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Self-disclosure and SNS Platforms: The Impact of SNS Transparency and Culture

Research-in-Progress

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Abstract

Self-disclosure on social networking platforms has attracted attention in Information Systems (IS) research. While studies have connected individual beliefs such as perceived privacy, perceived benefits, and cost to SNS use, less research has examined how characteristics of the social media platform itself shape SNS use. This study extends the literature by examining how the interplay between SNS transparency and individual culture affect user's self-disclosure of personal information as well as factors that shape users' perceptions on SNS transparency. Drawing on Accountability Theory, Communication Privacy Management Theory, and Culture Theory, we build a comprehensive, integrative model that offers a more holistic view of self-disclosure and the impact of the contextual factors on self-disclosure behaviors. The proposed study will use factorial survey (Vance et al. 2013) to collect data. This study will conceptually develop and operationalize a new construct—SNS transparency—that could help the researchers to gain better understanding of SNS-based self-disclosure and offers insights into how to integrate transparency into social media platforms.

Keywords: Self-disclosure, SNS Transparency, Network transparency, Information transparency, Culture, Culture Theory, Accountability Theory, Communications Privacy Management Theory.

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Introduction

Social networking services (SNS) afford opportunities for users to share many types of information with friends, family, and others. For example, a user may disclose their preferences for food, relationship status, or the joys of daily work. Such sharing is referred to as information self-disclosure, defined as the action to disclose personal information when interacting with others (Cozby, 1973). Information disclosure can occur deliberately, such as directly tagging a friend in a post about a life event, or indirectly, such as a "friend of a friend" viewing that post about their mutual acquaintance. By disclosing information, SNS users can strengthen interpersonal relationships and facilitate communication (Lowry et al., 2011).

Despite such positives, self-disclosure may create costs. Because one may be lack of complete control over who views a post, self-disclosure can create a sense of vulnerability and, when settings are not managed mindfully, pose threats to users' information privacy (Altman & Taylor, 1973; Lowry et al., 2011). When deciding to share information, users calculate the trade-off between the benefits (e.g., strengthened relationship and attention) with the potential costs (e.g., lost privacy) (Sherby, 2005; Spiekermann et al., 2010).

Mitigating self-disclosures' perceived cost is important, because SNS requires user contributions to generate value for platform owners and users. To reduce perceived cost, SNS platforms use various methods to protect users' personal information, such as privacy statement or enabling users to control privacy settings (i.e., settings on who can see the disclosed information). By doing so, platforms hope to induce more users to disclose their personal information (Hui et al., 2007) by decreasing users' privacy concerns (Xu et al., 2011) and generate profits.

Because self-disclosure is an important SNS use behavior, there is a need to develop rich theoretical and empirical understanding of how the context shapes cognitive processes that lead to sharing personal information on social media platforms. Accountability theory suggests that users' decision and choice are shaped by task environment and individual preferences (Tetlock, 1999). In an SNS context, that environment includes the characteristics of the platform. Hence, this study proposes a model that uses individual and platform characteristics to explain users' self-disclosure intention. As for platform characteristics, we conceptualize a new concept, SNS transparency, to gain insights into the self-disclosure phenomenon on SNS platforms.

In addition to the context, because SNS engage culturally diverse user populations, we believe it is important to enrich understanding of how culture influences self-disclosure on social media platforms. Lowry et al. (2011) found that culture significantly predicts attitude towards using self-disclosure technologies. This view is consistent with theories, such as Communication Privacy Management Theory (Petronio, 1991), that suggest culture shapes decisions to share personal information. Cultures could shape how SNS users respond to features of the social media platform. Most commercial websites have the same designs and features, except languages and local contents, for different countries or cities (Sia et al. 2009). The case is true for most SNS sites, which do not offer extensive customization for specific country except language.

Understanding the implications of culture for self-disclosure is important, because social media platforms increasingly complete in a global marketplace. Evidence suggests that users from Western and Eastern countries desire different features (Morio and Buchholz 2009). For example, users from western countries desire communities with low level of anonymity; in contrast, users from eastern countries favor high anonymity. While Reinecke and Bernstein (2013) offer a design science approach to build interfaces that automatically adopt to culture; they only focus on attracting users at the very first sight of the website. They do not pay attention to how to keep the users from different culture. Our research could help provide guidelines for SNS sites to build culturally adoptive SNS interfaces to hold the users.

In summary, we want to investigate the following research questions:

- 1. What drives user perceptions of transparency on SNS platforms?
- 2. What is the relationship between SNS transparency and users' self-disclosure?
- 3. Will culture moderate the proposed relationship between SNS transparency and self-disclosure?

Our proposed study holds potential to contribute to research and practice. For research, we will provide a more nuanced understanding of self-disclosure on the online social networking platforms. We examine online self-disclosure from the multi-theoretical perspectives, thereby, offering a more comprehensive understanding of the phenomenon. For practice, understanding the relationship between transparency and self-disclosure may increase user's contributions to the SNS. Our findings may inform understanding of how to make social media platforms more transparent, encourage self-disclosure, and encourage more contributions to the community. The rest of the paper unfolds as follows. The second section introduces theoretical foundations for SNS transparency, and our proposed research model. The third section develops the hypotheses. The fourth section introduces the proposed method and preliminary data analysis. Then, in the last section we conclude our paper.

Theory

The literature in organizational transparency and the features of SNS, Accountability Theory, Communication Privacy Management Theory, as well as Culture Theory inform our study of SNS transparency and self-disclosure.

SNS Transparency

We conceptualize the SNS Transparency as incorporating two sub dimensions: information transparency and network transparency considering the nature of SNS. By doing this, we can have a better understanding about the impact of features of SNS on intention to self-disclose. Bazarova and Choi (2014), extending the functional model of self-disclosure, found that SNS affordances (directedness and publicness) could influence the goals of self-disclosure. For example, through private message, people more likely to aim to develop good relationship, while through status update, people more likely to aim for social validation (Bazarova and Choi 2014). We see SNS transparency as one of the affordances of SNS platforms and focus on the level of intention to self-disclose. This aligns with the idea that self-disclosure behavior is influenced on the contextual factors (Joinson and Paine 2007).

Transparency has become one of the "most cherished and celebrated, yet unquestioned" principles in business environment and even in the whole society (Lord 2006; Christensen and Cornelissen 2015). The history of transparency is long in organizational sciences and "information systems researchers have investigated transparency in the context of business to consumer relationships and digital markets." (Schnackenberg and Tomlinson 2014). Zhu (2004) investigates the incentives for business to join Business-to-Business exchanges under different competition conditions, different information structures, and by different nature of the products, challenging the popular "information transparency hypothesis". He argued that information transparency is a double-edged sword. Control is a major factor in online disclosure. Individuals want control over what and how their private information is collected and with whom it is shared (Joinson & Paine 2007). SNS platforms should have information transparency since it holds in the databases tons of personal information. Wauters and colleagues (2014) investigate the ways to optimize information transparency in the context of SNS. They find that it is important to do "smart transparency" to make it easier for users to understand the policies and rules.

Researchers from different disciplines seem to exclusively focus on transparency in terms of information (Schnackenberg and Tomlinson 2014). In organization transparency literature, transparency is defined as the "availability of certain information, be it fiscal records, company policies, rules, etc., to the individuals or organizations outside of the specific organization (Bushman et al. 2004). We draw on their view of transparency in this paper. Awad and Krishnan (2006) investigate the impact of the information transparency features customers' willingness to be profiled online. There found some specific features of the context could enhance information transparency. By information transparency features they mean "features that give consumers access to the information a firm has collected about them, and how that

information is going to be used." (Awad and Krishnan 2006, p14). Consistent with these views, we define *Information Transparency* as the extent to which the information in the whole network is regulated and transmitted is known to the users.

Information transparency is different from **message transparency**, introduced by Leonardi (2015). Basically, it means everyone could know the message sent from one to another on SNS of the enterprise (Leonardi, 2015). The message transparency means communication through enterprise SNS is made, or can be made, public. However, in a general SNS context, the private message is not publically available. The conversation through comments, as a means to exchange messages publicly, reflects network transparency, which is the new construct we introduce in this study.

When studying the Enterprise SNS, Leonardi (2015) brought up the idea of network translucence. The enterprise SNS affordance makes it clear how people within the organization are connected (Leonardi, 2015). This is generalizable to SNS platforms as well. Like what Boyd and Ellison (2007, p. 211) have suggested: "what makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks." Therefore, we argue that network transparency is as important as information transparency on SNS platforms. Beyond message transparency, in social media context, network transparency can also reveal users' social relationships (Kane et al. 2014).

SNS sites are platforms that provide individuals to build and develop personal networks. It is important to see the whole picture of how the whole network is connected or grows. Stuart et al. (2012) are among the first to conceptualize similar phenomenon in a holistic manner. They term the phenomenon as social transparency, which is defined as "the availability of social meta-data surrounding information exchange" (pp. 451). Platforms on the Internet, e.g. SNS, enable the social transparency phenomenon. Thus, for SNS companies, there is another transparency feature that would influence users' perception about the platform, network transparency, because of SNS companies' nature. We align the Network transparency in our study with Straut et al. (2012). What's more network transparency is one of the four common features of SNS (Boyd and Ellison 2007; Ellison and Boyd 2013; Kane et al. 2014). Network transparency is viewed as the ability to view and traverse their list of connections and those made by others within the system. However, based on our examination of different SNS platforms, we found that the network transparency does vary across different SNS. We define *Network transparency* as the extent to which SNS users are aware of how the users of the whole network are connected.

Thus, we conceptualize transparency of SNS platforms as having two dimensions, information transparency and network transparency, generating the new concept, **SNS transparency**, which is defined as the extent to which SNS platforms make visible the cues concerning how one's network is connected and how personal information is regulated and transmitted. Conceptualizing the concepts bring together the two research streams (organizational transparency and social transparency) and provide a more holistic picture of the transparency issue of SNS.

Accountability theory

Accountability theory focuses on "the individual's relationship to social structures" (Tetlock, 1999, p.118). Accountability refers to the implicit or explicit expectation that one may be called on to justify one's beliefs, feelings, and actions to others (Lerner and Tetlock, 1999)

Accountability theory suggests four mechanisms that enhance individual feelings of accountability, among which are *identifiability*, *expectation of evaluation*, *awareness of monitoring*, *and social presence* (Vance et al. 2013, 2015). According to Vance et al. (2015) (see Table 1), these mechanisms could make the users of certain information system to feel more accountable since they know they are identifiable, monitored, evaluated and notice the presence of others. We believe these factors could influence SNS users' perceptions of a social media platform's transparency (detailed arguments for why it is the case are in the hypothesis section) according to our definition of SNS transparency.

Table 1. Mechanisms that Affect Perceived Transparency									
Identifiability	knowledge that his outputs could be linked to him								
Expectation of Evaluation	performance will be assessed by another [party] according to some normative ground rules and with some implied consequences								
Awareness of Monitoring	a user's state of active cognition that his/her system related work is monitored								
Social Presence	awareness of other users in the system or "the sense of being together with others"								

In addition to these mechanisms, Wauters and colleagues (2014) find that features of SNS, such as visualization and information design, could impact user's perceptions of information transparency. Schnackenberg and Tomlinson conclude that transparency is a function of three factors, among which are Disclosure, Clarity, and Accuracy. The case should be true in the context of SNS. These three factors are incorporated in one of our four antecedents of SNS transparency: awareness of monitoring. We will discuss this later.

Why do we want to test the impact of these design features on SNS transparency rather than directly evaluating accountability? Accountability directs attention to how one feels about the self, where SNS Transparency directs attention to the users' perceptions of the platform. Accountability is "the implicit or explicit pressure to justify one's beliefs and actions to others" (Tadmor & Tetlock, 2009; p. 8). Whereas our notion of transparency is about the visibility of information and social networks on a platform. We are interested in understanding how design features affect users' general perceptions about the platform's transparency affects their decisions to contribute to the platform. SNS platforms (among other digital media) promise to make transparency at least technically possible (Christensen and Cornelissen 2015). Thus, we believe, in the context of social media, transparency, should be a primary driver SNS user behavior.

What's more, transparency and accountability are difficult to theoretically tease apart at the organizational level. The link between organizational transparency and organizational accountability has been comprehensively addressed by Hood (2010), who uses three metaphors, *Siamese twins*, *matching parts*, *or awkward couple*, to describe the relationship between the two concepts. Though Hood (2010) focuses on "good governance issues" in the government, not in the context of business corporations, but these two concepts could be applied in the business context and the three metaphors have much implications for our study. When considered as Siamese twins, the two concepts are basically undistinguishable (Hood 2010). What is noteworthy is that the organizational accountability is different than individual accountability. We focuses on transparency as features of the "platform" e.g., characteristics at the organizational level.

Communication Privacy Management Theory

Communication privacy management theory (CPM) is developed by Petronio (1991). CPM incorporates notions of private information ownership, private information control, and private information turbulence (Petronio 2008). Private information ownership deals with the range of the information that individuals define as their private information; private information control is about rules that people use to decide whether to reveal the private information; private information turbulence reflects the situation when people lose control of their privacy (Petronio 2008).

According to CPM theory, contextual factors (in our case, SNS transparency) could influence the decision about disclosing private information. The contextual factors in our study would be SNS transparency and culture.

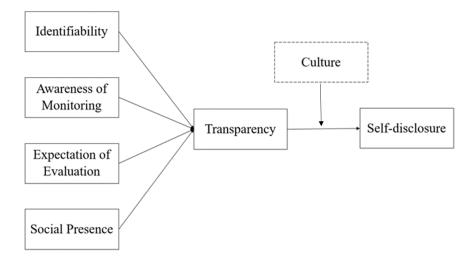


Figure 1 Research Model

CPM assumes that information will be defined as private when it "carries vulnerabilities", thus, they believe they can control the information flow (Petronio 2008). Each person has certain set of rules to manage the privacy boundary. As the context changes, the rules to manage the privacy or decision to self-disclose change (Child et al. 2011; Petronio 2008). Child et al. (2011) found that the changes in contextual rules could lead the bloggers to delete the blog they have posted, informing us the importance of the context on SNS sites, in our case, the SNS interfaces' ability to elicit perceptions of identifiability, expectation of evaluation, awareness of monitoring, and social presence.

Communication privacy management theory also provides us the cultural perspective on self-disclosure. Culture affects whether a user opens up the privacy boundary and be willing to disclose personal information (Petronio, 1991). That is, people from different cultures have different core criteria to develop the private information control rules. Together with social penetration theory, which states how user relationships are built and explains why users want to disclose personal information (Altman & Taylor, 1973), we examine how SNS transparency and culture affect users' intention of self-disclosure.

Culture

Individuals may espouse national culture values to certain degrees, which are not always consistent with their country of origin or residence (Srite and Karahanna 2006). Consistent with this view, we treat national culture dimensions (individualism/collectivism, power distance, uncertainty avoidance, and masculinity/femininity) as individual-level variables to predict individual technology use behaviors. In addition, we examine Long Term Orientation, a national culture dimension, on information disclosure (Hofstede and Bond, 1988). Table 2 defines the cultural values.

Table 2. Definition	ns of the culture dimensions used in this study as moderators
Culture Dimension	Definitions
Individualism/Collectivism	Degree to which the individual emphasizes his/her own needs as opposed to the group needs and prefer to act as an individual rather than as a member of a group
Power Distance	Degree to which large differentials of power and inequality are accepted as normal by the individual. Power distance will condition the extent to which the employee accepts that his/her superiors have more power.
Uncertainty Avoidance	Uncertainty avoidance is the level of risk accepted by the individual which can be gleaned by his/her emphasis on rule obedience, ritual behavior, and labor mobility. This dimension examines the extent to which one feels threatened by ambiguous situations.
Masculinity/Femininity	The degree to which gender inequalities are espoused by an individual. Individuals who espouse masculine values emphasize work goals such as earnings, advancement, competitiveness, performance, and assertiveness. On the other hand, individuals who espouse feminine values tend to emphasize personal goals such as a friendly atmosphere, comfortable work environment, quality of life, and warm personal relationships
Long Term Orientation	Long term orientation a forward-looking versus present- and past-looking attribute; that is, a "future" (long-term) versus a "now" (short-term) view.
*This table is largely adopted f et al. (2006)	rom Srite and Karahana (2006). Long Term Orientation is from Bearden

In our study, we direct attention to the moderating effect of culture values on the relationship between SNS transparency and Self-disclosure intention. According to Communication Privacy Management Theory, cultural values will affect the degree to which individuals are open to sharing information (Petronio 2015). This suggests that given the same features on the same social media platform, people with different culture values could demonstrate different intentions, or actual, self-disclosure behavior.

Hypotheses Development

In our proposed study, four variables affect the SNS's Transparency: identifiability, expectation of evaluation, awareness of monitoring, and social presence. These four can be, according to Vance et al. (2013), manipulated by "text-based scenarios". Consistent with Vance et al. (2015), we see these four antecedents as the SNS's capability to foster corresponding perceptions.

Identifiability is a person's "knowledge that his outputs could be linked to him" and thus reveals his/her true identity (Williams, Harkins and Latane 1981, p. 309). Identifiability influences people efforts to perform well (Williams et al., 1981) and also has impact on the "salience of social identity and the strategic communication of it" (Reicher et al., 1994). For example, in low identifiability situation, swimming athlete's performance is lower in relay swimming (Everett et al. 1992); identifiability also has impact on brainstorming productivity (Diehl et al. 1987). Task visibility is negatively related to social loafing, according to George (1992), meaning that people will behave differently when identifiable than otherwise. In our study, we treat Identifiability as a platform's features that make the users feel identifiable, e.g., public versus private profiles, avatars etc.

"The ubiquitous presence of technology in our lives may limit opportunities to develop deep levels of self-awareness" (Colbet et al. 2016, p.733). According to Tanis and Postmes (2007), the use of computer to communicate can disembody individuals because of its mediation effect. SNS sites are platforms that

mediate users' communication with others, leading to the feeling of "de-individuation" (Reicher et al. 1994) even though they are identified (Vance et al. 2015). If the individual feels de-individuated, s/he will do or perceive something differently (Reicher et al. 1994). On the other hand, if one is distinguishable within a group a people, say, the network of a certain user, then this person will perceive the SNS platform in different ways than otherwise.

We propose that identifiability will affect SNS transparency. If every user of certain SNS is anonymous, it is not possible to know how the users in the network are connected, thus not knowing how the information is transmitted among the users. A SNS where the users enjoy complete anonymity may not require trust and nor foster feelings of accountability. Thus, such SNS will not be considered transparent, in terms of both information and network. We propose that higher SNS-enabled identifiability, operationalized as public profiles, synchronicity of updates, traceability of networks, will make the platform perceptually more transparent.

H1a: Higher platform-enabled identifiability will make the platform perceptually more transparent in terms of information.

H₁b: Higher platform-enabled identifiability will make the platform perceptually more transparent in terms of network.

Expectation of evaluation is the belief that one's "performance will be assessed by another [party] according to some normative ground rules and with some implied consequences" (Lerner and Tetlock 1999, p. 255). Individuals desire to gain approval from the audience (Quinn and Schlenker 2012), thus, the platform induced expectation of evaluation could very likely influence the perception about the transparency of it. SNS could be view as platforms for personal exhibition, enabling the users to achieve certain goals through the path of self-disclosure, including identify clarification, relational development, social validation, social control and resource gain, self-expression and release of distress, information sharing to benefit others, information storage and entertainment (Choi and Bazarova 2015). One's connections could be viewed as the audience that "evaluate" him or her. Features in SNS, such as likes or comments, emoticons, or promotion of what's trending, could increase expectations of evaluation, which can create evaluation apprehension (Geen 1991; Vance et al. 2015). This state of mind could make the users become more aware of how the network is connected and how the information is transmitted. What's more, this state of mind could also increase the feeling of the need to track how the network is connected as well as how the information is transmitted in the SNS sites. Thus, the transparency characteristics might be more prominent in people's mind. That is, the expectation of evaluation could push people to know more about the information regulation and transmission as well as how the network is connected on the SNS, making it perceptually more transparent.

We treat Expectation of evaluation as the SNS's capability to induce expectation of evaluation. *SNS* users who believe they are not going to be evaluated by others, e.g., lack an audience, may perform differently than those who lack anonymity (Kimble et al., 1992). Thus, they may also perceive the situation differently. Because of anonymity, the individual will very possibly think the platform is not transparent in terms of both network and information. That is, we propose that the impact of Expectation of evaluation will be mediated by Transparency.

H2a: Higher platform-enabled Expectation of evaluation will make the platform perceptually more transparent in terms of information.

H2b: Higher platform-enabled Expectation of evaluation will make the platform perceptually more transparent in terms of network.

Awareness of monitoring is a user's state of active cognition that his/her system related work is monitored (Vance et al. 2015). Monitoring is defined by Griffith (1993) as "the process of watching or tracking a user's activities." We distinguish monitoring from evaluation. Evaluation is from users, and the monitoring is from the platform. That is, we treat Awareness of monitoring as the capability of the platform to foster awareness of monitoring.

Social media platforms could monitor users in several ways. For example, media-monitoring could automatically monitor online sources (in our case, SNS users' posts) by "agents" or "bots", which could send alerts to the listener when certain online sources meet the predefined criteria (Rappaport 2010). The media-monitoring techniques could be used in many sectors, ranging from "marketing support to

reputation management" (Rappaport 2010, p202). More and more monitoring techniques are floating around as the governmental and/or organizational needs to know what is expressed online, indicating that SNS should keep monitoring function as default (Divol et al. 2012). In our case, monitoring is supposed to be used to make sure that the SNS sites provide a social platform free of improper information.

SNS may vary in the degree to which they monitor, or make users aware that they are monitored for certain purposes. Generally speaking, ethical social media platforms tell users in form of announcements or notifications, which contain the specific criteria of the monitoring, the use of the information collected, and the consequences of posting illegal information and so on (Zhang and Vos 2014). This type of announcement or notification, as the indicator of *Awareness of monitoring*, could inform the users how the information is regulated. Thus, *Awareness of monitoring* influences the users' perceptions about Transparency, especially information transparency.

H3a: Higher platform-enabled awareness of monitoring will make the platform perceptually more transparent in terms of information.

H3b: Higher platform-enabled awareness of monitoring will make the platform perceptually more transparent in terms of network.

Social presence is the awareness of other users in the system (Vance et al. 2015) or "the sense of being together with others" (Biocca et al. 2003, p.459). The definitions of social presence are many but the review of the definitions of the concept is beyond this paper (for review on social presence, see Biocca et al. 2003; Aragon 2003). It is also noteworthy that the social presence could also indicate the non-mediated presence but we use the term to specifically denote SNS-mediated social presence, aligning with Biocca et al. (2003). According to Biocca (1997), "The minimum level of social presence occurs when users feel that a form, behavior, or sensory experience indicates the presence of another intelligence. The amount of social presence is the degree to which a user feels access to the intelligence, intentions, and sensory impressions of another (p.132)". Thus, there are many features could foster social presence, such as using real name, using emoticons, personal profiles, using audio or video, among other (Aragon 2003) cues conveyed by the communication media (Short et al. 1976).

Social presence influences perceived learning and satisfaction (Richardson et al., 2003), attitudes towards online shopping (Hassanein et al., 2007), etc. Social presence can also facilitate group consensus in the case of communication technology mediated collaboration (Yoo and Alavi 2001). Mere presence of another person could increase conforming behaviors (Guerin 1986). This makes us to believe that social presence on SNS platforms could influence users' perception about the platform in term of whether it is transparent or not.

Social presence, in the form of updates and profile pictures, reminds individuals the existence of others though they are not physically present. Again, we treat Social presence as the capability of the SNS to provide the sense of human existence. Social presence will provide users a better idea of how the network is connected. That is, high social presence will lead to higher perceived network transparency.

H4a: Higher platform-enabled social presence will make the platform perceptually more transparent in terms of information.

H4b: Higher platform-enabled social presence will make the platform perceptually more transparent in terms of network.

Higher transparency could make the SNS more like traditional face-to-face communication because transparent SNS make the user more identifiable and socially present, thus making it more comfortable for the users to build more intimate relationship with people connected.

On transparent SNS, social network connections are viewable by all users, very possibly making users feel more control on the information they post online. Users will know who could see their information. From Social Penetration Perspective (Altman & Taylor 1973), it would be much easier for the individual to target the people that he or she wants to build more intimate relationship with. Again, this will make the individual more comfortable to self-disclose.

According to communication privacy management theory (Petronio, 1991; Petronio 2008), culture could influence how and/or under what conditions individuals self-disclose. That is, in the same situation (e.g.,

the same degree of transparency), users cultural values may lead to different decisions concerning whether to self-disclose or have different degree of comfort when self-disclosing. Thus, culture would influence the relationship between transparency and self-disclosure.

H5a: Higher perceived SNS information transparency will make the users more likely to selfdisclose.

H5b: Higher perceived SNS network transparency will make the users more likely to self-disclose.

"Behavioral models do not universally hold across cultures" (Srite and Karahana 2006, p.679). This indicates that people from different culture have different judgements even on the same condition. We follow along the logic of these research and propose H6. As noted in communication privacy management theory (Petronio, 1991; Petronio 2002), culture is among the factors that could influence how and/or under what conditions individuals self-disclose. That is, in the same situation (e.g., the same degree of transparency), users cultural values may lead to different decisions concerning whether to self-disclose or have different degree of comfort when self-disclosing. Thus, culture would influence the relationship between transparency and self-disclosure.

H6: Culture moderates the relationship between SNS transparency and self-disclosure intention.

Method

Data Collection

The data is collected by surveying (web-based) college students, as they represent the most active users on the SNS platforms. The model should be able to yield implications for SNS designers, thus we target our model to be applied to the whole population of social network service users. However, it is impossible to survey the whole population of SNS users, in order to maximize the implications, we draw our subjects from the most active user group: college students. Social Networking Sites are becoming an integral part of daily life of college students, which are among the largest groups of SNS users (citation). Thus, we frame our accessible population as college students around the world. We select universities in the US. China Hong Kong, and a European Country to diversify the culture background since culture is the important factor that could influence self-disclosure behavior.

We collect our data by using survey. We expect that there will be such college students who rarely use SNS, so we have some screening questions to make sure the subjects are active SNS users. The screening questions include: what kind(s) of social media platform(s) do you use? How often do you use social media? How long have you been using social media? We use these questions to rule out inappropriate responses. We also consider the time the subject used to finish the survey as one of the criteria to rule inappropriate answers.

Measurement

As much as possible, we will base our measures on existing literature. The measures of *Identifiability* are developed based on Reicher et al. (1994) and Schopler et al. (1995). The measures of Expectation of Evaluation are based on Kimble et al. (1992), Innes et al. (1975), and Jackson et al. (1985). The measures of Awareness of Monitoring are based on Vance et al. (2015). The measures of Social Presence based on Short et al. (1976), Gefen et al. (2004). Vance et al. (2015) also inform our measurement development for aforementioned four constructs. We adopt and modify Awad et al.'s (2006) measurements of information transparency. The measures of self-disclosure are based on Chen et al. (2015) and Posey et al. (2010). Our measurements of network transparency is developed based on existing SNS literature (boyd and Ellison 2007; Ellison and boyd 2013; Kane et al. 2014). Culture items are adopted from Srite and Karahana (2006) and Bearden et al. (2006). We also included Trust, the measurements of which are adopted from McKnight et al. (2011) and privacy concerns, the measurements of which are adopted from Lowry et al. (2011).

We take the following steps to develop and refine our measurements. We first customized existing measures for some of the constructs, including Information Transparency, Self-disclosure, Trust, Privacy Concerns, and Culture. For Information Transparency, we add several SNS related items and customize the original items considering it is used in e-commerce context (Awad et al. 2006). Then, we generate a sufficient large item pools for those constructs without clear and ready-to-be-customized items, such as Identifiability, Expectation of Evaluation, Social Presence, Awareness of Monitoring, Network Transparency. The definitions and item source for each construct is shown in Table 3.

Table ;	3. Table of construct definitions and item	source
Constructs	Definition	Item Source
Identifiability	Perception that his outputs could be linked to him (Williams, Harkins and Latane 1981, p. 309)	Developed based on Reicher et al. (1994) and Schopler et al. (1995)
Expectation of Evaluation	Perception that performance will be assessed by another [party] according to some normative ground rules and with some implied consequences (Lerner and Tetlock 1999, p. 255)	Developed based on Kimble et al. (1992), Innes et al. (1975), and Jackson et al. (1985)
Social Presence	A user's state of active cognition that his/her system related work is monitored	Developed based on Short et al. (1976), Gefen et al. (2004). Vance et al. (2015)
Awareness of monitoring	Awareness of other users in the system (Vance, Lowry, and Eggett 2015)	Developed based on Vance et al. (2015)
Information Transparency	The extent to which the information in the whole network is regulated and transmitted is known to the users.	Adopted and modified from Awad et al. (2006)
Network Transparency	The extent to which SNS users are aware of how the users of the whole network are connected.	Developed based on (boyd and Ellison 2007; Ellison and boyd 2013; Kane et al. 2014)
Self-disclosure	The action to disclose personal information when interacting with others (Cozby, 1973)	Adopted from Chen and Sharma (2015)
Trust	An individual's willingness to depend on another party because of the characteristics of the other party (McKnight et al. 2011)	Adopted from McKnight et al. (2011)
Privacy Concern	"The claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others" (Malhotra et al 2004, p. 337)	Lowry et al. (2011)
Culture	"The collective programming of the mind which distinguishes the members of one human group from another" (Hofstede 1980, p. 260)	Adopted from Srite and Karahana (2006) and Bearden et al. (2006

After we have sufficient number of items for each construct, we do the first round Q-sort, seven expert evaluators are invited to carefully match the randomized items with the constructs. The first round O-sort yields some "surprise". We discussed on the confusing items with the evaluators and modified the items in aim of solving the confusions. Then we do the second round Q-sort with another four evaluators. The hit rate meet the threshold of 0.70.

After we get good O-sort test results. We started our first pilot test. We use scenario-based online surveys to collect data. The pilot test is carried out at a large university in the United States. Students of business related majors are recruited as the subjects. They are given extra credit to take the survey. The announcements of the survey were made one week before the survey. The link to the survey was emailed to the students by the corresponding instructors. During a 5-day period, 69 students completed the survey.

About the survey, before a student fills out the survey questions, a video introducing the features of a hypothetical SNS platform is shown to him or her. The descriptions in the videos vary in terms of the SNS features that may affect the level of perceived identifiability, expectation of evaluation, awareness of monitoring, and social presence. We have three videos (i.e., high, medium, and low in terms of the manipulated factors) in total and only one (random) of them will be presented when a subject starts the web-based survey. We have specific questions about the level of perceived identifiability, expectation of evaluation, awareness of monitoring, and social presence to make sure the manipulated features are in effect. Then some questions about the potential use of the SNS were asked. These three videos are intended to generate certain variance in identifiability, expectation of evaluation, awareness of monitoring, and social presence. Demographic data and cultural orientation data are also collected. Duration of the survey is also recorded in order to rule out inappropriate answers.

Pilot Data Analysis

First pilot test

The primary purpose of our pilot study is to validate the measurement items we developed for this study. Convergent validity is assessed by the reliability of items and the average variance extracted (AVE) (Barclay et al. 1995; Hu et al. 2004). Table 4 reports the item loadings on the corresponding construct. As we can see from the result, all items have loadings greater than 0.7, which is a threshold of item reliability and convergent validity (Barclay et al. 1995). Our AVE score for each construct in Table 5, ranging from 0.64 to 0.82, also exceeds the minimum requirement of 0.50 (Hu et al. 2004).

Discriminant validity is assured by the factor analysis, the cross-loadings, and the correlations and square root of AVEs (Chin 1998). All our items have cross-loadings smaller than the loadings on their own constructs (they are not shown in Table 4 for clarity purpose). The correlations among constructs, presented in Table 5, are also much lower than the square root of AVEs. These evidences reveal that the constructs have good discriminant validity.

In short, based on the pilot data from 69 student subjects, we show that our items and constructs have both convergent validity and discriminant validity. These items will be used in the real data collection and to empirically test our research model in later stages.

	Table 4. Factor Analysis Result										
	IdeEoe	Sop	AOM	INT	NET	SED	PRI	TRU			
IDE_1	0.837										
IDE_2	0.878										
IDE_3	0.839										
IDE_4	0.836										
EOE_6	0.711										
EOE_8	0.789										
SOP_11		0.824									
SOP_12		0.781									
AOM_13			0.830								
AOM_15			0.768								
AOM_16			0.862								
INT_19				0.786							
INT_22				0.906							
NET_26					0.750						
NET_28					0.905						
NET_29					0.916						
SED_30						0.859					
SED_31						0.860					
SED_32						0.810					
SED_33						0.868					
PRI_47							0.899				
PRI_48							0.946				
PRI_49							0.862				
TRU_42								0.851			
TRU_43								0.897			
TRU_44								0.899			
TRU_45								0.873			

Note: SPSS was used for factor analysis. Extraction Method: Principal Component Analysis.

	Table 5. Correlation Table									
	AVE	Aom	INT	IdeEoe	NET	PRI	SED	Sop	TRU	
Aom	0.673	0.82								
INT	0.719	-0.101	0.847							
IdeEoe	0.667	0.524	0.081	0.816						
NET	0.74	0.427	0.018	0.486	0.86					
PRI	0.816	0.18	-0.169	0.154	0.254	0.903				
SED	0.721	-0.031	0.179	0.203	0.215	-0.129	0.849			
Sop	0.644	0.406	0.235	0.484	0.481	0.077	0.128	0.802		
TRU	0.775	-0.125	0.204	0.056	0.272	0.008	0.452	0.286	0.88	

Note: Diagonal elements are the square roots of average variance extracted (AVE)

Second Pilot Test

We further refine our items and do another round of pilot test. The items for the four antecedents of SNS transparency did not load well. We notice that they are very similar to each other and some of them are related. For example, Identifiability is high correlated with Expectation of Evaluation so that we used them as a second order factor in the first pilot test. Some of the items for Social Presence and Awareness of Monitoring does not load well. We discuss about the items and spend large amount of time modifying these items and adding new items for the four constructs. We want to make sure that we capture the domain of the constructs, so we don't only focus on dropping and modifying bad items. Many of the items of Information Transparency and Network Transparency do not load well. We only have two for Information Transparency and three for Network Transparency left in the first pilot test. We look at our definition of these two constructs and resample some items and modify the bad items. The items for Selfdisclosure, Trust, and Privacy Concern are loading well and we keep these items unchanged.

This time, snowball technique is used in order to get more response. Students from a large public university in southern eastern USA are given extra credit to fill out the survey and if they can refer three more students, they will get more extra credit. The same survey style with updated items is used. In the second test, we get 169 respondents to take the survey. Table 6 shows the demographics of the respondents. Table 7 shows the factor loadings. We only show these two tables for space consideration and time constraints. We will present more detailed analysis during the workshop.

Table 6. Subject Demographics										
Gender										
		Gender		Cumulative						
	E	D	37-11 1 D							
	Frequency	Percent	Valid Percent	Percent						
Male	88	52.1	52.1	52.1						
Female	81	47.9	47.9	100.0						
Total	169	100.0								
		Race								
White	138	81.7	81.7	81.7						
Asian/Pacific	10	5.9	5.9	87.6						
Islander										
Black/African	15	8.9	8.9	96.4						
American										
Hispanic/Latino	4	2.4	2.4	98.8						
Other	2	1.2	1.2	100.0						
Total	169	100.0	100.0							

			Tab	ole 7. R	otated	Comp	onent	Matrix	ζ			
		Component										
	1	2	3	4	5	6	7	8	9	10	11	12
NET6	.789											
NET8	.784											
NET5	.772											
NET7	.771											
NET1	.741											
NET4	.737											
NET2	.733											
NET9	.715											
NET10	.695											
NET3	.618											
INT6		.853										
INT2		.821										
INT7		.812										
INT8		.797										
INT4		.789										
INT5		·775										
INT9		.762										
INT3		.751										
INT1		.586										
IDE5			.857									
IDE3			.847									
IDE4			.803									
IDE6			.784									
IDE1			.688									
IDE2			.674									
SED3				.793								
SED5				. 777								
SED4				.766								
SED2				.720								
SED1				.562								
IDE7												
INO4					.825							
INO3					.798							
INO1					.790							
INO2					.750							

		,	Table 7	. Rota	ted Co	mpone	nt Mat	trix (co	nt.)			
		Component										
	1	2	3	4	5	6	7	8	9	10	11	12
PRI3						.897						
PRI1						.894						
PRI2						.882						
PRI4						.820						
EOE6							·755					
EOE5							.750					
EOE3							.618					
EOE4							.600					.449
EOE7							.574					.449
EOE2							.535					
AOM2								.873				
AOM1								.841				
AOM3								.813				
AOM4								.550				
TRU2									.788			
TRU1									.785			
TRU3									.732			
TRU4									.649			
SOP4										.803		
SOP5										.797		
SOP3										.554	.414	
SOP6												
SOP1											.750	
SOP2											.554	
EOE1												

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

There are still some items not good enough, but overall, the item loadings are good. We will further analyze the data and use the good items to build out measurement model.

Rotation converged in 9 iterations.

Loadings smaller than .404 are suppressed

Discussion

It the worth of mentioning that SNS platforms provide individuals the opportunities to make their profile better than the authentic self (Turkle, 2015). Additionally, Gonzales and Hancock (2011) found that viewing one's own Facebook profile enhances self-esteem, likely due to the selective self-presentation present in most Facebook profiles. We are not considering the fake self-disclosure (which is not necessarily fraud) in this research proposal. However, it is generally assumed that self-disclosure is honest. It would be interesting to see whether there is "fake" self-disclosure. We leave this to future researchers who are interested. We provide the measures of network transparency, which could be used by future researchers. Our study could also provide more insight into self-disclosure behavior on social media platform. What's more, we only focus on general self-disclosure without distinguishing specific content of self-disclosure at different layers, such as peripheral, intermediate, and core layers (Altman and Taylor 1973). It would be interesting to look at the impact of SNS transparency on the self-disclosure at different layers.

Our features are very general and could provide some guidelines for the feature designers. In order to make the users feel more comfortable to self-disclose and thus become more attached to the platform. This will benefit the platform in many ways.

This paper identifies the mechanisms that could make the SNS platforms transparent. Both researchers and practitioners could draw implications from our study. "Adapting user interfaces to a user's cultural background can increase satisfaction, revenue, and market share." (Reinecke et al. 2013, p427). Sia et al. (2009) prove that there is a need of considering cultural differences when choosing the right web strategies. The same designs or features could not simply work for all types of cultures (Sia et al. 2009). Our culture elements could give some hints for some global platforms such as Facebook, Twitter to emphasize on certain features when designing the interface for people from certain cultures.

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