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Self-Disclosure in Social Networking Sites: The Role of Perceived Cost, Perceived Benefits and Social Influence

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Self-Disclosure in Social Networking Sites: The Role of Perceived Cost, Perceived Benefits and Social Influence

Abstract

Purpose – This paper aims to examine the relative impacts of perceived cost, perceived benefits, and social influence on self-disclosure behaviors in social networking sites under an integrated theoretical framework.

Design/methodology/approach – Building upon social exchange theory and privacy calculus theory, an integrated model was developed. The model was tested empirically using a sample of 405 social networking site's users. Users were required to complete a survey regarding self-disclosure behaviors in Facebook.

Findings – The results indicate that social influence is the factor which exhibits the strongest effect on self-disclosure in social networking sites, followed by perceived benefits. Surprisingly, perceived privacy risk does not have any significant impact on self-disclosure.

Research limitations/implications – The results inform researchers about the importance to incorporate social influence factors and cultural factors into future online self-disclosure study.

Practical implications – The results suggest that users focus on the benefits as well as social influence when they decide to reveal personal information in social networking sites, but pay less attention to the potential privacy risks. Educators are advised to launch educational programs to raise students' awareness to the potential risks of self-disclosure in social networking sites. Service providers of social networking sites are encouraged to provide intuitive privacy indices showing users the levels of privacy protection.

Originality/value – This paper is one of the first to develop and empirically tests an integrated model of self-disclosure in social networking sites.

Keywords: Self-disclosure, Social Networking Sites, Facebook, Social Exchange Theory, Social Influence

Article Classification: Research paper

1. Introduction

Social networking sites have grown tremendously in popularity over the past few years. Being one of the most popular social networking sites, Facebook alone has about 1.11 billion monthly active users (Facebook, 2013). More than half of the Facebook users log in every day. Each user has about 130 friends on average, a figure which is expected to increase in the future. With respect to time consumption, statistics reports revealed that people spend much more time in social networking sites than other online activities (Gartner, 2013). Social networking, soundly trouncing email, news, and shopping, has become the most popular online activity.

Social networking sites are online platforms that facilitate the construction of social networks or social relations among people who share similar interests, backgrounds, and/or real-life connections. When people join social networking sites, they create a public profile and make connections with their friends. In the process of creating a profile, they often reveal much of their true identities by publishing personal information, photographs and personal preferences. The revelation of personal information through social networking sites potentially exposes users to greater privacy risks (Krasnova *et al.*, 2010, Squicciarini *et al.*, 2011, Tan *et al.*, 2012). Media reports have already provided anecdotal evidence that actual risks of exposing published personal information on Facebook exist, including potential abuses by online crooks, stalkers, bullies, and commonly, even their own friends (Kelly, 2008, Lemos, 2010, Shock, 2010). In addition, less maliciously but perhaps more consequentially, Facebook has been used in assessing employment candidacy (Kwoh, 2012). Some studies have found that despite awareness of these existing threats in Facebook, users continue to reveal their personal information (Acquisti and Gross, 2006, Boyd, 2008, Christofides *et al.*, 2009, Hugl, 2011).

Prior studies about self-disclosure in social networking sites mostly applied social exchange

theory to explain why users are willing to disclose personal information in social networking sites (Krasnova *et al.*, 2010). In other words, previous studies mainly focused on how perceived cost and perceived benefits affect self-disclosure in social networking sites. We believe that social networking sites create an online social environment where users can easily observe what others say and do on the platforms (Zhou, 2011). It may create peer pressure on whether to disclose personal information in social networking sites. However, prior studies investigating self-disclosure in social networking sites have been concentrated on examining impacts from the perspectives of perceived costs and benefits respectively; relatively less attention has been made to the impacts of social influence on self-disclosure. Moreover, the relative impacts of perceived costs, perceived benefits, and social influence on self-disclosure in social networking sites has not been tested under a single nomological network.

To this end, the current investigation endeavors to shed light on how perceived cost, perceived benefits and social influence factors affect self-disclosure in social networking sites. We synthesized extant literature to advance a theoretical model that posits perceived benefits and social influence exert positive effects on self-disclosure in social networking sites, whereas perceived cost exerts negative effect. This study contributes to extant literature in two ways: (1) to consolidate antecedents of self-disclosure in social networking sites within a single nomological network; (2) to empirically scrutinize the relative impacts of perceived cost, perceived benefits, and social influence on self-disclosure in social networking sites. Particularly, we aim to answer the following research questions in relation to self-disclosure in social networking sites: *(1) what are the relative impacts of perceived cost and benefits on self-disclosure in social networking sites?; and (2) does social influence affect users' self-disclosure in social networking sites?*

This article is structured as follows. We first analyze the literature on face-to-face self-

disclosure and online self-disclosure. We then discuss prior studies on self-disclosure in social networking sites, from which we developed our research model and hypotheses. Next, we describe our research design and present the results. Finally, we discuss the implications for research and practice, and conclude with a discussion of potential avenues for future research.

2. Literature Review

2.1. Self-Disclosure and Online Self-Disclosure

Rooted in the study of verbal communication, self-disclosure has been studied as "the process of making self known to others" (Jourard and Lasakow, 1958). This refers to all sorts of information or messages, including descriptive, evaluative, and affective information, about the self, opinions, and attitudes that an individual may communicate to another person (Cozby, 1973, Wheeless and Grotz, 1976).

Scholars across various disciplines have studied the concept of self-disclosure from different perspectives for decades. In the psychology literature, there are two predominant schools of thought regarding the definition of self-disclosure. One views it as a trait-like construct that varies across individuals (Berg and Derlaga, 1987), while the other treats it as an interpersonal process when individuals interact with each other (Dindia, 2002). Researchers from the social science disciplines consider self-disclosure as a social exchange process in which individuals evaluate cost and benefit before they communicate with others (Worthy *et al.*, 1969).

With the proliferation of information and communication technologies, researchers from the information systems (IS) discipline have begun to explore the role of self-disclosure in the context of various online environments (e.g., Hann *et al.*, 2007, Hui *et al.*, 2007, Li *et al.*, 2011, Zimmer *et al.*, 2010, Shanyang, 2007, Chou *et al.*, 2009). For example, Chou *et al.* (2009) demonstrated

mutual self-disclosure online in the B2C context in which increases of disclosure from company lead to increases of disclosure from their customers. Li *et al.* (2011) investigated the role of affect and cognition on online consumers' decision to disclose personal information to unfamiliar online vendors. Building on social exchange theory (Blau, 1964) and privacy-calculus theory (Culnan and Armstrong, 1999), existing studies mostly explained online information disclosure behavior as a result of the subjective evaluation of benefits and costs in an exchange relationship. Particularly, some view privacy loss as the price of acquiring desired benefits (Smith *et al.*, 2011). Research on online information privacy has found that privacy risk has a negative impact on the intention to disclose personal information (Malhotra *et al.*, 2004). However, it is also surprised to see that a particular group of users seem not pay much attention to the potential privacy risk of disclosing online. Hugl (2011) found that younger social networking sites users are less aware of potential privacy threats than adult users, and urged online social network operators to be alarmed by the large part of users who underestimate risks of their information privacy in social networking sites. Owning to the interactive nature and the exponential growth of social networking sites, it is particularly interesting and imperative to divulge what influence self-disclosure in social networking sites.

2.2. Prior Studies on Self-Disclosure in Social Networking Sites

With the popularity of social networking sites, we have witnessed an increasing number of studies attempting to understand the phenomenon of self-disclosure in social networking sites. Self-disclosure in social networking sites may take various forms, including displaying pictures, posting personal information, updating status, and/or revealing personal preferences and experiences.

In general, self-disclosure plays a dominating role in developing and sustaining relationships (De Vito, 1986, Laurenceau *et al.*, 1998, Nakanishi, 1986), and it facilitates the formation of trust for building intimate relationships (Worthy *et al.*, 1969). A majority of studies explain self-disclosure in social networking sites from the perspective of privacy concerns. Acquisti and Gross (2006) used web crawler to collect profile information from Facebook. They found that many Facebook users were not aware of privacy options and revealed a large amount of personal information. Dwyer *et al.* (2007) examined how trust and privacy concerns affect users' information disclosure on Facebook and MySpace. Hugl (2011) conducted a multi-faceted review of existing research to work out the current state of empirical studies dealing with privacy and online social networking. She found that adults seem to be more concerned about potential privacy threats than younger users and that traditional one-dimensional privacy approaches fall short. Tan *et al.* (2012) revealed in their findings that privacy concerns do not directly affect the intention of using social networking sites. These studies emphasized the risks that limited their information disclosure, but did not examine motivating factors that induced users' participation and information disclosure in social networking sites.

Krasnova *et al.* (2010) were one of the first to consider both the cost and benefit factors that explain the self-disclosure behavior in social networking sites. Building on the privacy-calculus theory (Culnan and Armstrong, 1999), they developed a research model that was empirically tested with 259 respondents in Germany. A majority of respondents in their study (over 85 percent) were students. Their study showed that both perceived cost and perceived benefits had a significant impact on online self-disclosure. Among all these factors, the convenience of maintaining relationships was the most important factor that drives people to reveal their personal information in social networking sites. Perceived privacy cost also exhibited a strong negative impact on users'

willingness to disclose personal information. Krasnova *et al.*'s (2010) model was comprehensive and had a strong theoretical foundation, and provided us with a good starting place to investigate the phenomenon.

3. Research Model and Hypotheses

In this study, we built on the model of self-disclosure in social networking sites (Krasnova *et al.*, 2010) and examined how the perceived benefits and perceived cost affected online self-disclosure in social networking sites (i.e., Facebook). In addition, we considered the role of social influence in self-disclosure in social networking sites. The research model is depicted in Figure 1.

[Insert Figure 1 about Here]

3.1. Perceived Benefits of Self-Disclosure in social networking Sites

Four major types of perceived benefits are identified in prior literature as being associated with the use of social networking sites: convenience of maintaining existing relationships, new relationship building, self-presentation, and enjoyment (Krasnova *et al.*, 2010, Cheung *et al.*, 2011).

Convenience of Maintaining Existing Relationships Social networking sites, such as Facebook, offer a number of convenience features that facilitate users to build and maintain relationships with other users without devoting too much time and effort (Ahn *et al.*, 2007). For instance, the platform allows users to conveniently broadcast news and updates to friends by just a single click. The platform also sends reminders and status updates, so as to facilitate users to maintain a very wide network of friends in a short period of time. Time-saving represents a typical outcome of convenience that motivates users to disclose their personal information in the online environment (Hui *et al.*, 2006). Relationship between maintaining existing relationship and

Facebook use has been corroborated in prior studies (e.g., Chen and Marcus, 2012; Hew, 2011). We believe that the convenience of maintaining relationships should encourage users to share their personal information in social networking sites, and therefore hypothesize that:

H1a: Users' beliefs regarding the convenience of maintaining existing relationships will be positively related to their self-disclosure in social networking sites.

New Relationship Building Social networking sites provide an excellent platform for building new relationships (Ellison *et al.*, 2006). The connectivity of social networking sites helps users to connect to a broader range of people, and thus facilitates users to accumulate social capital providing them with more useful information or perspectives (Boyd and Ellison, 2007). According to interpersonal theories, information disclosure is an important part of relationship building (Ellison *et al.*, 2006). When a user is willing to disclose more personal information, it sends out desired signals to others (Lampe *et al.*, 2007) and thus increases the impression of trustworthiness (Christofides *et al.*, 2009). From this, we hypothesize:

H1b: Users' beliefs regarding opportunities of new relationship building will be positively related to their self-disclosure in social networking sites.

Self-Presentation Self-presentation is a central element that motivates user participation in social networking sites (Boyd and Ellison, 2007). Social networking site users reveal their identity and formulate the impression they wish to produce through presenting desirable information about themselves on their walls as well as within their profiles in social networking sites (Krasnova *et al.*, 2010). Recent empirical study has testified that Facebook users apply various self-presentation

strategies (e.g., positive and honest) to disclose information in social networking sites as means to enhance their subject well-being (Kim and Lee, 2011). In addition, Chen and Marcus (2012) claimed that users can select different functionalities of social networking sites to manipulate their self-presentation. Socially advanced functions invented for social networking sites allow users to customize and reveal their personal profiles by manipulating their timeline banner and providing a potentially fancy profile picture. Thus, we hypothesize:

H1c: Users' beliefs regarding self-presentation benefits will be positively related to their self-disclosure in social networking sites.

Enjoyment Prior studies on user participation in social networking sites have empirically demonstrated that perceived enjoyment is an influential factor that drives the use of social networking sites (Lin and Lu, 2011). Hui *et al.*(2006) further argued that if something brings fun and enjoyment to users, it can induce them to reveal more personal information. Affect-driving features of social networking sites, such as Facebook applications embedded with mini-games, coupons, interesting articles, or videos, encourage users to participate and disclose their personal information (Krasnova *et al.*, 2010). Following from this, we hypothesize:

H1d: Users' enjoyment of platform use will be positively related to their self-disclosure in social networking sites.

3.2. Perceived Cost of Self-Disclosure in Social Networking Sites

Krasnova *et al.* (2010) built on privacy calculus theory (Culnan and Armstrong, 1999) and argued that some people view privacy loss as the price of acquiring desired benefits. Thus, they also explored the role of this perceived cost, privacy risk, in the investigation of self-disclosure in

social networking sites.

Perceived privacy risk refers to the expectation of losses related to self-disclosure in social networking sites. Hogben (2007) pointed out that public accessibility of personal user information in social networking sites posits potential risks including embarrassment, blackmailing, stalking, and even identity theft. Krasnova *et al.* (2009) have found that there is a negative relationship between privacy concerns and self-disclosure on Facebook. Lee *et al.* (2013) added that though consideration of benefits encourages users to endure the existence of certain risks, high perceived risk is generally undesirable to self-disclosure in social networking sites. Accordingly, we hypothesize:

> *H2: Users' perceived privacy risk will be negatively related to their self-disclosure in social networking sites.*

3.3. Cost-Mitigating Factors of Self-Disclosure in Social Networking Sites

In many cases, though users are aware of privacy risks, they still reveal their personal information in social networking sites. This discrepancy can be explained by the fact that users trust service providers, as well as their fellow members (Acquisti and Gross, 2006). In addition, social networking sites users rely on privacy control mechanisms to restrict unauthorized access to personal information.

Trust in Social Networking Site's Service Provider The uncertainty or concern of social networking site users is mainly over the provider's perceived ability to monitor and protect user personal data. Building on social exchange theory (Blau, 1964), trust is a way to reduce uncertainty or concern about the cost to privacy, and encourages users to participate in social networking sites

(Metzger, 2004). Prior studies have empirically showed that trust serves as a risk-reducing factor (Cheung and Lee, 2006, Gefen *et al.*, 2003). Users pay considerable attention to service provider's benevolence and integrity when they choose to disclose their personal information (McKnight *et al.*, 2002). Similarly, we may assume that when a social networking site's service provider is perceived to be caring, honest, and consistent in dealings with users, users will be less sensitive to the privacy risks involved in using social networking sites, and may potentially increase their self-disclosure intensity. In other words, as reflected by current affairs concerning privacy and data protection with Facebook, if users lose trust in social networking service providers, their awareness and perceived privacy risk towards disclosing in social networking sites are likely to increase (see Hill, 2012). Taken together, we hypothesize:

H3a: Users' trust in social networking site's service provider will be negatively related to their perceived privacy risk of disclosing in social networking sites.

Trust in Social Networking Site's Members Apart from service provider, the trustworthiness of other members is yet another essential element that determines users' self-disclosure in social networking sites. Social networking sites are data-rich environment where users' profiles, photos, and online activities can easily be found (Arrington, 2008). However, most of the time, users are unable to monitor and control other users' behaviors over social networking sites. Basically, they have to trust that other members do not abuse the personal information they have revealed. Krasnova *et al.*, (2010) argued that the perceived similarity between other users and oneself may provide a basis for the developing of trusting beliefs toward other users. Taken together, trust in other users will reduce one's perceived privacy risk of disclosing personal information in social networking sites. Therefore, we hypothesize:

H3b: Users' trust in social networking site's members will be negatively related to their perceived privacy risk of disclosing in social networking sites.

Perceived Control Culnan and Armstrong (1999) argued that when consumers are able to control their information, their perceived privacy risks will be reduced, and their trust level will be improved. Xu *et al.*, (2008) further illustrated that self-control policies can significantly reduce perceived privacy risk in social networking sites. Therefore, we hypothesize:

H4a: Users' perceived control will be negatively related to their perceived privacy risk of disclosing in social networking sites.

Prior literature has demonstrated that when customers have control over their own personal information, they develop a higher level of trust toward an online vendor (Ridings *et al.*, 2002). Similarly, Krasnova *et al.*, (2010) empirically showed that if service provider gave users a privacy control mechanism it helped users build trust in social networking sites. Therefore, we hypothesize:

H4b: Users' perceived control will be positively related to their trust in social networking site's service provider.

Control is regarded as an important mechanism for building confidence and trust among participating parties (Das and Teng, 1998). In the context of social networking sites, once users become friends, a member's profile is visible to all members within their network. One's status and profile updates will be immediately noticed by other members within the network. Prior evidence indicates that the perceived publicness of one's personal information in social networking

sites is negatively related to the intention for self-disclosure (Patrick *et al.*, 2011). To improve the situation, most social networking sites have introduced privacy control features that allow users to manipulate and manage their personal information accessibility. For instance, they can group their friends and authorize access to their personal information across groups. Thus, we believe that perceived control can in turn improve the trust toward other members within their social networking sites. Therefore, we hypothesize:

> *H4c: Users' perceived control will be positively related to their trust in other members in social networking sites.*

3.4. Social Influence on Self-Disclosure in Social Networking Sites

The popularity of social networking sites is highly dependent on the number of people using them and the intensity of interactions with other members in the network. Social influence remains a critical factor that determines user behaviors in social networking sites (Cheung *et al.*, 2011, Li, 2011, Zhou, 2011). The social influence underlying the subjective norm reflects the influence of expectation from significant others and represents what Kelman (1958) termed "Compliance". Individuals tend to coordinate their behaviors so that they are congruent with their friendship pairs (Cialdini and Goldstein, 2004, Kandel, 1978). Lewis *et al.*, (2008) have empirically showed that social networking site users are more likely to adopt a private profile if their friends have already done so. The effects of social influence on the use and adoption of social networking sites has been echoed time and again in prior studies (e.g., Lallmahomed *et al.*, 2013; Sánchez *et al.*, 2014). Sánchez *et al.*, (2014) contended that social influence is the most important factor in predicting the adoption of Facebook because users tend to comply with whom they share interests. In a

similar vein, we expect that users will be more likely to reveal their personal data in social networking sites when they want to comply with the expectation from their peers. Therefore, we hypothesize:

H5: Social influence will be positively related to self-disclosure in social networking sites.

4. Methodology

In this study, we focus on Facebook users' self-disclosure behaviors. Facebook provides users with virtual spaces to build their profile, connect with others, and share information with existing and new friends. Because of the richness of the personal information users provide, as well as the highly diversified users group, Facebook is an ideal platform for the current investigation of self-disclosure in social networking sites. In addition, Facebook was chosen due to the surge in its global popularity since its introduction. Facebook is now the most popular social networking sites, having around 800 million unique monthly visitors and far outweighing all other alternatives (eBiz, 2014). Facebook is therefore a representative example of the new generation of social networking sites featuring social and interactive elements, and is the most appropriate site for the current study. We collected our data from university students, which is believed to be an appropriate and representative sample of social networking sites users. According to a recent global research, 67% of Internet users reported that they use Facebook, and 83% of them aged between 18-29 (Brenner, 2013). Comparing Facebook usage across populations, Hong Kong has outweighed United States, India, Brazil, United Kingdom and other major countries and cities with 57.98% of the citizens using Facebook for the purpose of social networking (Socialbakers, 2013). We believe that university students in Hong Kong represents a group of frequent and heavy social networking sites

users, and the highly diversified sample (with students coming from different districts of Hong Kong) also provides a rich profile of respondents. In this section, we will describe the details of measure, and data collection procedure, as well as the demographic profile of the respondents.

4.1. Measures

All measures were borrowed from prior literature, with appropriate modifications in wordings to suit the context of our study. We used multi-item measures to ensure the validity and reliability of the constructs. All measures were taken on seven-point Likert scales, from "1 = strongly disagree" to "7 = strongly agree". Table 1 presents a summary of constructs and measures used in the current study.

4.2. Data Collection

The current study employed a cross-sectional survey design which requires participants to respond to an online survey. We administered our questionnaire in an online survey platform, www.qualtrics.com, and distributed the recruitment message and hyperlink of online survey through university mailing lists. We applied purposive sampling and recruited participants from a large local university in Hong Kong. Sampling from university students is justifiable in the current study that demographic data of university students generally match with those of average Internet users (Qiu & Benbasat, 2009). Rational behind sampling Facebook users from university in Hong Kong can be referred to discussion above (see Section 4 for details).

Voluntary participants can access the online survey by clicking on the hyperlink provided. We adopted screening questions to filter only Facebook users into the study. To encourage participation, respondents would automatically be entered in a lottery to win shopping coupons.

We received a total of 420 responses, which yielded 405 valid responses for subsequent analysis. Of the 405 respondents, 38% were male and 62% were female. For age distribution, 17% the participants aged 19 or below, 76% of aged between 20 and 23, and 7% aged above 23.

5. Data Analysis and Results

We performed the statistical analysis with the partial least squares (PLS) method. The PLS approach provides a better explanation for complex relationships (Fornell and Larcker, 1981), and is widely adopted by IS researchers (Chin, 1998). Following the two-step analytical approach (Hair *et al.*, 2006), we first conducted a psychometric assessment of the measurement scales, and then evaluated the structural model. Using the two-step analytical approach, we had more confidence in concluding that a structural relationship could be drawn from a set of measurement instruments with desirable psychometric properties.

5.1. Measurement Model

To validate the measurement model, we examined the convergent validity and discriminant validity. There general criteria were used to assess convergent validity of the constructs: (1) all item loadings should be greater than 0.70; (2) the composite reliability (CR) should be at least 0.70 (Chin, 1998); and (3) the average variance extracted (AVE) should be at least 0.50 (Fornell and Larcker, 1981). The results of our analysis shown in Table 1 met all three conditions of convergent validity, having CRs ranging from 0.87 to 0.95 and the AVEs from 0.66 to 0.91. The item loadings were all higher than the 0.70 benchmark.

Discriminant validity is the degree to which the measurement of a variable is not a reflection of other variables. Low correlations among the measure of interest and the measure of other

constructs indicates discriminant validity (Fornell and Larcker, 1981). When the squared root of the AVE for each construct is higher than the correlations among it and all other constructs, it demonstrates evidence of discriminant validity. As summarized in Table 2, the square root of AVE for each construct is greater than the correlations between them and all other constructs. The results suggest an adequate discriminant validity of all measurements. In the current study, results of data analysis provided us with strong evidence of convergent validity and discriminant validity.

[Insert Table 1 about Here]

[Insert Table 2 about Here]

5.2. Structural Model

We conducted the structural model analysis based on the hypothesized research model. Figure 2 shows the results of the hypothesized structural model analysis, including the explained variance (R^2 value) of the dependent variables, estimated path coefficients with significant paths indicated by asterisks, and the associated t-values of the paths. The results illustrate that the independent variables explain a substantial amount of the variance in the dependent variables. In our model, this explains 27% of the variance in perceived privacy risk, and 49% of the variance in self-disclosure in social networking sites. The significant antecedents are perceived control, trust in social networking site's service provider, convenience of maintaining existing relationships, new relationship building, self-presentation, enjoyment, and social influence.

[Insert Figure 2 about Here]

6. Discussion and Conclusion

In this study, we attempted to understand why users reveal personal information in social networking sites from an integrative point of view. The measurement model was confirmed with satisfactory convergent and discriminant validity, and the structural model explained 49% of

variance in self-disclosure in social networking sites.

6.1. Discussion of Results

The results of this study show that the perceived benefits and social influence are significant factors that determine self-disclosure in social networking sites. To our surprise, the perceived cost, specifically the perceived privacy risk, does not have any impact on self-disclosure in social networking sites. One possible explanation of this phenomenon is that users are not aware of the privacy risks associated with the use of social networking sites. A privacy awareness survey on Facebook users conducted by the Office of the Privacy Commissioner for Personal Data (PCPD) revealed that over 80% of the respondents know how to set access right to protect their personal data, but less than 40% do so (CASR, 2013).

Nowadays people tend to rely on numerous technologies in their lives (Shade, 2008). When they are enjoying the convenience from the use of new technologies, they seldom pay attention to its associated risks and dangers (Cady and McGregor, 2001). The lack of awareness of privacy risks among users has been illustrated in a number of studies. As revealed in prior studies, only 54 percent of respondents (a study of students) (Caruso and Salaway, 2008) and 56 percent of respondents (a study of Internet users in general) (Paine *et al.*, 2006) were concerned about their privacy online. In other words, almost half of the social networking site users do not pay attention to the privacy risk of disclosing personal information online. Coincidently, the results of this study revealed that perceived benefits, namely *convenience of maintaining existing relationships*, *new relationship building*, *self-presentation*, and *enjoyment*, generally have strong and significant positive effects on self-disclosure in social networking sites, whereas perceived privacy risk does not exert any significant negative influence. Responding to the first research question, the findings

suggest greater impacts of perceived benefits than perceived cost in influencing self-disclosure behavior in social networking sites.

On the other hand, *social influence*, among all antecedent variables in our research model, has the strongest impact on self-disclosure behavior in social networking sites. The importance of social influence in affecting the use and adoption of social networking sites has been corroborated in prior literature. The current findings also revealed that users of social networking sites tend to comply with expectation of others in the social circle and deliberately perform self-disclosure to a greater extent. Therefore, the relative importance of social influence on self-disclosure in social networking sites in the proposed research model is confirmed.

6.2. Theoretical Implications

Due to the apparent social nature of social media, research to address this relatively new communication and interaction phenomena has been increasing greatly in academic literature. Our study further contributes to a theoretical understanding of user behaviors in social networking sites. Particularly, we enrich existing literature on the topic of self-disclosure in social networking sites. The results of our study show that social influence has become the most important factor that drives self-disclosure in social networking sites. Our study informs researchers that it is important to incorporate social influence factors into the investigation of how individuals use social technologies. Furthermore, our data does not support the role of perceived privacy risk on self-disclosure in social networking sites. The role of perceived privacy has been well-tested in prior literature (e.g., Krasnova *et al.*, 2010). This inconsistency may be due to the cultural differences among respondents (e.g., individualism versus collectivism), signaling the need to incorporate cultural factors in future research. It is suggested that individual who are more collectivist tend to

be cohesive and integrated with others during social interaction, whereas those with an individualistic inclination have looser ties to people in social circle (Posey *et al.*, 2010). Therefore, those with strong collectivistic tendencies (e.g., Easterner) are more prone to reciprocity and social influence. Therefore, in collectivistic culture, the effect of perceived privacy risk on self-disclosure in social networking sites is likely to be weakened. The divergences of results thus call into question the generalization of prior findings among perceived costs, benefits and self-disclosure in social networking sites, and suggest that cultural factors should have a critical role to play.

6.3. Practical Implications

Apart from the theoretical contributions, the results of this study also provide some implications for practice, especially for policy-makers, educators, parents, and service providers of social networking sites. The current findings indicate that social influence and perceived benefits are the dominant predictors of self-disclosure in social networking sites. In the light of this, service providers are suggested to introduce more social features that foster users' interactions over the social networking sites, such as personal profile customization or news feed notification services. By strengthening the bonding between users, and providing enjoyable socializing experience, users are more likely to engage to these sites and are more willing disclose more personal information as it gives a sense of social presence and real time connections among users.

On the other hand, our results suggest that users do not seem to pay attention to the potential privacy risks of revealing personal information on online social platforms. As the depth and amount of information disclosure relates directly to the essence of building trust and forming relationships (Donath & Boyd, 2004), users might unconsciously provide too much personal information in the sites. Thus, it is not surprising to find an increasing number of incidents related

to offline risks and crimes (Barbovski *et al.*, 2011). Educators and teachers are advised to launch educational programs to raise students' awareness to the potential risks of self-disclosure in social networking sites. Service providers of social networking sites also can integrate intuitive privacy indices showing users the level of privacy protection to alert them about the potential risks of self-disclosure in social networking sites.

Recall the recent issues associated with the National Security Agency's Prism surveillance program, Facebook has revealed that it received over 9,000 requests for data from the US government in year 2012, and those confidential materials were sent back to the government without the consent from Facebook users. On the other side of the sun, a 24-year-old Austrian law student has launched a campaign called "Europe-v-Facebook" to raise public awareness of privacy and data protection with Facebook use, leading to widespread media attention (Hill, 2012). Whether users should trust the service providers in protecting their privacy have become an emerging issue after this incident. If trust is no longer valued by both parties in the future, there is a matter to study other potential drivers and barriers regarding self-disclosure in social networking sites.

6.4. Limitations and Future Research

We should note that this study is subjected to some limitations. First, the selection of respondents was restricted to Hong Kong. As self-disclosure has been suggested as a complicated and dynamic process and is affected by numerous individual, cultural and contextual factors (Harris *et al.*, 1999), additional research is needed to examine how and to what extent cultural differences affect users' disclosure behavior. Second, this study only focused on Facebook users. Since different types of social networking sites may have somewhat unique objectives and technological features, caution needs to be taken in generalizing the results to other online social

platforms. Third, this study was based on cross-sectional data to predict self-disclosure behavior in social networking sites under a theoretical framework. Longitudinal research studying individuals' usage behavior is needed to better explain the phenomenon. Finally, prior studies indicated that individual differences are influential in affecting self-disclosure in social networking sites. The current study, however, did not explicitly include individual differences variables into the investigation, which may in turn limit the explanatory power of the proposed research model. Future studies are encouraged to incorporate an additional group of variables and mechanisms to produce a thorough picture of self-disclosure in social networking sites.

Social networking sites have become a significant phenomenon in human communication and interaction patterns, and have profoundly affected the way people communicate and connect with each other. Although great interest has been placed on user behavior in social networking sites among researchers both in the IS and other disciplines, this study contributes to the literature by understanding why users disclose personal information with an integrative perspective of perceived cost and benefits, and social influence. We expect this study will generate interest among researchers and serve as a starting point for furthering our limited understanding of self-disclosure in social networking sites.

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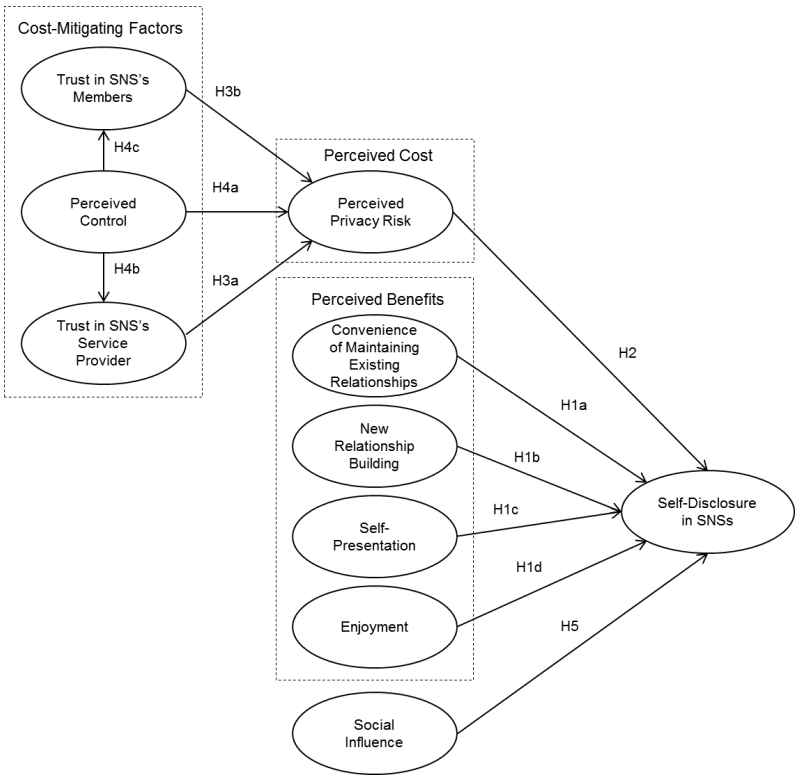

Figure 1. Research Model

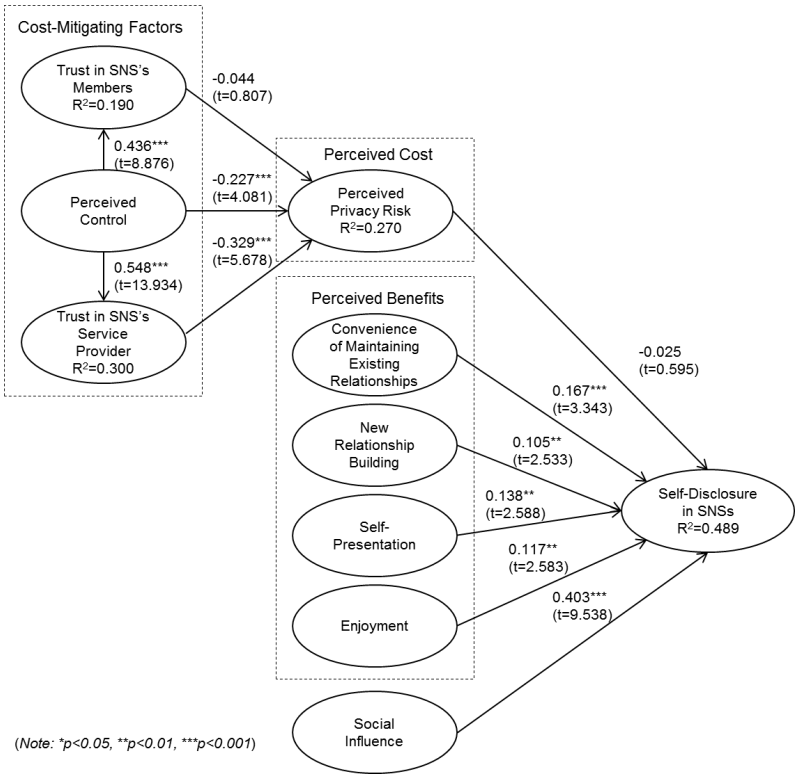

Figure 2. Results of the Research Model

Table 1. Psychometric Properties of Measures

Items		Loading	t-value	Mean	SD
Convenience of Maintaining Existing Relationships (CR=0.91; AVE=0.76) (Chiu et al., 2006; Krasnova et al., 2010)					
CON1	Facebook is convenient for informing all my friends about my ongoing activities.	0.87	49.22	5.53	1.19
CON2	Facebook allows me to save time when I want to share something new with my friends.	0.87	41.62	5.60	1.13
CON3	I find Facebook efficient in sharing information with my friends.	0.88	47.55	5.59	1.09
New Relationship Building (CR=0.90; AVE=0.75) (Krasnova et al., 2010)					
RB1	Through Facebook I get connected to new people who share my interests.	0.88	61.69	4.21	1.38
RB2	Facebook helps me to expand my network.	0.85	43.60	4.65	1.36
RB3	I get to know new people through Facebook.	0.87	47.04	4.16	1.46
Self-Presentation (CR=0.90; AVE=0.76) (Walther et al., 2001)					
SP1	I try to make a good impression on others on Facebook.	0.88	58.39	4.76	1.30
SP2	I try to present myself in a favorable way on Facebook.	0.89	50.08	4.33	1.36
SP3	Facebook helps me to present my best sides to others.	0.85	38.43	4.52	1.27
Enjoyment (CR=0.87; AVE=0.69) (Nambisan and Baron, 2007)					
EN1	When I am bored I often login to Facebook.	0.71	14.71	5.61	1.30
EN2	I find Facebook entertaining.	0.89	59.93	5.25	1.11
EN3	I spend enjoyable and relaxing time on Facebook.	0.88	52.66	5.04	1.11
Perceived Privacy Risk (CR=0.94; AVE=0.88) (Malhotra et al., 2004)					
RISK1	Overall, I find it risky to publish my personal information on Facebook.	0.92	52.37	4.50	1.25
RISK5	Please rate your overall perception of privacy risk involved when using Facebook. (*1 = very safe; 7 = very risky)*	0.95	145.64	4.53	1.24
Trust in SNS's Service Provider (CR=0.93; AVE=0.68) (Jarvenpaa and Tractinsky 1999; McKnight et al. 2002)					
TP1	Facebook is open and receptive to the needs of its members.	0.78	26.25	4.22	1.14
TP2	Facebook makes good-faith efforts to address most member concerns.	0.80	26.67	4.10	1.18
TP3	Facebook is also interested in the well-being of its members, not just its own.	0.84	46.63	3.90	1.15
TP4	Facebook is honest in its dealings with me.	0.86	56.97	3.97	1.20
TP5	Facebook keeps its commitments to its members.	0.86	45.13	4.07	1.01
TP6	Facebook is trustworthy.	0.80	39.87	4.44	1.05
Trust in SNS's Members (CR=0.92; AVE=0.67) (Chiu et al. 2006; McKnight et al. 2002)					
TM1	Other Facebook members will do their best to help me.	0.75	21.87	4.20	0.96
TM2	Other Facebook members do care about the well-being of others.	0.76	22.44	4.17	0.98
TM3	Other Facebook members are open and receptive to the needs of each other.	0.83	27.20	4.19	1.02
TM4	Other Facebook members are honest in dealing with each other.	0.88	57.63	4.07	1.00
TM5	Other Facebook members keep their promises.	0.88	47.25	4.06	0.96
TM6	Other Facebook members are trustworthy.	0.82	32.85	4.11	0.98
Perceived Control (CR=0.89; AVE=0.73) (Krasnova et al. 2010)					
PCL1	I feel in control over the information I provide on Facebook.	0.86	60.32	4.87	1.28
PCL2	Privacy settings allow me to have full control over the information I provide on Facebook.	0.90	72.03	4.25	1.37
PCL3	I feel in control over who can view my information on Facebook.	0.80	28.88	4.33	1.47
Self-Disclosure in Social Networking Sites (CR=0.89; AVE=0.66) (Krasnova et al. 2010)					
SD1	I have a comprehensive profile on Facebook.	0.78	28.10	3.64	1.54
SD2	I find time to keep my profile up-to-date.	0.82	41.41	3.30	1.53
SD3	I keep my friends updated about what is going on in my life through Facebook.	0.86	58.00	4.79	1.46
SD4	When I have something to say, I like to share it on Facebook.	0.80	34.45	4.92	1.43

Social Influence (CR=0.95; AVE=0.91) (Taylor and Todd 1995)					
SI1	People who influence my behavior would think that I should self-disclose on Facebook.	0.95	142.94	4.06	1.27
SI2	People who are important to me would think that I should self-disclose on Facebook.	0.95	134.65	4.14	1.32

Table 2. Correlation Matrix and Psychometric Properties of Key Constructs

	CON	EN	RB	SD	PCL	RISK	SP	SI	TM	TP
Convenience of Maintaining Existing Relationships (CON)	**0.87**									
Enjoyment (EN)	0.46	**0.83**								
New Relationship Building (RB)	0.45	0.38	**0.87**							
Self-Disclosure in SNSs (SD)	0.48	0.43	0.45	**0.81**						
Perceived Control (PCL)	0.32	0.35	0.30	0.52	**0.86**					
Perceived Privacy Risk (RISK)	-0.13	-0.19	-0.18	-0.20	-0.43	**0.94**				
Self-Presentation (SP)	0.41	0.40	0.39	0.46	0.35	-0.22	**0.87**			
Social Influence (SI)	0.37	0.34	0.40	0.61	0.41	-0.19	0.40	**0.95**		
Trust in SNS's Members (TM)	0.27	0.30	0.30	0.38	0.44	-0.34	0.23	0.42	**0.82**	
Trust in SNS's Service Provider (TP)	0.19	0.29	0.28	0.35	0.55	-0.48	0.30	0.32	0.61	**0.83**

Notes: Bolded diagonal elements are the square root of AVE for each construct. Off-diagonal elements are the correlations between constructs.