high level of strategic performance in AS are more concerned with how to use the medium than the content on the medium itself. Besides, intensity of Weibo use also significantly predicts the strategic performance of developing positive relationships. In a sense, the one-to-many nature of Weibo makes it a medium for both interpersonal communication and mass communication, so the practice of using Weibo may give individuals a sense of performing on the stage with an audience, thereby performing more premeditated behaviours than they would on a SNS.

Intensity of Weibo use, gratifications, and AS considering social capital

To gain more insight into the effect of Weibo use on interpersonal relationships, the concept of social capital was incorporated to reflect the maintenance of relationships. Previous studies have demonstrated the relationship between social capital and SNS, which is a platform stressing social relationships. However, social media, which underscores the content dimension rather than the social dimension, receives less research attention. The present study extends previous findings that social capital is positively related to SNS use (Donath & Boyd, 2004; Ellison *et al.*, 2006) to another social media platform. As hypothesized, results show that intensity of Weibo use and social capital were significantly linked. Such results indicate that the more people use Weibo, the greater social capital they have. In fact, the findings that Weibo use has more predictive power to bonding social capital than to bridging social capital also confirms the results of previous studies. However, it is worth noting that when Weibo gratification was entered into the equation, the prediction of Weibo use became insignificant. Statistically speaking, this could happen in the situation that the two independent variables (IVs) correlated closely with each other, and the IV that enters later may be mediating between the one that entered first and the outcome. Therefore, it is also theoretically feasible for us to assume that Weibo gratification is mediated between Weibo use and social capital. The more one uses Weibo, the more gratified he or she will be; and the gratification sought from Weibo use may lead one to perceive high social capital.

As the results show in Table 7, content and social gratification positively predicted bridging social capital, whereas convenience gratification positively predicted bonding social capital. This may be explained by the fact that, according to Putnam, in weak ties (bridging), people usually get into social activity to exchange useful information, whereas in strong ties, people are close enough and do

not need to socialize or seek information for utilitarian purpose. Therefore, in weak ties, Weibo is used to gratify the needs of engagement in social interaction and for exchanging useful information. In contrast, in strong ties, Weibo is mainly used to keep in contact with close friends.

With respect to the relationship between AS and social capital, it is unexpected that AS was predictive of bonding social capital but not of bridging social capital. This may be explained by the different purposes in accumulating bonding and bridging social capital. According to Putnam (2000), bridging social capital is yielded from a weak tie network, in which people seek to broaden their connections with others for utilitarian purposes, such as obtaining information and opportunities for job seekers (Granovetter, 1973). Developing bridging social capital does not necessarily call for perceived attractiveness of others but for evaluation of the utility of others, that is, we make a weak tie with another person out of how useful the person is to us, rather than how socially attractive the person is. For example, we would make friends with the person that can help us to find a job, although we do not really like him or her. In contrast, bonding social capital is derived from strong tie networks, in which people exchange emotional and substantive supports. The interpersonal affinity is required to bond them together; only if we like the person can we offer emotional support. Therefore, AS predicted bonding social capital but did not predict bridging social capital.

Above all, this study makes theoretical contributions in several ways. First, this study identified four motivations for using Weibo and built on U&G theory to explain the intensity of Weibo use. Second, by controlling the effect of

narcissism embedded in social media, this study analyzed the relationship between gratification from Weibo and AS to provide insights into the individual behaviours of initiating and maintaining interpersonal relationships on Weibo. Third, this study extended the rationale from general Internet use to social media use that the effect on social capital is contingent upon specific uses and gratification sought by users, and provided solid empirical evidence to address the inconsistent findings of effects on social capital.

Limitations and suggestions for future research

First, as only those who had participated in online surveys on Sojump.com were in the sample pool, not all Internet users in China had an equal chance to be invited to participate in the study. Thus, the results may not be generalizable. Second, to keep the length of the questionnaire as manageable as possible, only the short version scales were used to encourage respondents to participate. Therefore, the short version scales may impair the reliability and validity, especially when the instrument was developed in the west and applied in the Chinese context.

As Weibo is a continuously growing social media, new features and functions are being added. Therefore, the gratification sought from Weibo could vary as people experience other features of Weibo. Perhaps Weibo could gratify more needs as technology develops. Therefore, further research should focus on identifying Weibo gratification and explore its influences.

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