

## EXAMINING MICROBLOGGERS' INDIVIDUAL DIFFERENCES IN MOTIVATION FOR SOCIAL MEDIA USE

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Examining individual differences in the intrinsic motivations for social media use is essential for determining what causes individuals to enjoy using social networking sites and to engage more consistently in online activities. We analyzed data obtained from a survey of 227 users of social networking sites in China. We tested the hypothesized model using structural equation modeling. Research findings revealed that personality traits are the best predictors of intrinsic motivations for social media use. The Big Five traits of agreeableness and extraversion positively affected social interaction and self-presentation, whereas conscientiousness negatively affected self-presentation. Additionally, the results indicated that demographic variables of age and gender affect intrinsic motivations for social media use. Compared with females, males were more likely to utilize social media to express themselves and expand their social interactions. Moreover, participants older than 25 years demonstrated a lower level of self-presentational needs than did those aged 25 and younger. Our findings further confirm that differences among individuals, largely rooted in personality traits and demographic characteristics, contribute to various motivations for social media use.

*Keywords:* social media use, intrinsic motivation, individual difference, agreeableness, extraversion, conscientiousness.

With the fast growth of social collaborative technologies over the last decade, people have been able to become increasingly inclined towards cultivating their virtual social relationships and virtual life on social media sites on the Internet (Leimeister, Sidiras, & Krcmar, 2006). On these social networking sites users can interact with others, and they are able to create an online public profile that

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reflects their interests, activities, and real-world connections (Qiu, Lin, Ramsay, & Yang, 2012). Moreover, in this space, individual preferences, relationships, and ideologies can converge and be displayed simultaneously (Sun & Wu, 2012). In recent years, microblogging has been gaining popularity in China. A *microblog* is a type of social network platform that is a simplified form of a blog in content, in which the focus is on communication and immediate interaction with other users (Lai & Yang, 2015). For instance, microblog users post self-relevant information to interact with friends, companies run advertisement campaigns, and journalists use the platform to gather information, disseminate news items, and express ideas as opinion leaders (Swasy, 2016). As of the final quarter of 2015, Sina Weibo, which is a leading microblogging service in China, had more than 2.36 million monthly active users (Weibo Corporation, 2016). Because of the richness and availability of process-generated complete network data, the microblog has been regarded as an ideal web-based platform to test human psychological traits and individual behavior differences, and has begun to attract the attention of scholars (Lai & Yang, 2015; Zhang & Pentina, 2012).

With regard to what drives people to use social media, in the uses and gratifications theory it is posited that users choose specific media to satisfy their specific individual needs; this theory is often used as a framework to assess user motivations for media use and access. Based on the uses and gratifications theory, McQuail, Blumler, and Brown (1972) suggested that the uses of different types of communication media can be divided into four categories: (a) to serve as a diversion, (b) to foster personal relationships, (c) to help define an individual's personal identity, and (d) to serve as a surveillance tool. On the basis of the vast literature on the social and psychological functions of mass media, Katz, Gurevitch, and Hass (1973) focused on the most basic needs for mass media and identified 35 needs fulfilled by the use of mass media, grouping them into five categories: cognitive needs, related to strengthening the individual's information, knowledge, and understanding; affective needs, related to strengthening aesthetic, pleasurable, and emotional experience; personal integrative needs, related to strengthening credibility, confidence, stability, and status; social integrative needs, related to strengthening contact with family, friends, and the world; and tension release needs, related to the weakening of contact with self and one's social roles. With the development of web-based technologies and mobile technologies, social media may provide highly interactive platforms for users, so the needs of users are changing. The interactive nature of the Internet gives users access to a vast amount of information and offers them numerous interactive functions. In particular, social media platforms such as Facebook, Myspace, and microblogging sites not only offer users a platform to create more original content but also to facilitate interpersonal communication (Lai & Yang, 2015; Park, Kee, & Valenzuela, 2009; Wang, Tchernev, & Solloway, 2012). Thus, in the context of

microblogging, the vast majority of the user needs described here can be summed up by two intrinsic motivations: social interaction and self-presentation.

*Motivation* refers to the reasons for an individual's actions, desires, and needs (Elliot & Covington, 2001). In modern theories of motivation a cycle is emphasized in which thoughts influence behaviors, behaviors drive performance, and performance impacts thoughts. Empirical researchers have suggested that social media sites are beneficial for users by providing them with the ability to share knowledge and gain access to potential future possibilities (Sin & Kim, 2013). These benefits motivate more users to participate in social media.

*Social interaction* reflects a dynamic sequence of social actions between two or more individuals and is the basis of forming social relationships (Lehmann & Rousset, 2014). *Self-presentation* reflects a behavior that is designed to convey an individual image of a person to other people (Baumeister, 1982). Researchers have shown that individuals use social media in different ways according to their characteristics and to fulfill different needs (Błachnio, Przepiórka, & Rudnicka, 2013). Although human interaction, socializing, and communication activities are all moving to online platforms, people who are liked in online contexts also tend to be liked offline. Indeed, Kosinski, Bachrach, Kohli, Stillwell, and Graepel (2014) found that individuals' online behaviors tend to mirror the expectations of an individual with distinct offline personality traits (e.g., extraversion, agreeableness, and conscientiousness). For example, *extraversion* describes the tendency to be outgoing, amicable, assertive, energetic, talkative, and sociable (Deng, Liu, Li, & Hu, 2013), whereas *introversion* describes the tendency to be reserved and solitary (Amichai-Hamburger & Vinitzky, 2010). In psychological tests it has been suggested that in the virtual world extraverts pursue social enhancement, whereas introverts tend to seek social compensation (Mehdizadeh, 2010; Zywica & Danowski, 2008). Analogously, psychologists claim that individuals who score high in agreeableness are peacekeepers who are generally optimistic and trusting of others, whereas conscientious individuals are extremely reliable and tend to be high achievers, hard working, and planners. Seidman (2013) found that conscientious individuals tend to be self-disciplined, and that individuals with low conscientiousness scores have a greater self-presentational need than their peers have. Moore and McElroy (2012) found that extraversion and agreeableness were positively related to social media use. In particular, in recent research results have indicated that outer behaviors are the manifestation of inner personality traits (Kosinski, Stillwell, & Graepel, 2013; Marshall, Lefringhausen, & Ferenczi, 2015), and that individuals' observable online activities are closely connected to their elemental traits and motivations (Scott, 2014). Thus, we proposed the following hypotheses:

**Hypothesis 1:** Agreeableness will positively affect social interaction in social media use.

**Hypothesis 2:** Agreeableness will positively affect self-presentation in social media use.

**Hypothesis 3:** Conscientiousness will negatively affect social interaction in social media use.

**Hypothesis 4:** Conscientiousness will negatively affect self-presentation in social media use.

**Hypothesis 5:** Extraversion will positively affect social interaction in social media use.

**Hypothesis 6:** Extraversion will positively affect self-presentation in social media use.

In addition, empirical findings from studies on use of social network sites (SNSs) have shown that SNS use differs depending on demographic characteristics (e.g., age, gender, and level of education). For example, Barker (2009) focused on gender differences in usage patterns of SNSs and found that females tended to use SNSs for communication, whereas males were more likely to use them to seek social identity gratification (i.e., the possibility of identifying with group members who share similar characteristics). With respect to age differences in the usage patterns of SNSs, Kuss & Griffiths (2011) and Livingstone (2008) showed that adolescents and university students were more likely than adults were to use SNS features of sharing information, social searching, and self-presentation. Furthermore, Jackson and Wang (2013) considered cultural differences in SNS use and found that U.S. participants spent more time on SNSs than did Chinese participants. In a study in which they specifically investigated the use of social media sites, Vošner, Bobek, Kokol, and Krečič (2016) found that age, gender, and level of education seemed to be the most important factors. Based on the findings in these previous studies and on the distinct personality traits we examined, we proposed the following hypotheses:

**Hypothesis 7:** Women will tend to have more motivation for social interaction on social networking sites than will men.

**Hypothesis 8:** Women will tend to have more motivation for self-presentation on social networking sites than will men.

**Hypothesis 9:** Individuals in the age group up to 25 years will tend to have more motivation for social interaction on social networking sites than will individuals older than 25 years.

**Hypothesis 10:** Individuals in the age group up to 25 years will tend to have more motivation for self-presentation on social networking sites than will individuals older than 25 years.

Recently, researchers have shown that self-presentation on Facebook is a good means of expression (E. Lee, Ahn, & Kim, 2014), and that self-presentational activities, such as posting photographs, profile information, and emotional disclosure, can enhance personal identity and increase offline social network size

(Seidman, 2013). Similarly, Sung, Lee, Kim, and Choi (2016) found that positive reactions and feedback received from social connections on SNSs may encourage emotionally closer relationships with network members and increase the user's popularity on SNSs. In the studies we have cited inherent associations between self-expression and social interaction have been implicitly expressed. Thus, we proposed the following hypothesis:

**Hypothesis 11:** Self-presentation will positively affect an individual's social interaction on social networking sites.

## Method

### Participants

To avoid possible bias introduced by cultural differences, we selected participants for this study only in China. We received 312 responses over 4 weeks, of which 227 were valid; we discarded 85 respondents who either reported having had no microblogging experience or having had fewer than 12 months experience. Among the 227 valid responses, 96 (42.3%) were from men, and 131 (57.7%) were from women. With regard to age, 103 (45.4%) of the participants were 25 years old and under, 124 (54.6%) were older than 25 years, and the mean age was 24.5 years. With regard to educational background, 42 (18.5%) of the participants held a high-school certificate or lesser qualification, 146 (64.3%) had completed college/vocational training after high school, and 39 (17.2%) had a university degree or higher academic qualification.

### Measures

To test the proposed hypotheses, we designed a structured survey that comprised a 23-item inventory made up of five subscales (see Table 1): extraversion (four items), agreeableness (five items), conscientiousness (six items), social interaction (four items), and self-presentation (four items). A 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) was used to measure each indicator of the latent variables. The survey was hosted on a popular survey-hosting site in China. Survey announcements were made through popular portals such as Baidu Post Bar, Sina Weibo, and Renren. Participants who visited the online survey link through any of the announcement channels were asked to provide their microblogging user name and demographic information (i.e., sex, age, and education level). In return for taking part, all respondents were eligible to participate in a raffle for 100 top-up prepaid mobile phone cards valued at US\$8.

Table 1. *Measurement Model for Motivations for Social Media Use*

Constructs	List of items	Source
Extraversion a = .830, CR = 0.831, AVE = 0.714	EX 1: I make parties come alive. EX 2: I feel comfortable around people. EX 3: I start conversations with people. EX 4: I don't mind being the center of attention.	Karim, Zamzuri, & Nor (2009)
Agreeableness a = .819, CR = 0.823, AVE = 0.696	AG 1: I sympathize with others' feelings. AG 2: I have a soft heart. AG 3: I take time out for others AG 4: I feel others' emotions. AG 5: I make people feel at ease.	Karim et al. (2009)
Conscientiousness a = .941, CR = 0.939, AVE = 0.801	CO 1: I am always prepared. CO 2: I pay attention to details. CO 3: I get chores done right away. CO 4: I like order. CO 5: I follow a schedule. CO 6: I am exacting in my work.	Karim et al. (2009)
Social Interaction a = .930 CR = 0.812, AVE = 0.713	SI 1: I think that using microblogging can let me interact with my friends instantly. SI 2: I think that using microblogging can let me interact with people I know instantly. SI 3: I think that using microblogging can make me keep contact with my friends. SI 4: I think that using microblogging can make me keep contact with people I know.	Lai & Yang (2015)
Self-presentation a = .825, CR = 0.833, AVE = 0.768	SE 1: I would intimately, openly, and fully disclose who I really am in my post when microblogging. SE 2: When I reveal my feelings about myself while microblogging, I consciously intend to do so. SE 3: I often express my personal beliefs and opinions when microblogging. SE 4: My statements about my own feelings, emotions, and experiences when microblogging are always accurate self-perceptions.	Lai & Yang (2015)

*Note.* EX = extraversion, AG = agreeableness, CO = conscientiousness, SI = social interaction, SE = self-presentation.

### Procedure

Elemental traits represent basic individual differences that generally consist of personality traits (e.g., agreeableness, conscientiousness, and extraversion)

and demographic characteristics (e.g., age and sex). To examine the differences among individuals in their intrinsic motivations for microblogging, and to clearly identify the effects of individual elemental traits on their microblogging patterns, we chose to use Bayesian structural equation modeling (Bayesian SEM; Zyphur & Oswald, 2015) rather than the usual maximum likelihood estimation (S. Y. Lee & Shi, 2001). The Bayesian SEM approach can be used to test the inherent associations between individuals' elemental traits and their intrinsic motivations. Bayesian estimation can also better address nonstandard models (Cai, Song, & Lee, 2008), such as models with categorical variables (e.g., age and sex). We conducted a Bayesian SEM analysis by using SPSS Amos 20. The theoretical model is shown in Figure 1.

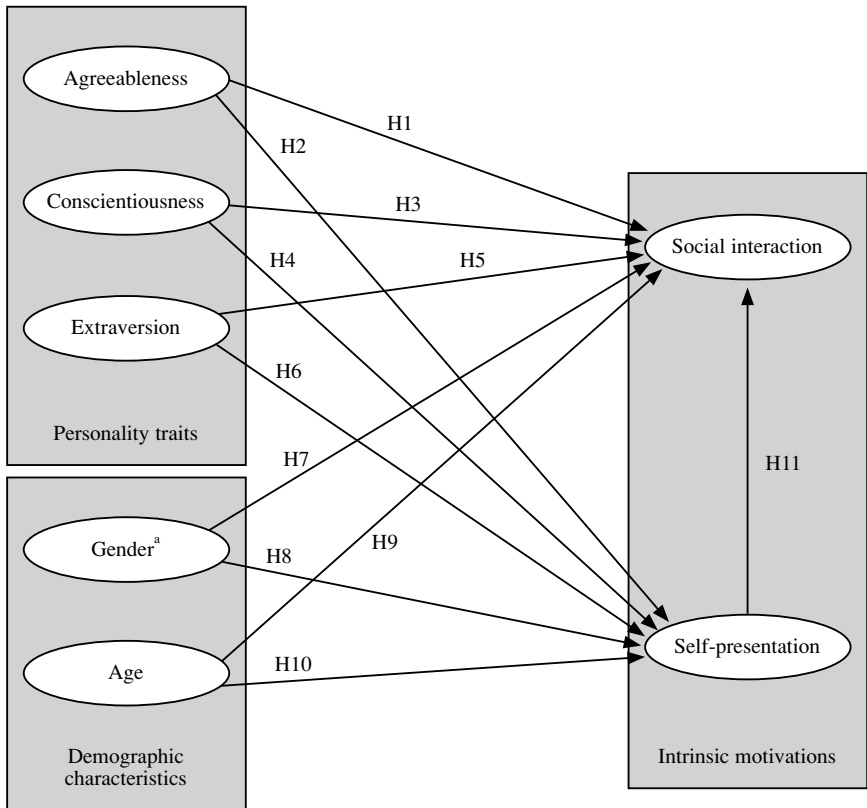


Figure 1. Theoretical model.

<sup>a</sup> = dichotomous variable, 0 = male, 1 = female.

**Results**

In the Bayesian SEM method, Markov chain Monte Carlo estimation is used, in order to repeatedly sample from the dataset and generate a substantial number of estimates for each model parameter. The posterior probability distribution of each parameter can then be estimated. Bayesian SEM is used to evaluate the measurements using a different model from maximum likelihood estimation.

A convergence statistical value of less than 1.002 indicates that the model has converged; our model yielded a convergence statistical value of 1.0005 (see Table 2). For Bayesian models with categorical outcome variables, posterior *p* distribution is generally used to measure the fit of the model; a value closer to 0.5 suggests a better model fit, whereas a value closer to 0 or 1 shows a poor fit.

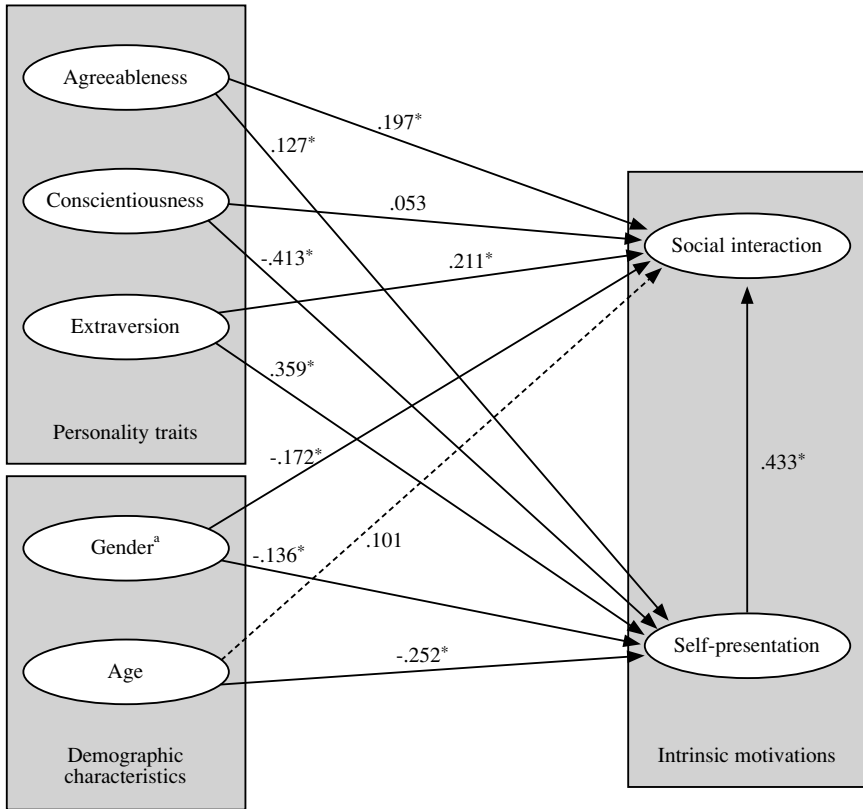


Figure 2. Results of analysis of study model.

<sup>a</sup> = dichotomous variable, 0 = male, 1 = female. Statistically significant paths are represented by solid lines and nonsignificant paths are represented by dotted lines. Numbers on the paths indicate standardized direct effect coefficients. \* *p* < .05.

The statistical significance of each parameter can be assessed by the Bayesian credible interval. When the Bayesian 95% credible interval does not contain zero, the parameter is statistically significant (Arbuckle, 2009). In our study the posterior  $p$  distribution of the hypothesized model was .31.

Table 2. *Bootstrap Analysis of the Test for Significance of Mediating Effect*

Path	Standardized indirect effects estimation	Point estimate	95% CI	
			lower limit	upper limit
Agreeableness →				
Self-presentation →	$0.127 \times 0.433 = 0.055$	0.056	0.017	0.096
Social interaction				
Conscientiousness →				
Self-presentation →	$-0.413 \times 0.433 = -0.179$	-0.178	-0.259	-0.098
Social interaction				
Extraversion →				
Self-presentation →	$0.359 \times 0.433 = 0.155$	0.156	0.086	0.226
Social interaction				
Gender →				
Self-presentation →	$-0.136 \times 0.433 = -0.059$	-0.060	-0.110	-0.011
Social interaction				
Age → Self-presentation →	$-0.252 \times 0.433 = -0.109$	-0.108	-0.188	-0.027
Social interaction				

The results from the model are shown in Figure 2. The parameter represents the standardized changes in a response variable when a predictor variable changes, while holding all other variables in the model at their mean values. Nine of the 11 hypotheses were supported. Agreeableness directly affected social interaction and self-presentation. Conscientiousness had a significant negative effect on self-presentation. However, conscientiousness was not a direct determinant of social interaction. As predicted, results showed support for the direct effects of extraversion on both social interaction and self-presentation. Similarly, results suggest that females had less of a need for social interaction and self-presentation than did males. Against our expectation, age had a negative direct effect only on self-expression, and the direct effect on social interaction was nonsignificant. In addition, self-presentation significantly affected social interaction, thus supporting H11.

Because we had found that the relationship between self-expression and social interaction was significant, we then tested for the mediating effect of

self-expression on personality traits (agreeableness, conscientiousness, and introversion), demographic characteristics (age and gender), and social interaction relationships, by generating 95% confidence intervals for indirect effects using 500 bootstrap samples from the original data ( $N = 227$ ; Shrout & Bolger, 2002). If the 95% confidence interval does not contain zero, an indirect effect is statistically significant. The results suggest that self-presentation had significant mediating effects. As shown in Table 2, agreeableness had a positive indirect effect on social interaction via self-presentation, which then had significantly positive direct effects on social interaction. Analogously, conscientiousness and age had negative indirect effects on social interaction via self-presentation. Finally, both extraversion and gender had indirect effects on social interaction.

## Discussion

Despite the individual interests or perceived intentions that underlie social media use (e.g., social enhancement), there is a lack of understanding of the differences and similarities in motivation for social media use (Brandtzæg, Lüders, & Skjetne, 2010). In this study we have attempted to increase understanding about motivations to use social media by examining the inherent associations between individuals' elemental traits and their intrinsic motivations.

Consistent with our predictions, we found that agreeableness and extraversion were the strongest predictors of intrinsic motivations for social media use because each of these factors had significant positive direct effects on both social interaction and self-presentation. However, our findings indicated that the participants in our study who scored high on the personality trait of agreeableness tended to have a greater need for social interaction with others than for self-presentation in a virtual environment, whereas the participants who scored high on the trait of extraversion tended to engage in more online self-presentation than other users did. Conscientiousness had a negative effect on self-presentation but did not influence social interaction. A possible reason for this result is that conscientious individuals prefer to establish high-quality interpersonal relationships (Asendorpf & Wilpers, 1998), and it has been found that they tend to be more cautious than other people are and strive to control their social media environment (Błachnio et al., 2013). Our results corroborate the assertion that personality traits are particularly tied to the behavior patterns, cognition, and emotions of individuals.

In empirical research it has also been suggested that women use SNSs more often than men do (Moore & McElroy, 2012). However, in our analyses of the gender differences of our participants in their intrinsic motivations for social media use, we found that the men were more likely to utilize social media as an effective medium to make friends and contacts, and were willing to take

more risks than the women were with regard to the disclosure and exchange of personal information, all of which means that men tend to use social media more frequently than women do. Prior researchers have suggested that individuals aged 40 years and older tend to use SNSs to chat with old friends and family, whereas it has been found that people aged from 10 to 19 years preferred online interactions like sharing videos and games with their peer group (Brandtzæg et al., 2010; Livingstone, 2008). Our findings also indicated that there are age differences in use of SNSs for self-presentation. The participants who were aged up to 25 years had a more distinct motivation than did those aged over 25 years to actualize their identities or express their authentic self on SNSs. Because our result was not consistent with those reported in previous studies (Kuss & Griffiths, 2011; Pfeil, Arjan, & Zaphiris, 2009), we were surprised that we did not find any difference in the frequency of social interaction as an intrinsic motivation according to age. A possible reason for this is that there were limitations with our sample in that most of the participants in our study were between 20 and 35 years old, which, according to monitoring data obtained by Sina Weibo, is the age group in which individuals are generally members of significantly more groups on microblogging platforms than any other, and have a more focused and frequent usage pattern. Therefore, because of a lack of empirical evidence in our study, it remains unclear whether or not people older than 25 years have a need similar to those under 25 for staying connected and socializing with their friends and whether or not they use social media excessively.

In accordance with Hypothesis 11, self-presentation had a significant direct influence on our participants' social interaction. This result indicates that self-presentation can enhance the success of a social interaction. This mechanism may serve as a preliminary explanation for the motivation behind self-disclosure and emotional disclosure. Most forms of social media, such as forums, blogs, and SNSs, allow users to construct images of themselves, to establish a personal identity in their online profiles. On these social media platforms, constructing a positive self-image can help users acquire more social capital through gaining recognition from audiences (Cheung, Chiu, & Lee, 2011; Ellison, Steinfield, & Lampe, 2007). As suggested in previous literature (Simon, Brexendorf, & Fassnacht, 2016; Sung et al., 2016), winning a favorable impression from others allows individuals to maintain their existing relationships or expand the number of fans within their social network. To control or guide the image of themselves for the audience, users need to devote time and effort to portraying themselves as competent and effective people (Cheung et al., 2011; Sledgianowski & Kulviwat, 2009). In general, the strategies people use to achieve this are updating their status, sharing special events, posting comments, and/or retweeting others' posts frequently. However, use of these types of impression management may reinforce excessive social media use and ultimately bring about serious negative

consequences of cyber-relationship addiction and net compulsions (Kuss & Griffiths, 2011). In our study in the social interaction items in the survey we focused only on participants' interactions with friends they were already acquainted with, or people they knew. As users tend to interact with people who are familiar or identifiable in a virtual environment, we ignored broadening interactions with unidentified people in our analysis.

In our research we have extended past work on personality traits and on individuals' major motivations for social media use. Our findings offer several theoretical and practical implications. From a theoretical point of view, our findings can partially explain why people choose to use social media, and what drives them to continue to use social media. Our results suggest that differences among individuals are rooted in personality traits and demographic characteristics, which contribute to various motivations for social media use. From a practical point of view, our results contribute to several new insights for social media providers in enhancing *user stickiness*, that is the user's attitude toward the website and the level of his or her attachment to it (Chen, Chien, Wu, & Tsai, 2010). We note that most social media serve not only as a content-driven broadcasting service but also as an interactive platform. The interactive function of social media and the corresponding possibilities can satisfy or compensate for intrinsic needs (i.e., information seeking and emotional disclosure) that are unmet in a real-world setting (Masur, Reinecke, Ziegele, & Quiring, 2014). Moreover, some opinion leaders, that is, those who have many followers on social media, who can obtain more media coverage than others can, and who play a crucial role in disseminating information via social media (Li & Du, 2017; Zhang, Zhao, & Xu, 2016), may enjoy an advantage from their position and benefit from network effects. Thus, developing and optimizing SNSs for users—for example, by developments such as impersonal information retrieval facilities, influential user rankings, and specific image extracting—is important in encouraging users to continue using particular forms of social media.

A major limitation of our study was that we restricted our investigation of microblogging to Chinese users. Future researchers should focus on the motivations of users from different cultural backgrounds. Second, in our study we examined only the association between individuals' demographic characteristics of age and gender, and their intrinsic motivations, with regard to social interaction and self-presentation. However, it has been shown that online behaviors tend to mimic what could be expected of an individual with some specific offline personality traits (Eftekhar, Fullwood & Morris, 2014). Therefore, in future studies, researchers should introduce motivation as a bridge between personality and behavior, and should examine a cascading set of influences from personality traits, to intrinsic motivation, to online behavior.

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