

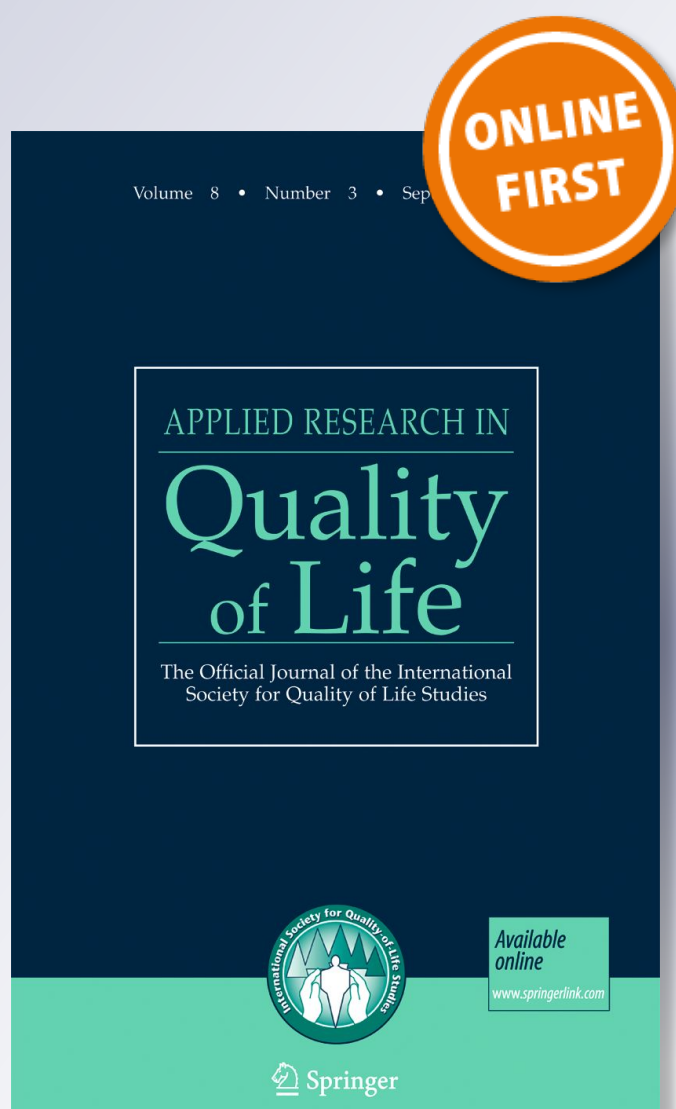
# *The Impacts of Personality Traits, Use Intensity and Features Use of LinkedIn on Bridging Social Capital*

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# The Impacts of Personality Traits, Use Intensity and Features Use of LinkedIn on Bridging Social Capital

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**Abstract** This exploratory study examines the effects of LinkedIn users' personality traits, use intensity, and LinkedIn feature usage patterns on their perceived gained bridging social capital. The data were gathered from a purposive sample of 301 LinkedIn users in mainland China. The results showed that subjects with agreeable personality traits who participate often in the LinkedIn platform to react to and follow professional information from companies perceived that they gained greater bridging social capital. As expected, subjects with extraverted and neurotic personalities were heavier users of LinkedIn and, in particular, they tended to use LinkedIn to react and follow professional information, self-promote expertise, and to engage in strategic professional network building. The implications of the study are also discussed.

**Keywords** LinkedIn use intensity · Personality · Social capital · Feature usage patterns

## Introduction

With the development of the Internet, recruiting, job seeking, and professional network building have increasingly been conducted online by both companies and applicants (Invest HK 2014; Tapscott 2008; Utz 2016). Young professionals and students use professional networking services (PNS), which are business- and employment-oriented social networking services (SNS), to plan and develop their careers (Skeels and Grudin 2009). PNS focus on helping people to manage their professional identities; build and

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engage their professional networks; and gain access to knowledge, insights, and opportunities related to their careers (Claybaugh and Haseman 2013). Companies advertise on LinkedIn for new clients, collaborators, and suppliers. Among the three leading PNS, LinkedIn has more than 467 million, while Twitter has 328 million and Facebook has 1.94 billion global users worldwide (Statista 2017). In 2014 (Invest HK 2014), LinkedIn had almost 900 thousand users in Hong Kong. Similar to Facebook's influence on social lives (Bargh and McKenna 2004; Chou and Edge 2012), LinkedIn has become the most important tool for helping users, especially office workers and job seekers, to enhance their professional lives. According to Archambault and Grudin (2012), in 2011, 77% of employees in the US posted their profiles on LinkedIn, 15% of whom used it daily or frequently. According to the Pew Research Center (2016), the percentage of Americans using LinkedIn daily (29%) exceeded that of Twitter (24%), and this number has increased yearly. Because LinkedIn can be used as a social tool to create new connections and maintain existing relationships within a professional network, it is important to examine the reasons that people engage in LinkedIn and to determine their needs and the factors that influence their patterns of use.

Previous studies have demonstrated that personality factors are related to the use of the Internet and social networking services (SNS: Amichai-Hamburger and Vinitzky 2010; Gosling et al. 2011). Some studies focused on the general intensity of use and others on separate usage patterns (Moore and McElroy 2012; Ross et al. 2009; Ryan and Xenos 2011). However, few studies focused on PNS, especially the association between personality factors and the use of specific functions of LinkedIn. Most previous studies used a simple measure of SNS activity (e.g., the overall time spent on the site). Few studies paid close attention to the level of use of various functions. Because of the wide range of activities possible on LinkedIn, such as information seeking, information sharing, networking, self-promotion, and job hunting, personality differences are likely to affect the use of specific features of this professional social platform (Amichai-Hamburger et al. 2002).

Previous studies have also demonstrated a relationship between SNS use and social capital (Ellison et al. 2007; Valenzuela et al. 2009). However, little is known about the ways in which individuals may gain social capital via LinkedIn. In fact, employees and potential employees may use LinkedIn to engage with their colleagues, team members, and new business contacts to accumulate social capital. Today, because friendships and other social relationships can be developed and maintained through social media, more interpersonal conversations are being carried out through social media than through face-to-face contact. Therefore, this study contributes to the literature by exploring the role of LinkedIn in the perceived gain of social capital.

## Literature Review, Research Questions, and Hypotheses

### Social Capital and SNS Use

Social capital is a relatively complex, multidimensional concept that researchers have defined using a variety of approaches, including social networks, trust, civic engagement, and life satisfaction (Adler and Kwon 2002; Brehm and Rahn 1997; Lin 2001; Putnam 2000). The concept of social capital used in this study refers to the collection of resources

owned by the members of an individual's personal social network and that may become available to the individual because of the history of these relationships (Coleman 1988; Van Der Gaag and Snijders 2004). Lin (2001) distinguished between the access to and the use of social capital as follows: *access to social capital* refers to an individual's collection of potentially mobilizable social resources; the *use of social capital* refers to actions and the mobilization of resources aimed at creating returns. This study focuses on measuring individuals' potential access to social capital.

A widely accepted distinction of social capital is the two-dimensional conceptualization of *bonding* social capital and *bridging* social capital. Bonding social capital is usually defined as the social capital derived from relationships between similar persons or from one's close circle, whereas bridging social capital is defined as deriving from dissimilar persons at the same level of hierarchy or from weak-tie relationships (Kim et al. 2006). According to Putnam (2000), bonding social capital involves people who already know each other in strong ties, whereas bridging social capital involves bringing together people or groups who previously did not know each other. As users of LinkedIn are generally strangers to each other, it is reasonable to narrow the focus of the study to measure only bridging social capital.

Regarding the relationship between SNS or Internet use and social capital, the previous research results are mixed. According to Nie (2001), Internet use detracts from the amount of face-to-face time spent with others. However, several studies have challenged this conclusion. Wellman et al. (2001) claimed that online interactions could replace in-person interactions, thus mitigating the loss from time spent online. Other previous findings showed that SNS use was positively correlated to the size of the individual's social network or the amount of social capital, especially bridging social capital (Hampton and Wellman 2003). Similarly, Ellison et al. (2007) also found a strong association between the use of Facebook and the three types of social capital (bonding, bridging, and maintained), with the strongest relationship being to bridging social capital. However, Valenzuela et al. (2009) found that the positive and significant associations between Facebook variables and social capital were small.

Despite the contradictory results of previous research, some congruency is evident. It has been assumed that patterns of new media use in relation to information acquisition and community building were positively associated with the individual production of social capital (Hampton and Wellman 2003). In contrast, patterns of use in relation to entertainment and diversion were negatively associated with social capital (Valenzuela et al. 2009). As LinkedIn has been known for its ability to help users to acquire corporate information and to expand professional networks, it is logical to assume that a key benefit of LinkedIn use is to help build bridging social capital. Therefore, we state the following hypothesis:

H1: The intensity of LinkedIn use positively predicts users' perceived bridging social capital.

## LinkedIn Features Use

Utz (2016) studied how the actual use of PNSs affects informational benefits in the context of feature usage, content consumption and sharing, and network structure.

Unlike other types of social media, PNS can be used in a rather passive way, by reading, or in a more active way, by reacting in the form of forwarding articles or leaving likes or comments on them. Papacharissi (2009) pointed out that PNS such as LinkedIn have a strong professional focus but offer little space for non-professional use like other SNS. Further, active participation (i.e., in terms of frequency) in LinkedIn features use (such as actively reacting to professional information) might be necessary but may not be sufficient for gaining access to bridging social capital. Thus, LinkedIn features use should also be articulated in the context of content and strategic networking.

In terms of content, Utz (2016) pointed out that the content posted should matter more than the usage or the frequency of reading or posting, because work-related posts such as following and reacting to professional information demonstrate one's expertise and capability. Similarly, posting for self-promotion on PNS can also demonstrate users' knowledge and qualifications when they make updates on their statuses and profiles. Conversely, readers can learn about others' profiles and their current statuses. Thus, the content of posts can be good for self-promotion and, in particular, enhance bridging social capital, especially for LinkedIn users who have few close ties.

Utz (2016) also pointed out that, in addition to usage and content features, using LinkedIn for strategic networking behavior is also important to yield benefits. *Strategic networking* in LinkedIn use refers to users intentionally adding individuals or LinkedIn friends who may become important to them in the future (e.g., someone with higher status in the field). Therefore, it is logical to think that individuals who engage in strategic networking on LinkedIn could also see an increase in bridging social capital.

On the whole, this study summarizes these professional informational benefits, as characterized by Utz (2016), into distinct LinkedIn features, including the ability to: (1) react to professional information, (2) follow professional information, (3) post for self-promotion, and (4) engage in strategic networking. These features are substantial impetuses for the quick popularization of this platform. In addition to intensity of LinkedIn use and personality traits, this study examines the use of these four features and the roles they play in influencing bridging social capital.

## Personality Traits

Past research has argued that individual differences, such as gender, age, and personality, influence the use of mass media (Rosengren 1974). With the rise of the World Wide Web as the prominent form of mass media, the Internet has dominated this area of scientific inquiry (e.g., Ryan and Xenos 2011; Ross et al. 2009). Instead of examining the relationships between Internet use and specific personality traits, most previous research in this area has been based on a broad model of personality. The five-factor model (FFM), which includes the “Big Five” personality traits—extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience—is widely accepted as the most comprehensive and parsimonious measure (Devaraj et al. 2008; Donnellan et al. 2006).

*Extraversion* is characterized by sociability, energy, expressiveness, and the ability to generate positive emotions. Existing studies have offered two differing explanations for the relationship between extraversion and SNS use: “the-rich-get-richer” and “social compensation” (Ong et al. 2010). Both explanations have received some

empirical support. For example, Correa et al. (2010) found that extraversion was positively correlated with the time spent on SNS and that extraverts tended to be members of several SNS groups. Similar conclusions were drawn by other researchers (e.g., Ehrenberg et al. 2008; Gosling et al. 2011; Ryan and Xenos 2011; Seidman 2013; Wilson et al. 2010). However, contradictory findings showed that extraverts spent significantly less time on SNS (Moore and McElroy 2012) and tended to make less use of the communicative features on Facebook (Ross et al. 2009). Other findings showed that extraversion was not related to the number of Facebook groups to which the user belonged but was positively related to the actual number of Facebook friends (Amichai-Hamburger and Vinitzky 2010). Similarly, previous findings showed that extraverts tended to engage more frequently in self-disclosure and to generate more Facebook content than other personality types did and that extraverts posted less personal information on their Facebook profiles (Amichai-Hamburger et al. 2008; Amichai-Hamburger and Vinitzky 2010). Moore and McElroy (2012) suggested that this finding could indicate that extraversion is more closely related to the personal disclosure of the user's current activities and thoughts than the disclosure of established interests and relationship statuses, which are most likely already known by the friends of extraverts. They also suggested that this possibility is consistent with the findings of Amiel and Sargent (2004) that extraverts perceived social networks as forums for sharing information and opinions rather than as substitutes for face-to-face interaction. Based on this literature, we expected that extraverts would use LinkedIn to seek and follow information to keep abreast of the most current events in their profession, rather than to post information that other people already know. Consequently, the more that extraverts use LinkedIn, the more they are satisfied with the benefits. Therefore, we state the following hypothesis:

H2: Extraversion will be positively related to LinkedIn usage such that more extroverted users will report higher intensity in LinkedIn use, react more often to professional information, follow professional information more frequently, post more often for self-promotion, and engage more in strategic networking LinkedIn features.

*Agreeableness* refers to the tendency to be sympathetic and cooperative and includes characteristics such as tendermindedness and modesty. Although Ross et al. (2009) found no relationship between agreeableness and Facebook use, previous studies showed evidence of some links between them. For example, Seidman (2013) showed that agreeableness is an effective predictor of belongingness-related behaviors. Further, it has been shown that agreeable people tend to care more about receiving support from others and the appropriateness of the posted content (Moore and McElroy 2012), and they usually view their pages and the pages of others more often and enjoy commenting on others' profiles (Gosling et al. 2011; Wang et al. 2012). It was also reported that people with lower levels of agreeableness showed less interest in learning about events concerning others and the world (Amiel and Sargent 2004). Interestingly, Amichai-Hamburger and Vinitzky (2010) found a positive relationship between agreeableness and the pictures and contact information uploaded to Facebook, indicating that those who were the most agreeable tended to engage in higher levels of self-disclosure online to gain support or to protect self-esteem. Therefore, we state the following hypothesis:

H3: Agreeableness will be positively related to intensity of LinkedIn use such that individuals high in agreeableness will report higher intensity of LinkedIn use, react more often to professional information, follow professional information more frequently, post more often for self-promotion, and engage more in strategic networking LinkedIn features.

The personality trait of *conscientiousness* refers to being responsible, goal-oriented, and organized and having a high level of self-control. Previous studies have found that conscientiousness was negatively correlated to self-presentational behaviors and the amount of time spent and on Facebook (Amichai-Hamburger and Vinitzky 2010; Devaraj et al. 2008; Gosling et al. 2011; Ryan and Xenos 2011; Seidman 2013; Wilson et al. 2010). Previous findings have also shown that people with a high level of conscientiousness (i.e., tending to value efficiency and productiveness) were more likely to be cautious in their presentation of both themselves and others (Seidman 2013; Devaraj et al. 2008), show fewer addictive tendencies in using SNS (Wilson et al. 2010), and spend more time online engaged in academic pursuits than in leisure activities (McElroy et al. 2007). In light of these findings, we pose the following hypothesis:

H4: Conscientiousness will be negatively related to intensity of LinkedIn use such that people higher in conscientiousness will react less to professional information, follow professional information less frequently, post less often for self-promotion, and engage less in strategic networking LinkedIn features.

The personality trait of *neuroticism* is associated with sensitivity to threat, low levels of emotional stability, and high levels of anxiety. Previous research has found that neuroticism was positively correlated to self-presentational behaviors and the amount of time spent on Facebook (Correa et al. 2010; Moore and McElroy 2012; Ryan and Xenos 2011; Seidman 2013). Previous findings have also shown that neurotic people used Facebook more frequently to keep up with others, to feel a sense of “belonging,” and to stay informed (Amiel and Sargent 2004; Moore and McElroy 2012). Other findings suggested that neurotic people are more likely to engage in computer-mediated communication (CMC) because it may allow them to spend more time reviewing messages in a non-face-to-face environment, thus reducing the anxiety in interpersonal communication (Ehrenberg et al. 2008). Therefore, it is reasonable that neurotic persons, motivated by the need for self-assurance, strive to share more information in a non-threatening and secure place (Amichai-Hamburger and Vinitzky 2010). Therefore, we state the following hypothesis:

H5: Neuroticism will be positively related to intensity of LinkedIn use such that people higher in neuroticism will report higher intensity of LinkedIn use, react more often to professional information, follow professional information more frequently, post more often for self-promotion, and engage more in strategic networking LinkedIn features.

The last personality trait, *openness*, is the tendency to be curious, to think deeply in a variety of ways, and to enjoy artistic pursuits. Though some previous studies found no



relationship between openness and the use of Facebook (Moore and McElroy 2012), others found that open people tended to have more friends, engage in more activities, and express more about themselves on their profiles and were more likely to engage in blogging (Correa et al. 2010; Guadagno et al. 2008). In the context of PNS, it is reasonable that open people would take advantage of the employment-oriented platform LinkedIn to engage in and expand their professional networks. Therefore, we state the following hypothesis:

H6: Openness will be positively related to intensity of LinkedIn use such that people higher in openness would report higher intensity of LinkedIn use, react more often to professional information, follow professional information more frequently, post more often for self-promotion, and engage more in strategic networking LinkedIn features.

All in all, the present study aims to contribute to the understanding of the ways in which users' characteristics (i.e., personality traits) influence the intensity of their LinkedIn use and the features used. Therefore, we pose the following research question:

RQ1: How can demographics and personality traits predict (a) LinkedIn use intensity and (b) LinkedIn features use?

The relationship between SNS use and social capital has been shown to depend not only on the intensity of use but also on personal characteristics and the manner of usage (Steinfeld et al. 2009). Thus, it is reasonable to think that individuals with different personality traits and different levels of LinkedIn use will exhibit different perceptions in gaining access to bridging social capital through LinkedIn. In fact, Ellison et al. (2007) found that intensity of Facebook use was a significant predictor of bridging social capital, even after controlling for demographics, Internet use, and psychological well-being measures. Moreover, they also found that the relationship between Facebook use and bridging social capital was greater for low self-esteem students than for high self-esteem students. This finding contradicts Kraut et al.'s (2002) "rich-get-richer" finding that high extraversion subjects gained more from their Internet use than low extraversion subjects. Although introversion/extraversion is not the same variable as conscientiousness, an equally possible situation is that the relationship between LinkedIn use and bridging social capital will be greater for high conscientiousness subjects than for low conscientiousness subjects. This is because high conscientiousness subjects would appear cautious, high in self-control, and goal-oriented. This means that they would tend to be light users of LinkedIn, which would result in low bridging social capital. In contrast, low conscientiousness subjects would appear less cautious, low in self-control, and less responsible. Thus, when they use LinkedIn, they would hope to maintain a large and heterogeneous network of friends. As a result, they would be more likely to gain a larger access to bridging social capital than high conscientiousness subjects.

Therefore, given this literature and rationale, we pose the following hypothesis and research question:

H7: Conscientiousness will moderate the relationship between LinkedIn use intensity and bridging social capital.

RQ2: After controlling for demographics, how can personality variables, intensity of LinkedIn usage, and LinkedIn features use predict perceived bridging social capital?

## Method

### Samples and Sampling Procedure

The data were collected from a purposive sample of 459 LinkedIn users in mainland China. The respondents were sent invitations via LinkedIn InMail to participate in an online survey administered from 25 March to 20 April 2015. The sample frame began with over 500 connections of the authors on LinkedIn. Using the snowball technique, each invitee was asked to invite another five LinkedIn friends to participate via e-mail. An active hypertext link to the questionnaire, which was posted on [Sojump.com](http://Sojump.com), was embedded in the e-mail. Only 301 non-students who participated were valid cases for analysis. Students (more than one-third of the original sample) were excluded in the final analysis to avoid the possibility of getting homogenous responses as, by and large, their intention of using LinkedIn is to seek employment and self-promote. Of the sample, 64.5% were male LinkedIn users. The average age was 33 years, 43.2% had more than 11 years' work experience, and 62.8% had completed postgraduate studies.

### Measurements

**LinkedIn Use Intensity** LinkedIn use intensity was measured by the responses to three questions: "In a typical week, how many times do you log in to LinkedIn?"; "How much time (in minutes) do you typically spend on LinkedIn when you log in?"; and "How many LinkedIn connections do you have in total?" The responses were recorded according to 5-point Likert scales. They were then combined to create a composite measure of LinkedIn use intensity ( $M = 3.17$ ;  $SD = .82$ ;  $\alpha = .64$ ).

**LinkedIn Features Use** To measure the usage patterns, the participants were invited to indicate how often they used each of 16 features on LinkedIn on a 5-point Likert scale ranging from "never" = 1 to "very often" = 5. Sample items included "leave likes or comments on articles published by companies, influencers, or channels"; "view the pages of companies"; "update or refine my profile"; "add new contacts." A principal components factor analysis with Varimax rotation was conducted to determine the potential grouping of the 16 items in relation to the patterns of use on LinkedIn. Three items were removed because of low communalities or the failure to load on any factor. The analysis yielded four factors and explained 71.62% of the variance (See Table 1).

The first factor was "reacting to professional information" ( $\alpha = .88$ ), which included four items that referred to reacting to information on LinkedIn by forwarding or leaving likes and comments about articles published by others. The second factor was "following professional information" ( $\alpha = .82$ ), which indicated the behavior of following companies, channels, or influencers to learn about the latest information.

**Table 1** Factor analysis of LinkedIn features use

I use different features in LinkedIn to:	Factors				Mean	S.D.
	1	2	3	4		
Reacting to professional information					2.21	.99
1. Forward articles or insights published by contacts or other users	.83				2.18	1.14
2. Leave likes or comments on articles published by companies, influencers, or channels	.81				2.16	1.17
3. Forward articles published by companies, influencers, or channels	.81				2.09	1.18
4. Leave likes or comments on articles or insights published by contacts or other users	.80				2.42	1.10
Following professional information					2.58	.97
5. Follow companies		.84			2.86	1.25
6. View companies' pages		.79			2.68	1.22
7. Follow channels		.70			2.21	1.07
8. Follow influencers		.67			1.57	1.25
Posting for self-promotion					2.72	.93
9. Update my current status or activities on my homepage			.76		2.68	1.23
10. Update or refine my profile			.76		3.35	1.07
11. Seek recommendations			.75		2.11	1.13
Strategic networking					4.06	.93
12. View others' profiles				.90	4.15	1.02
13. Add new contacts				.83	3.97	1.04
Eigenvalues	5.31	1.70	1.29	1.00		
Variance explained (%)	23.47	19.69	15.23	13.22		
Cronbach's alpha	.88	.82	.74	.78		

Scale used: 1 = Never, 5 = Very often; *N* = 301

The third factor was “posting for self-promotion” ( $\alpha = .74$ ), which reflected the behaviors related to updating a profile or status and seeking recommendations. The last factor was “strategic networking” ( $\alpha = .78$ ), which showed the behaviors relating to viewing others' profiles and adding new contacts.

**Personalities** The 20-item short form of the 50-item The Big Five International Personality Item Pool developed by Donnellan et al. (2006) was used in this study. It consisted of five factors: extraversion ( $\alpha = .73$ ), agreeableness ( $\alpha = .64$ ), conscientiousness ( $\alpha = .66$ ), neuroticism ( $\alpha = .76$ ), and openness ( $\alpha = .66$ ). The sample items included the following: “I am the life of the party”; “I sympathize with others' feelings”; “I get chores done right away”; and so on. The participants were asked to evaluate each item on a 5-point Likert scale ranging from “strongly disagree” = 1 to “strongly agree” = 5.

**Perceived Social Capital** Perceived social capital obtained on LinkedIn was measured using the revised Internet Social Capital Scale (ISCS) developed by Williams (2006).

Using a 5-point Likert scale ranging from “strongly disagree” = 1 to “strongly agree” = 5, five items were used to assess perceived bridging social capital ( $\alpha = .91$ ). Sample items included “Interacting with people on LinkedIn makes me interested in things that happen outside of my small circle” and “Interacting with people on LinkedIn makes me want to try new things.”

**Demographics** As controls, the study also recorded demographic information about the participants, including gender, age, education level, and work experience.

## Results

### Hypotheses Testing

In order to test the hypotheses (H1 to H7), a zero-order correlation analysis (in Table 2) and 5-parallel multiple regression analyses (in Table 3) were performed. The results show that the intensity of LinkedIn use was significantly correlated with perceived bridging social capital ( $r = .33, p < .001$ ). However, the results of the regression analysis shown in Table 3 did not confirm the relationships ( $\beta = -.07, p > .05$ ) between intensity of LinkedIn use and bridging social capital. Thus, H1 is rejected.

Similarly, the results in Table 2 show that extraversion was significantly related to intensity of LinkedIn use ( $r = .16, p < .01$ ) and to reacting to professional information, following professional information, posting for self-promotion, and engaging in

**Table 2** Zero order correlations of key variables

	2	3	4	5	6	7	8	9	10	11
Personalities										
1. Extraversion	.41***	.04	-.17**	.26***	.24***	.25***	.35***	.20***	.16**	.20***
2. Agreeableness		.23***	-.16**	.33***	.15*	.11	.25***	.24***	.15*	.28***
3. Conscientiousness			-.22***	.19**	-.03	-.06	.04	-.02	-.04	.10
4. Neuroticism				-.26***	.15**	.21***	.10	.07	.06	.12*
5. Openness					-.08	-.11	.02	.07	.00	-.03
LinkedIn features use										
6. Reacting to professional information						.54***	.44***	.25***	.29***	.40***
7. Following professional information							.44***	.28***	.24***	.39***
8. Posting for self-promotion								.43***	.34***	.39***
9. Engaging in strategic networking									.46***	.33***
10. LinkedIn Use intensity										.33***
11. Bridging social capital										

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ;  $N = 301$

**Table 3** Regressing bridging social capital on demographics, personalities, intensity of use, and LinkedIn features use

Predictors	Bridging Social capital $\beta$
Demographics	
Gender ( $M = 1$ )	-.01
Age	.00
Education level	-.03
Work experience	.03
$\Delta R^2$	.00
Personalities	
Extraversion	.00
Agreeableness	.18**
Conscientiousness	.05
Neuroticism	.08
Openness	-.05
$\Delta R^2$	.11
Intensity of LinkedIn use	-.07
$\Delta R^2$	.00
LinkedIn features use	
Reacting to professional information	.17**
Following professional information	.17**
Posting for self-promotion	.04
Engaging in strategic networking	.11#
$\Delta R^2$	.14
Interaction term	
Conscientiousness X Intensity of LinkedIn use	.18**
$\Delta R^2$	.03
$R^2$	.28
Adjusted $R^2$	.26
$F$	15.71***

#  $p \leq .1$ ; \* $p \leq .05$ ; \*\* $p \leq .01$ ;  
\*\*\* $p \leq .001$ ;  $N = 301$

strategic networking (with  $r$  ranging from .20 to .35,  $p < .001$ ). Likewise, the results of the regression analyses in Table 4 show that extraversion was a significant predictor of intensity of LinkedIn use ( $\beta = .16$ ,  $p < .01$ ), reacting to professional information ( $\beta = .30$ ,  $p < .001$ ), following professional information ( $\beta = .31$ ,  $p < .001$ ), posting for self-promotion ( $\beta = .31$ ,  $p < .001$ ), and engaging in strategic networking ( $\beta = .14$ ,  $p < .05$ ). Therefore, H2 is fully supported.

In Table 2, the correlation results show that agreeableness was significantly related to intensity of LinkedIn use ( $r = .15$ ,  $p < .05$ ) and all LinkedIn features use (with  $r$  ranging from .15 to .25, at  $p < .05$ ) except following professional information ( $\beta = .11$ ,  $p > .05$ ). Also in Table 4, the results of the regression showed that agreeableness was a significant predictor only of posting for self-promotion ( $\beta = .16$ ,  $p < .01$ ) and engaging

**Table 4** Regressing intensity of use and features use of LinkedIn on demographics and personalities

Predictors	Intensity of LinkedIn use		LinkedIn features use		Following professional information		Posting for self-promotion		Engaging in Strategic Networking	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Control variables</b>										
Gender ( <i>M</i> = 1)	.08	.00	.05	.06	.03	.05	.14*	.15**	.11	.12
Age	.17**	.18**	-.07	-.03	-.09	-.05	-.06	-.07	-.04	-.02
Education level	-.17**	-.15**	-.04	-.05	-.14*	-.12*	-.07	-.03	.01	.02
Work experience	-.09	-.10	-.03	-.02	-.04	-.02	-.14*	-.14*	-.11	-.10
										.00
<b>Personalities</b>										
Extraversion	.16**			.30***		.31***		.31***		.14*
Agreeableness	.07			.11		.07		.16**		.21***
Conscientiousness	-.06			.02		.01		.03		-.05
Neuroticism	.10#			.17**		.23***		.19***		.13*
Openness	-.07			-.12*		-.14*		-.07		.00
<i>R</i> <sup>2</sup>	.05	.08	.00	.11	.02	.16	.03	.20	.00	.09
Adjusted <i>R</i> <sup>2</sup>	.04	.07	.00	.10	.01	.14	.02	.19	.00	.08
<i>F</i>	8.20***		11.89***		13.59***		14.65***		9.41***	

# *p* ≤ .1; \**p* ≤ .05; \*\**p* ≤ .01; \*\*\**p* ≤ .001; *N* = 301

in strategic networking ( $\beta = .21, p < .001$ ). However, it was not a significant predictor of intensity of LinkedIn use, reacting to professional information, or following professional information. Therefore, H3 is only partially supported.

The correlation results in Table 2 show that conscientiousness was not significant in relation to intensity of LinkedIn use or LinkedIn features use. Similarly, in Table 4, the results of the regression also show no significant relationships. Therefore, H4 is rejected.

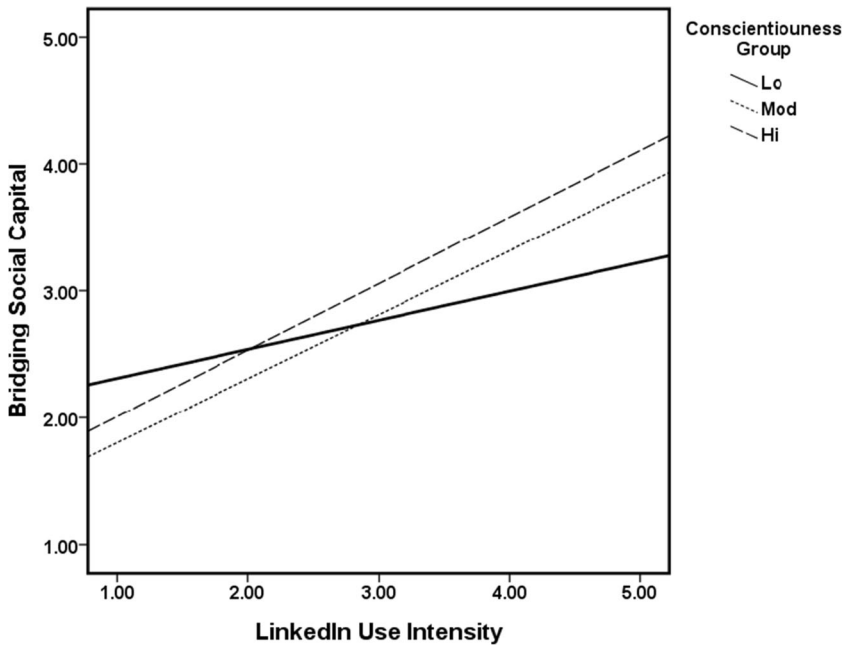
In Table 2, the correlation results show that neuroticism was significantly and positively related to only two dimensions of the features use (reacting to professional information:  $r = .15, p < .01$ ; following professional information:  $r = .21, p < .001$ ), while neuroticism was unrelated to LinkedIn use intensity and two other LinkedIn features use variables. The regression results in Table 4 also supported these relationships with LinkedIn use intensity, approaching significance ( $\beta = .10, p < .1$ ), and the four other LinkedIn features use variables were also significant, with beta ranges from .13 to .23 at  $p < .05$  level. Thus, H5 is largely supported.

The last personality type is openness. The correlation results in Table 2 did not find any significant relationships between openness and use intensity or any features use. However, the regressions results in Table 4 show that openness was significantly and negatively linked only to reacting to ( $\beta = -.12, p < .05$ ) and following professional information ( $\beta = -.14, p < .05$ ). Therefore, H6 is only partially supported.

A final set of analyses looked at the moderation effect of conscientiousness between LinkedIn use intensity and perceived bridging social capital. The results in Table 3 show that the interaction term (conscientiousness X intensity of LinkedIn use) significantly predicted perceived bridging social capital ( $\beta = .18, p < .01$ ) after controlling for LinkedIn users' demographics, personalities traits, use intensity, and features use. As illustrated in Fig. 1 this indicates that conscientiousness significantly moderated between intensity of LinkedIn use and perceived bridging social capital. It shows the stronger association between LinkedIn use intensity and bridging social capital for the higher conscientiousness individuals compared to the lower conscientiousness subjects.

### Predicting LinkedIn Use Intensity and Features Use

To address RQ1 regarding how demographics and personality traits can predict (a) LinkedIn use intensity and (b) LinkedIn features use, five multiple regressions were run with demographics and personality traits as independent variables and LinkedIn use intensity and the four LinkedIn features as dependent variables. As shown in Table 4, heavy LinkedIn users tended to be extraverted ( $\beta = .16, p < .01$ ), older ( $\beta = .18, p < .01$ ), and less educated ( $\beta = -.15, p < .01$ ) individuals. In terms of features use, the results also showed that those who reacted to professional information frequently on LinkedIn tended to be extraverted ( $\beta = .30, p < .001$ ), neurotic ( $\beta = .17, p < .01$ ), and less open ( $\beta = -.12, p < .05$ ) subjects. Similarly, participants who often followed professional information also tended to be extraverted ( $\beta = .31, p < .001$ ), neurotic ( $\beta = .23, p < .001$ ), less open ( $\beta = -.14, p < .05$ ), and less educated ( $\beta = -.12, p < .05$ ). The results also showed that extraverted ( $\beta = .31, p < .001$ ), agreeable ( $\beta = .16, p < .01$ ), neurotic ( $\beta = .19, p < .001$ ), male ( $\beta = .15, p < .01$ ) participants with less work experience ( $\beta = -.14, p < .05$ ) tended to post self-promotion more often on LinkedIn. Likewise, those who often



**Fig. 1** Interaction effect of intensity of LinkedIn use and conscientiousness on bridging social capital

engaged in strategic networking on LinkedIn tended to be individuals with extraverted ( $\beta = .14$ ,  $p < .05$ ), agreeable ( $\beta = .21$ ,  $p < .001$ ), and neurotic ( $\beta = .13$ ,  $p < .05$ ) personality. The amount of variance explained ranged from 7 to 19%.

### Predicting Bridging Social Capital

To answer RQ2, a hierarchical regression analysis was conducted to examine the factors (including personality variables, intensity of LinkedIn usage, and LinkedIn features use) that influence perceived bridging social capital. As shown in Table 3, no demographic characteristic was linked to bridging social capital. However, only the agreeable personality type was significantly linked to the perception of bridging social capital ( $\beta = .18$ ,  $p < .05$ ). To our surprise, despite a significant association between intensity of LinkedIn use and bridging social capital in the bivariate relationship (as indicated in Table 2), no significant relationship was found in the regression analysis. This result may be due to the dominant predictive power from personality traits and LinkedIn features use variables, as well as the interaction term in the regression equation. But, in LinkedIn features use, those who often reacted to professional information ( $\beta = .17$ ,  $p < .01$ ), followed professional information ( $\beta = .17$ ,  $p < .01$ ), and engaged in strategic networking ( $\beta = .11$ , though significant at  $p < .1$  level) tended to perceive that they had greater enjoyment from gaining bridging social capital on LinkedIn. The amount of variance explained was 11% for personality variables and 14% for LinkedIn features use predictors. The interaction term (conscientiousness X intensity of LinkedIn use:  $\beta = .18$ ,  $p < .01$ ) also contributed 3% additional variance for a total of 28%.



## Discussion and Conclusions

The main purpose of this exploratory study was to investigate the influence of LinkedIn users' personality traits, use intensity, and features use on their perceived bridging social capital. The results show that the most powerful blocks of predictors were from the LinkedIn features use, followed by personality traits and the interaction term. In particular, reacting, sharing, and following insightful professional information were the strongest predictors of perceived increase in bridging social capital, whereas posting for self-promotion had no significant effects. Although weak at  $p < .1$  level, engaging in strategic networking also showed some effects on bridging social capital. These findings indicate that creating visibility on LinkedIn by forwarding articles by other users, leaving likes or commenting on articles, following information about companies, and deliberately and strategically adding new contacts to expand the LinkedIn professional network are important and effective ways to be recognized and appreciated. It is reasonable to believe that users perceive these features as the most helpful in making themselves visible, presenting themselves in the best light, and in maintaining new contacts outside the company. By forwarding information and offering likes or comments, LinkedIn users participate in the LinkedIn community instead of being passive lurkers. This finding supports the assumption of the social exchange theory (Cropanzano and Mitchell 2005) that human relationships are formed by making subjective cost-benefit analyses and comparing alternatives. For example, in order for users to continue exchanging e-mail messages, participating in group discussions, or posting on personal Webpages, they must perceive that they benefit from the norms and rules of exchange in these interactions. Such benefits could be conceived as resources exchanged or bridging social capital gained.

Another interesting finding was that individuals with agreeable personalities perceived that they gained more bridging social capital by being active in LinkedIn. This finding may be because, unlike other SNS platforms, the primary motivation for LinkedIn use was career expansion. Thus, subjects with agreeable personality feel that LinkedIn is a positive site for meeting people and reacting to and commenting on professional information. Participants with higher levels of agreeableness tended to care about support from others and be interested in learning what happens to others. These findings indicate that agreeable people perceive that LinkedIn promotes contacting strangers and strengthening weak ties and relationships and that they use LinkedIn to expand their careers and increase their bridging social capital.

Although this study found no support for H1, which proposed a significant link between intensity of LinkedIn use and bridging social capital, it is worth noting that the interaction effect between conscientiousness and LinkedIn use was significant in predicting perceived bridging social capital, as depicted in Fig. 1. The data clearly show the stronger association between LinkedIn use and bridging social capital for the higher-conscientiousness individuals compared to the lower-conscientiousness subjects. This finding strongly supports what we proposed in H7. One interpretation could be that, as a computer-mediated platform, LinkedIn might facilitate communication, and perhaps alleviate fears of rejection or embarrassment, in initial social interaction for those who are overly cautious in their presentations of both themselves and others, as is often exhibited in highly conscientious individuals in the offline world. So, when they are heavy users of LinkedIn, LinkedIn provides them with a safe and protected

environment where they can interact with strangers without being too cautious. And as a result, they perceive a higher bridging social capital gained. However, as shown in Fig. 1, the lower-conscientiousness subjects appear to gain more in perceived bridging social capital as compared to the higher-conscientiousness subjects when both are not active LinkedIn users. This may be due to the fact that, with intensity of LinkedIn use being constant, higher-conscientiousness individuals may behave with more self-constraint or be more overly-conscientious as compared to the lower-conscientious people. They may think that LinkedIn is a waste of time and perceive that it has little or no effect on bridging social capital.

Another purpose of this investigation was to examine the impact of LinkedIn users' personality traits on their use intensity and features use. The results show that personality traits, in particular extraversion and neuroticism (though at .1 level), were significant predictors of the intensity of LinkedIn use, as well as use of the four LinkedIn features. This may be explained by extraverted people tending to be more active on LinkedIn and self-disclosing their current activities more often. It indicates that extraverts take full advantage of LinkedIn to obtain company or professional information, network with colleagues, satisfy the need to belong, and present their best side to people. This finding is consistent with previous studies on SNS that applied the "rich-get-richer" approach (Amichai-Hamburger and Vinitzky 2010; Correa et al. 2010; Ehrenberg et al. 2008; Gosling et al. 2011; Ryan and Xenos 2011; Seidman 2013; Wilson et al. 2010).

As for neuroticism, the present study also found that neurotic personalities used LinkedIn for information needs by reacting or following, for a sense of belonging by self-promoting, and for career expansion by engaging in strategic networking. These findings support previous studies indicating that neuroticism and the need for a sense of belonging were significantly linked (Amiel and Sargent 2004; Moore and McElroy 2012). Furthermore, a possible explanation is that because neurotic people are more prone to anxiety, they need to gather information on LinkedIn about the company, industry, and the competitors when they prepare for a job interview. This information would provide them with more knowledge about the company and yield greater opportunities to expand their career. Thus, the hypotheses (H2 and H5) that more extroverted and neurotic users will report higher intensity of LinkedIn use, react more often to professional information, follow professional information more frequently, post more often for self-promotion, and engage more in strategic networking LinkedIn features were indeed supported.

This study also found significant relationships between agreeableness and posting for self-promotion and engaging in strategic networking but not with intensity of LinkedIn use. These findings are in line with previous findings that agreeableness was a significant predictor of belongingness-related behaviors (Seidman 2013) and that agreeable people tended to stay connected to others (Gosling et al. 2011; Wang et al. 2012). These findings supported H3.

The literature suggests that conscientious people may spend less time on Facebook (Amichai-Hamburger and Vinitzky 2010); therefore, this study also proposed that there would be a negative relationship between conscientiousness and LinkedIn use intensity and four features use (as in H4). However, contrary to this expectation, conscientiousness was not a significant factor. This finding might be because, unlike Facebook, which is a social-oriented SNS that is often used for relaxation and socialization, LinkedIn is mainly a business- and employment-oriented SNS that is used for

professional networking, such as employers posting jobs and job seekers posting CVs. Conscientious people are goal-oriented, organized, and concerned about their professional identities, job performances, and work proficiencies. Consequently, individuals would take advantage of the LinkedIn platform to assist in their professional development, regardless of their higher- or lower-conscientiousness personality types.

Another surprising finding was that openness was not a positive predictor of use intensity or the use of all four features, as proposed in H6. Instead, it was found to be negatively related to reacting to and following professional information. This finding might be because open personalities tend to have more friends and engage in more activities. Thus, the need to get professional information on LinkedIn may not be their primary motivation, or LinkedIn may not be their primary channel. They could obtain industry information from other sources, such as close friends and colleagues at the office.

## Implications

The findings of this study have several important implications. First, this study tested the links established in previous SNS research between the Big Five personality factors and the intensity of LinkedIn use. The findings showed that both neurotic and extraverted personalities were more likely to use LinkedIn and the four LinkedIn features as characterized by Utz (2016). This finding implies that LinkedIn users with these personality traits are potential heavy PNS users and, therefore, that PNS operators should target these demographics.

Second, a LinkedIn connection is regarded as “professional and formal” rather than “friendship and casual,” like links established through other SNS, such as Facebook, which promotes personal and relaxed relationships. Unlike other SNS, LinkedIn is perceived as useful for career development rather than for entertainment. Thus, previous research findings regarding SNS may not be applicable to PNS. The unique features of PNS should be further examined. Moreover, the findings imply that LinkedIn usage is mainly motivated by career expansion and the need for company information. Therefore, helping employees and especially job seekers to reach out, learn about their industry and the professional world, and seek new opportunities conveniently and efficiently is an important direction for the future development of PNS.

Third, considering the insignificant relationship between the intensity of LinkedIn use and perceived bridging social capital, exploring other moderating and/or mediating pathways in helping young professionals gain access to social capital on PNS may also be another direction for PNS development. PNS platforms could provide additional resources, such as job counseling, tips on resume preparation, interview skills, and community groups for sharing ideas and information about employment. Such resources would greatly enhance the perception of LinkedIn as having an inventory of support that could help LinkedIn users to gain bridging social capital.

## Limitations and Suggestions for Future Studies

This exploratory study is limited by its use of cross-sectional data and a non-probability sample. Moreover, although the study explored features of LinkedIn use, the current

items might not have covered all the dimensions of the features available in LinkedIn. Hence, future research should expand the item pool and revise the dimensions of this construct. Another weakness is the low Cronbach's alpha at .64 for the intensity of LinkedIn use which was assessed by three items. This raises the question in the internal consistency of the composite measure. As pointed out by Reis (1994) that there is a danger that respondents may not be able to "remember all relevant instances" and "conduct the mental arithmetic needed to produce a summary judgement" (pp. 91–92). We re-run the regression analyses with the three single items (i.e., frequency of use, time spent each time, and number of contacts they have) as dependent variables separately. However, the amount of variance explained dropped substantially. Therefore, we use the composite measure to assess the intensity of LinkedIn use. Future research should pay close attention to this methodological limitation.

In addition, because the questionnaire was distributed through InMail (i.e., a function of LinkedIn), it is likely that participants with a higher intensity of LinkedIn use were over-sampled. Because employees in certain fields, such as human resource managers looking for potential hires and sales staff looking for clients, are more likely to use LinkedIn intensively, it is possible that the participants working in these fields were also over-sampled. Future studies should use a probability sample to increase the response rate and the representativeness of the results. The occupations of the respondents could also be used as a control variable. Moreover, in this study, the respondents aged 33 years or above (47.8%) and with work experience of 11 years or more (43.2%) were over-represented. In future studies, the respondents' demographic information should be taken into account in drawing accurate conclusions based on the results. Also, as the ethnicity of the sample was mostly Chinese, results of this study may not be generalizable to other culture.

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