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What is This?

Article

Determinants of individuals' self-disclosure and instant information sharing behavior in micro-blogging

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Abstract
Micro-blogging is a new social networking service (SNS) that can be viewed as an easily accessible, simplified blog. The simple and swift spread properties of micro-blogging make it different to the conventional SNS. However, little empirical results were provided in prior literature to elaborate individual's behavior of micro-blogging use. Consequently, this study aims to explore the possible influence of individuals' motivations on their self-disclosure and instant information sharing behavior as well as the extent of perceived social support in micro-blogging. Individuals who had experiences on Plurk usage were invited as subjects. The partial least squares (PLS) was utilized to examine the proposed model and hypotheses. Analytical results indicate that *popularity* and *interpersonal* needs significantly influence individual's *self-disclosure*, while *interpersonal* and *entertainment* needs significantly influence individual's *instant information sharing* behavior. Moreover, both individual's *self-disclosure* and *instant information sharing* behavior have a positive relationship with the perceived extent of *social support*.

Keywords
Instant information sharing, micro-blogging, motivation, Plurk, self-disclosure, social networking services

Introduction

Micro-blogging is a social networking service (SNS) that has emerged in recent years. Users post short messages on personal pages, which can then be viewed via multiple channels including on the web, over mobile devices, or via instant messaging software.

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The result resembles an easily accessible, simplified blog. Users can control who sees their post, making them available to the general public or only to specific users. Although micro-blogging services have been around for less than a decade, many popular micro-blogging service providers have already attracted hundreds of millions of users. For instance, Twitter has over 200 million active daily users who create over 400 million tweets per day (Wickre, 2013). Plurk, a widely used service in the Chinese-speaking world, has over a million active daily users, with Taiwan contributing to about 30% of its traffic (Alexa Internet Inc., 2014). These significant numbers have indeed received growing attention from both academics and SNS providers. Compared to Twitter, Plurk present the posts in horizontal form through a scrollable timeline. Furthermore, Plurk design a mechanism named "Karma," which represents the level of activity participation of each member. Higher Karma value allows users to post messages with additional emoticons.

Micro-blogging can be viewed as a new type of SNS due to two major distinctions from conventional SNS. First, the number of words in a post is limited in micro-blogging (usually fewer than 140 words). Second, the means of message delivery in micro-blogging are diverse, and therefore, messages can be conveyed swiftly. These two features distinguish micro-bloggers from conventional SNS users in both motives and behavior. For example, many past studies have investigated and provided empirical evidence regarding self-disclosure behaviors on SNS (e.g. Christofides et al., 2009; Ledbetter et al., 2011). It is pointed out (Chen et al., 2013; Derlega et al., 1993; Pachankis, 2007) that self-disclosure was the foundation of building closer relationships with others. Restated, interpersonal relationships can be developed and maintained through SNS, through in-depth self-disclosure and interaction. However, simplified user profile pages and limited post lengths may restrain the self-disclosure of micro-bloggers. Furthermore, the sharing of information and knowledge among virtual communities has also been a common topic in prior studies, whereas the instant message delivery style of micro-blogging is bound to influence the sharing behavior of individuals. Thus, the motivations and using behavior with regard to self-disclosure and instant information sharing in micro-blogging may be different from the use of conventional SNS.

Recently, many studies have put attention on micro-blogging use in various contexts, such as privacy issue (Einspänner, 2013; Jin, 2013), personality expression (Qiu et al., 2012), marketing effect (Ikeda et al., 2013; Rui et al., 2013), and so on. Nevertheless, little research has been conducted to provide empirical evidences about individual's motivations as well as behavior in micro-blogging usage. Consequently, it may be interesting to explore the possible motivations and behavior related to the micro-blogging use.

The purpose of this study is to investigate what drive individuals to engage in self-disclosure and instant information sharing on micro-blogging websites. Moreover, we are also concerned with the perceived possible social support owing to the use of micro-blogging. Based on prior literature, this study proposes a research model that seeks to (a) explore individual's motivation of micro-blogging use (i.e. self-disclosure and instant information sharing behavior), (b) examine the influence of micro-blogging use on individual's perceived social support, and (c) compare the difference between general SNS and micro-blogging.

The remainder of this article is organized as follows. Section "Literature review and hypotheses development" reviews the theoretical foundations, and develops the research model and hypotheses. Section "Research design and methodology" describes the research methodology. Section 4 presents the statistical analysis results with discussion. Finally, implications and limitations are discussed in section "Conclusion."

Literature review and hypotheses development

Self-disclosure

Self-disclosure refers to an individual's disclosure of her/his information to others in the form of words (Derlega et al., 1993). The contents may include factual information, personal thoughts, or emotions (Chelune, 1979). A broader definition states that any statements made by individuals about themselves can be regarded as self-disclosure (Derlega et al., 1993), whereas a narrower view defines self-disclosure as a behavior disclosing only personal and private information (Chelune, 1979). Derlega et al. (1993) indicated that an individual discloses information about himself or herself during his or her communication with others for the sake of personal information exchange. For this reason, self-disclosure can be regarded as the foundation of closer relationships with others.

Previous researchers have discussed the self-disclosure of individuals on the Internet and even on SNS from various perspectives. Barak and Gluck-Ofri (2007) categorized different types of self-disclosure behavior on Internet forums. Cho (2007) focused on understanding how gender and different motives influence the intention, frequency, depth, positive and negative content, and authenticity of self-disclosure by young adults in online chat rooms. Leung (2002) investigated similar mechanisms in instant messaging software. In SNS self-disclosure, Christofides et al. (2009) studied the behavior and control of self-disclosure displayed by individuals on Facebook. Ledbetter et al. (2011) also suggested self-disclosure as a predictor of individual Facebook communication and relational closeness. However, the limitation of post length in micro-blogging may cause user differ in ways of self-disclosure. In other words, what kind of individual needs would fulfill through self-disclosure in micro-blogging may differ from that of general SNS.

Considering the context of micro-blogging, this study suggested two individual needs including popularity needs and interpersonal needs, which may lead individuals to engage in self-disclosure in micro-blogging. First, in terms of popularity needs, it was a widely discussed motive in prior studies regarding SNS and online communities. Many psychological studies have indicated that popularity is an important social factor for teenagers. For instance, Boyatzis et al. (1998) stated that attractiveness and academic achievements influence the popularity of teenagers among their peers, and the significance of attractiveness is considerably greater than that of academic achievements. Unattractive students are considered to be unpopular no matter how well their grades are. Zakin (1983) observed that students are more likely to choose attractive individuals to establish relationships with. Popularity needs matter a great deal to teenagers and even influence their performance at school.

Popularity can also be reflected in online communities. For an SNS, popularity is an influential factor for both individual users and the website itself. The popularity of an SNS determines whether it can attract more users, and the popularity of an individual decides whether the individual can establish more relationships with other individuals. Therefore, both websites and individuals have popularity needs. Nardi et al. (2004) studied the motivations of individuals blog use and discovered that making a record of the small things in their lives is a strong motive for most bloggers. Christofides et al. (2009) identified a significant correlation between the popularity needs of individuals and their self-disclosure behavior on Facebook. While micro-blogging does not provide complicated user information pages, it allows individuals to post a great deal of brief information regarding their personal thoughts, moods, and even their current location and what they are doing onto their personal page at any time. Zywica and Danowski (2008) found that popular individuals on Facebook update and modify the contents of their personal information more frequently than less popular individuals. In other words, such individuals would engage in self-disclosure more frequently. We therefore inferred that individuals who participate in micro-blogging based on popularity needs tend to disclose their personal information, emotions, whereabouts, as well as other messages, images, or videos related to themselves more frequently. This leads to the following hypothesis.

H1: Popularity needs positively affect the extents of individual's self-disclosure in micro-blogging.

Creating and maintaining relationships with others are primary objectives of participating in online communities, whereas the essence of self-disclosure is to develop close relationships with others (Derlega et al., 1993). That is, individuals who participate in online communities for meeting their interpersonal needs will tend to disclose more personal information, thoughts, or feelings (Barak and Gluck-Ofri, 2007; Christofides et al., 2009). Cho (2007) hypothesized that the different motivations for online chatting would affect different levels of self-disclosure; three motivations—interpersonal relationships, entertainment, and information—were considered. The empirical results of Cho's (2007) study also indicated that users driven from relationship motivation tend to have higher self-disclosure amount in online chat room than users with other two motives. Leung (2002) investigated the self-disclosure of users on the instant messaging software ICQ and discovered positive relationships between ICQ users and the intention as well as depth of their self-disclosure. In our research context, due to the instant message delivery style of micro-blogging and as it can be accessed on various devices, individuals can easily initiate one-to-many interactions on their own page, which is similar to the situation via instant messaging software. That is, micro-blogging can further been regarded as an instrument that enables users to interact with friends in any place at any time. This study therefore inferred that micro-bloggers with strong interpersonal needs are also inclined to post their status, mood, and thoughts on their personal page with depth and more frequently. This leads to the following hypothesis.

H2: Interpersonal needs positively affect the extents of individual's self-disclosure in micro-blogging.

Instant information sharing

Alternatively, another behavior that this study focused on is the instant sharing of information in micro-blogging. Based on the context of micro-blogging (i.e. simple and instant message delivery style) and the results of previous research (Chen, 2011, 2013; Java et al., 2009; Tu et al., 2011), this study suggested that individuals engage in instant information sharing through micro-blogging to meet four needs: popularity needs, interpersonal needs, entertainment needs, and information needs. First, in terms of popularity needs, micro-blogging messages are short and can be accessed through a number of devices. It was the instantaneous nature of the message delivery that initially attracted the attention of academics in the field of marketing. Jansen et al. (2009) analyzed Twitter messages and discovered that micro-blogging is an effective way for marketing and the word-of-mouth spreading of information. Thus, regardless of whether it can be converted into actual revenue, corporations can use micro-blogging and post messages to promote brands and products and gain popularity. Restated, micro-blogging is a convenient platform to attract crowds as messages are posted and delivered instantly. Furthermore, followers (i.e. individuals who pay attentions to the posted messages of the specific micro-blogger) can also access such messages posted on micro-blogging at any time using devices other than their computers. For example, after the Iranian presidential election in 2009, the Iranian government introduced Internet control, the instant connections of public demonstrations and the reports on government crackdowns heavily replied on the usage of Twitter (Wojcieszak and Smith, 2014); Larsson and Moe (2012) also observed Twitter as a good platform for political discussion during the 2010 Swedish election. As another example, during the period of disaster caused by Typhoon Morakot in Taiwan in 2009, Plurk played a significant role in the transfer of first-hand information and the allocation of emergency supplies. From the perspective of personal use, Java et al. (2009) discovered that micro-bloggers, who are viewed as information sources, would have more followers. That is, when such micro-bloggers post user-generated content, re-share information, or instantly share what they have just seen or heard, they can easily attract followers that are interested in such information, thereby gaining popularity. This study inferred that individuals who engage in micro-blogging due to popularity needs tend to immediately share what they have seen or heard on their personal pages through text, video, or images. This leads to the following hypothesis.

> H3: Popularity needs positively affect individual to engage in instant information sharing in micro-blogging.

Alternatively, individuals can post any information that they find useful or interesting or have just witnessed through micro-blogging, regardless of whether the information was obtained online or in real life. Although prior studies mainly focus on self-disclosure in the use of instant messaging software (Leung, 2002) and online chat rooms (Cho, 2007), this study argued that sharing other non-personal information, videos, or images can also stimulate interactive discussions among friends. Since users of micro-blogs can keep track of and reply to any posts from their friends, such interactions would

be effective. That is, micro-blogging can effectively initiate social interactions among multiple persons (Tu et al., 2011). This study therefore inferred that in addition to engaging in self-disclosure, those with strong interpersonal needs are also more likely to share what they have just witnessed through micro-blogging to generate interactions with their friends. This leads to the following hypothesis.

H4: Interpersonal needs positively affect individual to engage in instant information sharing in micro-blogging.

With regard to entertainment needs, Rubin et al. (1988) proposed that six motives including happiness and relaxation would influence the interpersonal interactions of individuals. Tufekci (2008) also found that one reason of using SNS would be for the sake of getting the latest gossip and rumors for fun. In micro-blogging, users can share interesting content, images, or videos on their personal pages with friends or followers. Therefore, micro-blogging is not simply a platform for social interaction but also a platform for instant entertainment. Java et al. (2009) analyzed the posts of Twitter users and discovered that 13% of the messages contained URLs, many of which used URL shortening services such as TinyURL (http://tinyurl.com/). Because images and videos cannot be directly posted on Twitter, a significant proportion of these external links contained images or videos. This study therefore inferred that individuals with entertainment needs are inclined to share various types of information in micro-blogging and have fun during the process. This leads to the following hypothesis.

H5: Entertainment needs positively affect individual to engage in instant information sharing in micro-blogging.

In terms of information needs, as mentioned, simplicity and the instantaneous nature of micro-blogging platforms distinguish them from conventional SNSs. Individuals can instantly obtain useful information or keep track of the status, information, or moods of friends or certain targets through micro-blogging. That is, information needs may also exert influence on an individual's SNS behavior. Tu et al. (2011) observed that many Plurk posts contained useful information for everyday life, such as discounts, promotions, or instant responses to the posts of their friends. Raacke and Bonds-Raacke (2008) indicated that approximately 34% of the SNS users that they interviewed used SNS to learn specific information, such as professional knowledge, or common information concerning everyday life, such as restaurant recommendations and product discounts. Furthermore, 10% of these exchanges even were academic in nature. Persons with a specific interest will often form a small micro-blogging group to exchange the information that they want. This study therefore inferred that strong information needs would cause an individual to share instant information with others more frequently in micro-blogging. This leads to the following hypothesis.

H6: Information needs positively affect individual to engage in instant information sharing in micro-blogging.

Social support

Cobb (1976) defined social support as the feelings of belonging, respect, or concern that an individual perceives in a crisis; it has been discussed frequently in prior research on psychological health and social welfare. Early studies on social support concentrated on the social support generated by actual interactions among persons. In recent years, many scholars have placed their focus on computer-mediated social support. Dunham et al. (1998) conducted an experiment and discovered that individuals can find social support from computer-mediated environments similar to that which might occur in actual interpersonal relationships. Tichon and Shapiro (2003) analyzed the contents of mails of the system LISTSERV and concluded that individuals engage in online self-disclosure to derive social support from others. We believe that individuals use micro-blogging similarly for the purpose of developing and maintaining relationships with others. As a result, they are more able to gain social support in micro-blogging through self-disclosure than in bulletin board systems, LISTSERV, or general online forums. The instantaneous nature of micro-blogging particularly enhances the speed and effectiveness with which an individual perceives social support, regardless of whether the support is emotional, opinionative, or substantial. This leads to the following hypothesis.

> H7: Individual's extent of self-disclosure positively affects his or her perception of social support in micro-blogging.

One may argue that some micro-bloggers might not intend to interact with others and merely express their emotions and opinions or post messages online in a one-sided manner. With such usage patterns, fewer sources of social support can be obtained, and therefore, it is more difficult for such users to perceive social support from others. Nevertheless, since micro-blogging is also a kind of SNS, the purpose for which individuals participate in SNSs is to create as well as maintain relationships with others (Derlega et al., 1993). In a study on Twitter, Java et al. (2009) also indicated that long-term users of micro-blogging do so for the purpose of everyday chatting and exchanging information. Restated, considering for the long-term use of micro-blogging, the main purpose of its usage may still be interpersonal interaction. If an individual merely one-way expressed his or her emotions and opinions on the Internet, his or her willingness to use the website would diminish once the website becomes non-trendy. That is, his or her usage would only be for short term.

In this study, we adopted a positive view in terms of long-term scenarios and consider the behavior of instant information sharing to be an extension of self-disclosure, including the exchange of information, videos, images, or text that are not personally related with the posters. Generally, the more frequently an individual shares information on his or her personal page in micro-blogging, the more he or she would interact with others. As a result, it would be likely that they will perceive more sources of social support through these interactions. This leads to the following hypothesis.

> H8: Individual's instant information sharing behavior positively affects his or her perception of social support in micro-blogging.
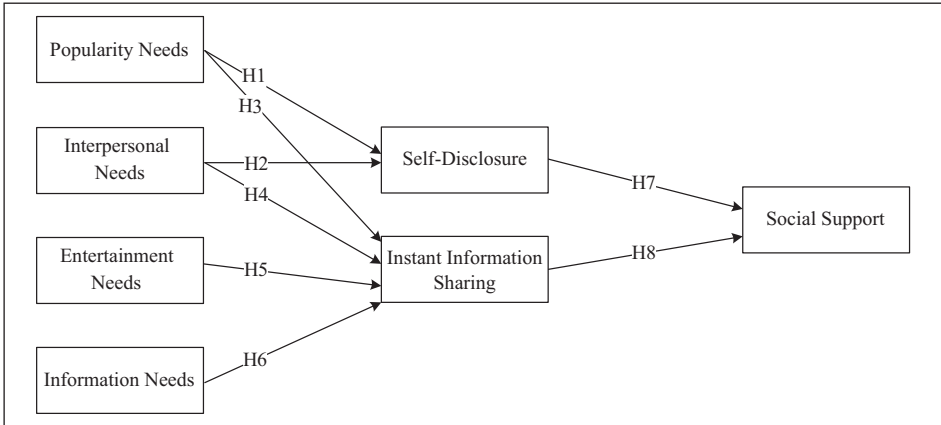
Figure 1. Research model.

Research design and methodology

Based on the arguments in prior section, our research model was shown as Figure 1. To test the proposed research model, the survey method was used for data collection, and the partial least squares (PLS) was applied to examine the collected data.

Instrument design

The measurement items used in this questionnaire (see Appendix 1) were either adapted from prior literatures that had been validated by other researchers or developed from theoretical definitions of constructs. Specifically, the items for the four individual needs, namely, popularity, interpersonal, entertainment, and information needs, were developed based on prior SNS studies and the context of micro-blogging (Ross et al., 2009; Sheldon, 2008; Zywica and Danowski, 2008). The items for measuring self-disclosure were adopted from Wheeless' (1976) Revised Self-Disclosure Scales (RSDS) with some modification for fitting the micro-blogging context (i.e. Plurk was mentioned in the items to specifically limit individual's self-disclosure situation). RSDS is a multi-dimensionality scale that contains five subscales for measuring intention, amount, depth, positive/negative matter, and accuracy of self-disclosure, respectively. Furthermore, five items were developed based on Ross et al.'s (2009) work to assess the instant information sharing construct in the context of micro-blogging. Finally, the items for measuring social support were adopted from the subscale of Macdonald's (1998) Scales of Perceived Social Support (SPSS) related to the micro-blogging context. All items in the questionnaire were designed on a 5-point Likert-type scale ranging from 1 for "strongly disagree," to 5 for "strongly agree."

Data collection

The survey data were collected from Plurk, which is a multilingual micro-blogging service launched in 2008. In Taiwan, it is the most widely adopted micro-blogging service

Table 1. Sample characteristics.

Demographic variable	Sample composition	Number (N = 365)	Percentage
Gender	Female	266	72.9%
	Male	99	27.1%
Age	Under 16 years	7	1.9%
	16–25 years	235	64.4%
	26–35 years	109	29.9%
	36 years or above	7	1.9%
Profession	Student	201	55.1%
	Education	8	2.2%
	Public Administration	6	1.6%
	Information	28	7.7%
	Service Industry	36	9.9%
	Manufacturing	13	3.6%
	Unemployed	26	7.1%
	Others	47	12.9%
Internet uses per day	Less than 1 hour	12	3.3%
	1–3 hours	38	10.4%
	3–5 hours	104	28.5%
	5–7 hours	87	23.8%
	7–9 hours	48	13.2%
	More than 9 hours	76	20.8%
Micro-blogging usage experience	Less than 6 months	32	8.9%
	Half year–1 year	59	16.2%
	1–2 years	226	61.9%
	More than 2 years	48	13.2%
Micro-blogging uses per day	Less than 1 hour	73	20.0%
	1–3 hours	123	33.7%
	3–5 hours	75	20.5%
	5–7 hours	49	13.4%
	7–9 hours	17	4.7%
	More than 9 hours	28	7.7%

with more than 1.5 million members. Several Plurk members who totally have more than 5000 friends and followers were asked to post the survey invitation message on their personal timeline that contained a hyperlink redirecting subjects to access the survey questionnaire website in March 2011. Subjects were asked to evaluate the questionnaire based on their experiences of micro-blogging use. After 2 weeks, 400 responses were received, of which 365 were valid. Among the respondents, 266 (73%) were female and 99 (27%) were male. More than 55% subjects were students with about 1–2 years experiences on micro-blogging uses. The detailed demographic information is shown in Table 1.

Results

PLS was utilized in this study as it allows latent constructs to be modeled either as formative or reflective indicators. Following recommended two-step analytical procedures

Table 2. Composite reliability and average variance extracted.

Scale dimensions	Items	Composite reliability	Average variance extracted
Popularity needs (Pop)	5	0.912	0.675
Interpersonal needs (Int)	4	0.844	0.576
Entertainment needs (Ent)	5	0.903	0. 652
Information needs (Inf)	6	0.931	0.773
Self-disclosure intention (SDI)	3	0.811	0.594
Self-disclosure amount (SDAm)	4	0.878	0.644
Self-disclosure positive/negative matter (SDPN)	3	0.758	0.527
Self-disclosure depth (SDD)	4	0.871	0.629
Self-disclosure accuracy (SDAc)	4	0.899	0.691
Instant information sharing (IIS)	5	0.900	0.644
Social support (SS)	13	0.924	0.636

(Hair et al., 2006), reliability and validity of the measurement model were first measured, and then the proposed model and hypotheses were examined. SmartPLS version 2.0 was utilized in this study (Ringle et al., 2005) with 100 iterations bootstrapping resampling to assess the significance of paths in the proposed model.

Reliabilities and validation

The reliability was measured using composite reliability (CR) in this study. As Table 2 shows, all CR values ranged from 0.758 to 0.931, which are well above the 0.7 threshold suggested by Fornell and Larcker (1981). Thus, the model reliability is adequate in this study.

Alternatively, two types of validity were assessed in this study including convergent and discriminant validity. The convergent validity was measuring through the following criteria: (a) all factor loadings in the measurement model should be significant and exceed 0.7, and (b) the average variance extracted (AVE) values for each construct should exceed 0.5 (Fornell and Larcker, 1981). Analytical results indicated that all factor loadings in this study were above 0.7, and the AVE values of all study constructs ranged from 0.527 to 0.773 (Table 2), which are all above the acceptable level; thus, the convergent validity was confirmed.

Discriminant validity was also assessed using AVE values. As Fornell and Larcker (1981) recommended, the AVE value of each construct should be greater than the squared correction among other constructs in the measurement model. As Table 3 shows, the square root of AVE value in the diagonal is greater than the corresponding off-diagonal correlation coefficients. Thus, discriminant validity was also acceptable in this study.

Testing the hypotheses

With an adequate measurement model, the hypothesized paths were then examined. The analytical results are shown in Figure 2 and summarized in Table 4. Considering the

Table 3. Correlations and square root of AVE values.

	Pop	Int	Ent	Inf	SDI	SDAm	SDPN	SDD	SDAc	IIS	SS
Pop	**0.82**										
Int	0.23	**0.76**									
Ent	0.13	0.45	**0.81**								
Inf	0.27	0.15	0.29	**0.88**							
SDI	0.19	0.27	0.36	0.17	**0.77**						
SDAm	0.10	0.18	0.22	0.01	0.24	**0.80**					
SDPN	0.15	0.14	0.07	0.06	0.21	−0.04	**0.94**				
SDD	0.19	0.13	0.13	0.04	0.19	0.35	0.06	**0.79**			
SDAc	0.18	0.24	0.26	0.13	0.44	0.39	0.12	0.40	**0.83**		
IIS	0.21	0.34	0.42	0.19	0.32	0.35	0.11	0.29	0.38	**0.80**	
SS	0.06	0.37	0.37	0.15	0.32	0.23	0.19	0.26	0.26	0.40	**0.75**

Pop: popularity needs; Int: interpersonal needs; Ent: entertainment needs; Inf: information needs; SDI: self-disclosure intention; SDAm: self-disclosure amount; SDPN: self-disclosure positive/negative matter; SDD: self-disclosure depth; SDAc: self-disclosure accuracy; IIS: instant information sharing; SS: social support; AVE: average variance extracted.
Diagonal values in bold are square root of AVE and off-diagonal are correlations coefficient.
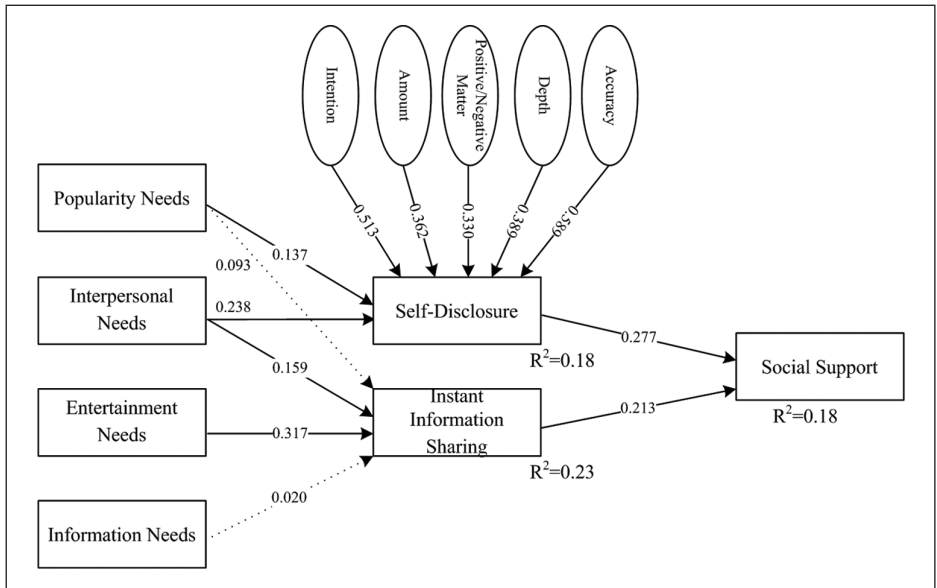

Figure 2. Analytical results.

influence of individual needs on self-disclosure, both popularity and interpersonal needs have significant influence on individual's self-disclosure in the micro-blogging (H1 and H2). The R^2 value shows that these two individual needs totally accounted for 18% variance of self-disclosure.

Table 4. Results of hypothesis testing.

Hypotheses	Results
H1: Popularity needs positively affect the extents of individual's self-disclosure in micro-blogging	**Supported**
H2: Interpersonal needs positively affect the extents of individual's self-disclosure in micro-blogging	**Supported**
H3: Popularity needs positively affect individual to engage in instant information sharing in micro-blogging	Not supported
H4: Interpersonal needs positively affect individual to engage in instant information sharing in micro-blogging	**Supported**
H5: Entertainment needs positively affect individual to engage in instant information sharing in micro-blogging	**Supported**
H6: Information needs positively affect individual to engage in instant information sharing in micro-blogging	Not supported
H7: Individual's extent of self-disclosure positively affects his or her perception of social support in micro-blogging	**Supported**
H8: Individual's instant information sharing behavior positively affects his or her perception of social support in micro-blogging	**Supported**

Bold Values: Significant level at 0.05

Alternatively, regarding various influences of individual needs on instant information sharing, significant relationships were found for H4 and H5. Interpersonal and entertainment needs have significant influence on individual's instant information sharing in the micro-blogging. The R^2 value shows that four individual needs totally accounted for 23% variance of instant information sharing.

Finally, regarding the influence of micro-blogging uses on individual's perceived social support, both self-disclosure and instant information sharing were found to have significant influence on the level of social support individuals may perceive. Therefore, H7 and H8 were supported. The R^2 value shows that self-disclosure and instant information sharing accounted for 18% variance of social support.

Discussion

The objective of this study was to understand how the individual needs influence self-disclosure behavior and instant information sharing through micro-blogging platforms, as well as how such behavior influences the social support perceived by individual. Based on the analytical results, the majority of the hypotheses proposed in this study were supported. First, with regard to the influence of individual needs on self-disclosure, popularity and interpersonal needs have a significant influence on self-disclosure behavior. According to Tong et al. (2008), the number of friends that an individual has on SNS is a crucial clue to whether the individual is popular on the Internet. Essentially, the purpose of self-disclosure is to establish relationships with others (Derlega et al., 1993). This applies to micro-blogging just as it does to real-life relationships: micro-bloggers with popularity needs tend to disclose information, emotions, and ideas associated with

themselves more frequently, which in turn creates more frequent interactions with others, attracting more fans or friends and increasing their own popularity. Individuals with interpersonal needs engage in self-disclosure to satisfy their need to interact socially with others, which supports the findings of previous SNS studies (e.g. Park et al., 2011; Raacke and Bonds-Raacke, 2008; Sheldon, 2008). Additionally, of all the needs examined in this study, frequent micro-bloggers cited interpersonal needs as the strongest factor that motivated their micro-blogging self-disclosure behavior, thereby indicating that although user profiles in micro-blogging only display basic personal information and the length of posts is limited, users can still thoroughly disclose personal information and express their emotions or thoughts. Through micro-blogging, users can achieve their objective of interacting and connecting with others.

Interpersonal and entertainment needs also have significant influence on the instant information sharing behavior of an individual in micro-blogging. In addition to engaging in self-disclosure through micro-blogging, individuals with interpersonal needs also engaged in instant information sharing. A further examination of the social behavior of micro-bloggers shows that individuals who participate in micro-blogging due to interpersonal needs engage in self-disclosure behaviors more often than instant information sharing behaviors. In other words, individuals motivated by interpersonal needs tend to regard micro-blogging as a platform to express their personal feelings or thoughts, and this self-disclosure behavior helps them interact with others and create as well as maintain their relationships. On the other hand, the results of this study also indicate that entertainment needs are a crucial motivation in micro-blogging, which supports the findings of Raacke and Bonds-Raacke (2008) and Sheldon (2008). Individuals who participate in micro-blogging to satisfy entertainment needs tend to share what they have seen or heard through text, video, or images more frequently.

In contrast, popularity and information needs did not exhibit a significant effect on instant information sharing. We speculate that while the Plurk homepage displays the hottest topics, videos, or images to all users, it is still different from the interpersonal interactions generated by the self-disclosure of individuals in micro-blogging. Interactions related to general information exchange are not as deep, and most users are less willing to add the authors of these posts to their friends or become a fan of these authors unless there is a specific theme to the shared information, such as food recommendations or information on electronic products. Being time sensitive and generally disappearing as time passes, the hot topics shown on the homepage are not substantially effective in gaining popularity for specific users. Therefore, it is not easy for micro-bloggers with popularity needs to achieve popularity through instant information sharing. Alternatively, the design of micro-blogs is different from that of online forums, which are primarily used for information exchange. In the context of virtual communities, a considerable amount of empirical evidence in previous research has demonstrated the issue of reciprocity; many individuals contribute information or knowledge on online forums with the hope that others will assist them in return when they have need for certain information or knowledge in the future (Bock et al., 2005; Wasko and Faraj, 2005). However, the interactions in common online forums are generally theme-oriented; for example, a group of individuals may demonstrate many-to-many interactions on forums with specific topics. In contrast, the micro-blogging mainly enables one-to-many interactions. Put differently,

an individual may become the follower of a specific micro-blogger for the sake of accessing the information that that user provides on his or her personal page; however, this does not fulfill the concept of reciprocity being one-sided. The study conducted by Java et al. (2009) on Twitter indicated that many Twitter users use Twitter to search for information; once they find information they are interested in, they become a follower of the information sharer, but rarely post tweets on their own personal pages. This was supported by Heil and Piskorski (2009), who observed that 90% of the contents on Twitter were generated by only 10% of the users. Taking this statistic into consideration, the concept of reciprocity cannot be used to explain the exchange of information in micro-blogging, and individuals with information needs do not necessarily engage in instant information sharing more frequently in micro-blogging.

Finally, this study also confirmed that an individual's self-disclosure behavior and instant information sharing have significant influence on his or her perception of social support. This result supports the findings of Dunham et al. (1998) and Tichon and Shapiro (2003), which state that SNS use, like computer-mediated environments, enables individuals to perceive social support. Regardless of whether an individual discloses personal information or shares what he or she has just witnessed through micro-blogging, he or she can create more opportunities to interact with his or her friends and thereby perceive social support from them.

In summary, since micro-blogging is also a kind of SNS, it can be expected that the determinants between SNS and micro-blogging usage may overlap. However, as Smock et al. (2011) suggested that studies on user motivation and behavior in SNS should put attention on the different features use rather than adopt an overall perspective. That is, different SNS features may fulfill different individual needs, which may be dissimilar to the overall SNS usage. In this study, we put attention on two features that distinguish micro-bloggers from conventional SNS users. Our empirical results revealed that micro-blogging like other SNSs can fulfill individual's interpersonal needs through self-disclosure and instant information sharing behavior. Furthermore, the usage of micro-blogging just like other SNSs could enable individuals to perceive social support. However, there are also some analytical results, which are dissimilar to the general SNSs, that is, information needs do not have significant influence on individual's instant information sharing behavior in micro-blogging. Such findings might reflect the essence of micro-blogging use, which has some differences from the use of general SNSs in other online communities.

Conclusion

Implication

This study conducted an empirical study on micro-blogging users to understand the influence of their motives on self-disclosure and instant information sharing behaviors as well as the extent of social support that they can perceive. The empirical results can provide academic and practical understanding of the current SNS/micro-blogging trend.

Academically, this study makes four major contributions. First, it adds to the body of knowledge regarding micro-blogging, mitigating a lack of empirical evidence regarding the behavior of micro-bloggers and the possible effects of such behavior. Second, the

results of this study prove that micro-blogging can satisfy the interpersonal needs of individuals as general SNSs; therefore, engaging in either self-disclosure or instant information sharing on a micro-blogging can help an individual satisfy interpersonal needs. Third, unlike previous research on the motivations that inspire SNS use, we included an examination of the context of micro-blogging in this study. The results show that the instantaneous nature of micro-blogging makes it an excellent entertainment platform for users. Micro-blogging can bring instant entertainment to users. Finally, the results of this study also prove that micro-blogging enables an individual to perceive social support from friends. In other words, micro-blogging can effectively integrate the real and virtual social networks of an individual and bring substantial social benefits without supplanting an individual's social network in real life. In practice, micro-blogging provides a platform for instant information sharing that satisfies the interpersonal needs of an individual while also being highly entertaining. However, the designs of micro-blogging platforms are not very complex, so the entertainment lies in the fun that users have when sharing what they have seen or heard with their friends. Managers of micro-blogging services should take social interaction into consideration in the design of the platform so that users can access the platform easily from different devices and thereby satisfy their needs for social interaction and entertainment.

Limitations

The analytical results in this study should be interpreted considering some limitations which need to be addressed by future research. First, the samples collected in this study were cross-sectional, and the analysis results can only be used to interpret the behavior displayed by individuals in the current popular micro-blogging (i.e. Plurk) community in Taiwan. Micro-blogging does not provide any significantly complex functions, and there are a number of websites with similar services on the Internet so far; knowing how the needs of users might change and whether they will continue micro-blogging long term requires continuing observation. Next, while there are a number of micro-blogging services on the Internet, users in different countries and regions seem to prefer certain services. For example, users in China show greater acceptance of Sina Weibo, whereas Twitter is more common among Japanese users. A greater understanding of the reasons for different platform choices among individuals in different countries or with different cultural characteristics and whether these individuals display differences in their motives would require transnational research across multiple websites for further comparison. Finally, conventional SNSs lack many of the features that the new style SNSs currently have, such as the game features of Facebook. Few studies have examined this change. This study focused on the empirical study and investigation of micro-blogging. The characteristics displayed by other new SNSs and the possible changes or influences that they may bring to the needs and behavior of users will require further research to provide additional academic or practical insights.

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Appendix 1. Item measure.

Construct	Measure
Popularity needs	
Pop1	I think that using Plurk can let me have many followers on it
Pop2	I think that using Plurk can let me make new friends
Pop3	I think that using Plurk can increase my visibility on the Internet
Pop4	I think that using Plurk can let me become famous on the Internet
Pop5	I think that using Plurk can let me gain recognition on the Internet
Interpersonal needs	
Int1	I think that using Plurk can let me interact with my acquainted friends instantly
Int2	I think that using Plurk can let me interact with people I know instantly
Int3	I think that using Plurk can make me keep contact with my acquainted friends
Int4	I think that using Plurk can make me keep contact with people I know
Entertainment needs	
Ent1	When I feel boring, I use Plurk to pass the time
Ent2	Using Plurk to interact with my friends instantly gives me pleasure
Ent3	Using Plurk to interact with my friends makes me feel happy
Ent4	The process of using Plurk makes me feel relaxed
Ent5	Overall, using Plurk makes me feel pleasant
Information needs	
Inf1	I think that using Plurk can let me acquire useful knowledge
Inf2	I think that using Plurk can let me obtain life information
Inf3	I think that using Plurk can let me increase knowledge
Inf4	I think that using Plurk can let me keep abreast of current affairs
Inf5	I think that using Plurk can let me trace my friend's situation
Inf6	I think that using Plurk can let me trace celebrities' status
Self-disclosure intention	
SDI1	When I express my personal feelings on Plurk, I am always aware of what I am doing and saying
SDI2	When I reveal my feelings about myself on Plurk, I consciously intend to do so

Appendix 1. (Continued)

Construct	Measure
SDI3	When I self-disclose on Plurk, I am consciously aware of what I am revealing
Self-disclosure amount	
SDAm1	I do not often talk about myself
SDAm2	I usually talk about myself for fairly long periods
SDAm3	I often discuss my feelings about myself
SDAm4	I often express my personal beliefs and opinions
Self-disclosure positive/negative matter	
SDPN 1	I usually disclose positive things about myself
SDPN 2	I normally express my good feelings about myself
SDPN 3	On the whole, my disclosures about myself are more positive than negative
Self-disclosure depth	
SDD 1	I would intimately, openly, and fully disclose who I really am in my post on Plurk
SDD 2	I typically reveal information about myself without intending to
SDD 3	I often disclose intimate, personal things about myself without hesitation
SDD4	Once I get started, I intimately and fully reveal myself in my self-disclosures
Self-disclosure accuracy	
SDAc 1	My expressions of my own feelings, emotions, and experiences on Plurk are true reflections of myself
SDAc 2	My self-disclosures on Plurk are completely accurate reflections of who I really am
SDAc 3	My self-disclosures on Plurk can accurately reflect my own feelings, emotions, and experiences
SDAc 4	My statements about my own feelings, emotions, and experiences on Plurk are always accurate self-perceptions
Instant information sharing	
IIS1	I would like to post my own feelings, emotions, and thoughts on Plurk instantly
IIS2	I would like to post what I saw on Plurk instantly
IIS3	When I found something interesting, I would like to post it on Plurk instantly
IIS4	When I found some useful information, I would like to post it on Plurk instantly
IIS5	When I heard some rumor, I would like to post it on Plurk instantly
Social support	
SS1	I feel very close to my friends
SS2	My friends understand me
SS3	My friends show that they care about me
SS4	I feel that my friends love me
SS5	I talk to my friends about things that are really important to me
SS6	My friends give me guidance and support when I need it
SS7	My friends advise me when I have to make a difficult decision
SS8	My friends give me good advice when I have personal problems
SS9	There is at least one friend who helps me cope with life's everyday problems
SS10	If I was short of cash, my friends would help me out
SS11	My friends give me practical kinds of help
SS12	I can count on my friends for practical help in an emergency
SS13	There is at least one friend who would offer me his/her assistance, without being asked