To disclose or not: publicness in social networking sites

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Abstract

Purpose – Social networking sites (SNS) are changing the methods of social connectivity – and what it means to be public. Existing literature hints at competing perspectives on how the public nature of these sites impacts users. The question of how the perceived publicness of SNSs influences users' self-disclosure intentions is debated in the literature, and the aim of this paper is to answer this debate.

Design/methodology/approach – This paper theorizes competing perspectives on the role of publicness on self-disclosure. Competing perspectives are tested using data collected via an online survey.

Findings – The study finds support for the perceived publicness of a SNS negatively influencing users' self-disclosure intentions. Additionally, exploratory analysis of self-disclosure items ubiquitous to most SNSs found that perceived publicness negatively influences users' intention to self-disclose items related to users' likes and affiliations.

Research limitations/implications – Variables of the study were self-reported and, as such, are subject to the typical limitations of cross-sectional, survey-based research. Future research should seek to examine how perceived publicness and other variables impact self-disclosure in SNSs over time.

Practical implications – Business models utilizing social networking technologies rely on users' willingness to engage in self-disclosure. This research provides a theoretical link between the public nature of a social networking environment and users' willingness to self-disclose. Highlighting perceived publicness as an important aspect of an environment could be one way to address the need to elicit and manage users' self-disclosure.

Originality/value – The paper utilizes a unique, but established, method of competing hypotheses to understand the role of the public nature of SNSs.

Keywords Social networking sites, Information disclosure, Customer satisfaction, Information exchange, United States of America

Paper type Research paper

Introduction

At one time creating content on the internet was largely the domain of organizations. Possessing resources and technical expertise, organizations would create content to attract potential consumers hungry for information or entertainment. Individuals were primarily content consumers and able to do so while maintaining their anonymity and privacy online. Few people were interested in generating their own content, or even

contemplated doing so, due to the technical aptitude required. However, Web 2.0 technologies have radically shifted how users interact with the internet.

Individuals, no longer just consumers of information, now play a large part in creating content for others to consume (e.g. Tapscott and Williams, 2008). Much of this content is generated via social networking sites (SNSs), such as Facebook (over 500 million users[1]), MySpace (over 67 million users[2]), or LinkedIn (over 37 million users[3]). Today more than 700 million people worldwide have profiles, or collections of information about themselves, on SNSs (Comscore, 2010). Over the last five years, the number of users engaging SNSs within the United States has more than quadrupled, with now more than 46 percent of American internet users interacting with SNSs (Lenhart, 2009). These statistics, coupled with increased attention in the popular media (e.g. Heining, 2009; Singel, 2007; Hardy, 2009) and from academics (e.g. Ellison *et al.*, 2007; Tong *et al.*, 2008; Zywica and Danowski, 2008), suggest that SNSs are now playing a significant role in changing the meaning and methods of social connectivity (Boyd, 2007).

SNSs are publicly accessible virtual meeting spaces where users present information about themselves and view information about others. These sites have created a new medium for public self-expression that allows individuals to connect with others who share an area of interest, but also possess the power to potentially shape public opinion, drive commerce, and change society (Klaassen, 2008; Wortham, 2009). The technologies underlying SNSs facilitate the flow of information in the form of text, photos, and videos ranging from the silly to the profound (Treese, 2006). This user-generated content is key to the success of social networking (Sullivan and Thaw, 2006). From a non-user's perspective, the content of these sites may seem to be only consumable information; however, the individuals who provide these materials are often constructing significant public self-expressions.

By participating in SNSs and constructing public self-expressions, users share a piece of themselves with potential others, or self-disclose. Whether sharing information about themselves or creating connections with others, individuals reveal clues about their offline identity (Douglas and Mcgarty, 2002). This creates an opportunity for users of SNSs to connect an online profile to an offline individual. In fact, a large majority, over 76 percent of SNS users, recognize the public nature of these spaces and admit that others would be able to find out who they are from the information they disclose online (Lenhart, 2009). It is this aspect of SNSs that have started to blur existing traditional boundaries, such as those between one's public work life and private personal life (Hewitt and Forte, 2006). Further, self-disclosure in SNSs has begun to shift what spaces, time, and information individuals consider to be public versus private (Dwyer *et al.*, 2007). This highlights a tension inherent in the use of SNSs – users desire social interaction and connectivity and disclosing information plays an essential role; yet users may not wish to have their information publicly accessible to an unknown audience.

While fields such as information systems, human computer interaction, and computer-supported cooperative work have considered privacy issues (for review see Awad and Krishnan, 2006), researchers have not directly examined the public dimension of these new sociotechnical systems. Further, the constant modification and manipulation of privacy policies by existing SNSs demonstrates that management of a public system is not well understood (Bonneau and Preibusch, 2009). Existing literature hints at competing perspectives on the public nature, or the publicness, of these sites, and how it impacts users. One perspective suggests that the public nature of these sites is the catalyst that drives people to self-disclose information by allowing them to

express themselves and connect with others. A competing perspective suggests that the public nature of these spaces should serve as a deterrent to those looking to use them. As such, the question of how the perceived publicness of SNSs influences users' self-disclosure intentions within the sites is an important, yet unanswered, question.

The aim of this paper is to answer this question. Towards this objective, we first discuss prior literature on self-disclosure and its relevance to SNSs. Next, the competing perspectives on the effect of publicness on SNS self-disclosure are theorized. Several scholars have espoused the virtues of this technique of competing hypotheses, proposing that making direct empirical comparisons of competing explanations of a phenomenon can provide needed focus and clarity (Pfeffer, 2005; Gray and Cooper, 2009; Leavitt and Peterson, 2010). We then test the competing hypotheses using the same empirical model and data collected via an online survey. We close with a discussion of our findings and their implications for researchers and practice.

Self-disclosure in social networking sites

Rooted in the study of verbal communication, self-disclosure has been referred to as the "process of making the self known to others" (Jourard and Lasakow, 1958, p. 91), and is any message, or information, about the self that a person communicates to another (for review see Cozby, 1973; Wheeless and Grotz, 1976). Three fundamental parameters of self-disclosure have been promoted in the literature (Altman and Taylor, 1973, Cozby, 1973):

(1) amount;
(2) depth; and
(3) duration.

Amount refers to the breadth of information disclosed, depth is associated with the intimacy of the information disclosed, and duration refers to the amount of time spent disclosing. Self-disclosure is a critical facilitator in the formation and development of interpersonal relationships (e.g. De Vito, 1986; Nakanishi, 1986; Laurenceau *et al.*, 1998; Jourard, 1971) as it plays an important role in the formation of trust and can function as a social reward that facilitates relationship building (Worthy *et al.*, 1969).

Given self-disclosure plays such an integral role in relationship formation and development, it is a particularly relevant issue in the context of SNSs. SNS self-disclosure is any message, or information, about the self that a person communicates within the site. The creation of an online identity, or profile, is a feature found in all SNSs (Boyd and Ellison, 2007). When creating profiles, users are asked to disclose information, such as their name, e-mail address, gender, and date of birth. Provision of personal and contact information is often encouraged, and the information is subsequently displayed prominently on the site. Other information users contribute may include location (e.g. city, state, country), political affiliation, religious affiliation, relationship status, and sexual preference. In many cases users have the ability to self-disclose additional information about themselves, such as general interests (e.g. hobbies), entertainment interests (e.g. favorite books, movies, music, or TV shows), photographs, and videos. All of these tools, either directly or indirectly, require users to publicly self-disclose information as they use them.

Arguably, the ability to specify other users with whom one has a relationship (i.e. "friends") is the feature most associated with SNSs (Boyd and Ellison, 2007;

Parameswaran and Whinston, 2007), and is said to be the backbone of these systems (Donath and Boyd, 2004). Creating and displaying one's network in a SNS is associated with the formation of social capital (Ellison *et al.*, 2007). What is unique about this feature is the ability to create a social network that is publicly visible to others. A publicly viewable network serves as a source of information to identify common bonds between new acquaintances, as it reveals cues about other's social position due to the presence, as well as the lack, of mutual acquaintances (Boyd and Ellison, 2007). Collectively, these self-disclosures constitute a profile, which is indicative of how an individual chooses to present themselves online, and is often tied to a specific time and specified understanding of the audience by the individual (Boyd, 2004). These aspects of the publicly articulated social network can facilitate, as well as impede, the formation of additional social connections.

Self-disclosure, both in the amount and depth, is the key to generating social benefits for SNS users, such as being connected to sources of support, opportunities, information (Donath and Boyd, 2004), creating shared identities, or feeling like users are part of a group (Joinson, 2008; Nicol, 2007). The more an individual discloses in the public space of the SNS, the more social connections they will be able to create (Sheldon, 2009), and presumably the greater the benefits they will derive from using the site.

Publicness and self-disclosure in social networking sites

Since the first years of the internet, scholars have examined the relationships between the internet and the public sphere. Some argued that the internet would create a new public sphere online, but found that only a lower quality duplication developing in a particular contexts (Dahlberg, 2001). However, with the emergence of SNSs, the relationship between the internet and the public sphere is becoming stronger. SNSs provide users with a greater ability to create rich online identities and describe their daily lives and happenings. These new public spaces, also known as a virtual public, are relatively transparent and open computer-mediated spaces that allow individuals to attend to and contribute to online interpersonal interactions (Jones and Rafaeli, 1999; Papacharissi, 2002; Aarseth, 1997; Carter, 2005).

The idea of publicness and presentation of information is rooted in the work of Goffman (1963), who analogized public presentation of one's self to performance on a stage for a given audience. However, other scholars have argued that Goffman's conceptualization of publicness does not apply to mass communication media and web technologies (Slevin, 2000; Thompson, 1996), suggesting that the internet has created a new kind of publicness. Slevin argues that the old definition of publicness requires two people to be in the same space at the same time, while today's publicness involves people "using communication media to make information and their points of view visible and available to others" (Slevin, 2000, p. 182). The key difference between Goffman's and Slevin's definitions of publicness lies in the performer's awareness of the degree of access possessed by the audience to the information presented. When a group of people occupy a shared physical space, the performer is aware that others have essentially unrestricted access to his or her statements and actions.

In contrast, in online spaces performers may, or may not, form this awareness of others' access. Hence, in addition to differing with respect to their true publicness, that is the degree to which others have unrestricted access to the space or information (Goffman, 1963; Slevin, 2000), online spaces may also differ in their perceived publicness, or the degree to which users believe that others have unrestricted access to

their information. SNSs represent a new public that contains self-disclosures, which are accessible, visible, persistent, searchable, replicable, and have an invisible audience (Boyd and Ellison, 2007). While SNSs provide individuals the opportunity to be public, there are competing perspectives on how the publicness of these virtual spaces will impact users' self-disclosure.

Publicness promotes self-disclosure in social networking sites
One perspective in the literature argues that the public nature of SNSs promotes user self-disclosure. Previous research has identified two primary groups of users of SNSs, social enhancers and social compensators (Zywica and Danowski, 2008). Social enhancers are extroverted, possess high levels of self-esteem, and are popular offline. These users replicate these characteristics online, making them popular within SNSs as well. On the other hand, social compensators are less extroverted, possess lower self-esteem, and are less popular offline; however, they strive for greater popularity in the environments to compensate for their lower offline popularity (Zywica and Danowski, 2008). Both of these user types use SNSs to create publicly available online profiles so that they can make themselves known to others. By making such a public self-disclosure, an individual is indicating openness to developing new relationships and a desire for the associated social benefits (Ellison *et al.*, 2007; Tong *et al.*, 2008). In addition to building relationships, public self-disclosure can be rewarding, cathartic, and ego-boosting (Worthy *et al.*, 1969). Publicly visible user profiles allow individuals to "type oneself into being" (Sundén, 2003, p. 3). Public self-disclosures and displays of network connections allow users to connect with others and serve as important identity signals (Donath and Boyd, 2004). From the perspective of a SNS user, increased perceived publicness magnifies the potential for social benefits and reward. Thus, the more public the user perceives the space of a social networking site to be, the more the user will want to self-disclose in that site.

P1. The perceived publicness of a social networking site is positively associated with the intention of users to self-disclose in the environment.

H1a. The perceived publicness of a social networking site is positively associated with an individual's intended amount of self-disclosure in the site.

H1b. The perceived publicness of a social networking site is positively associated with an individual's intended depth of self-disclosure in the site.

Publicness inhibits self-disclosure in social networking sites
Self-disclosure is key to the realization of many of the benefits afforded by SNSs. Yet, self-disclosure research has shown that, in general, people are reluctant to divulge information about themselves (e.g. Cialdini, 1993; Kelly and Mckillop, 1996; Lane and Wegner, 1995). Individuals balance their need for self-disclosure and vulnerability (Petronio, 2000; Petronio, 2004; Petronio, 1991). When deciding what personal information to share, individuals erect psychological boundaries between what they are willing to disclose to others and what they are not (Goffman, 1963; Petronio, 1991; Petronio, 2000; Petronio, 2004). These boundaries involve dimensions of: information ownership, individuals believe that they own their information; control, or who has restricted access to information; and permeability, in that they allow certain types of information to flow through the boundaries. Individuals construct these boundaries because self-disclosure is perceived as risky and may result in loss of face (Petronio, 1991).

Self-disclosure in SNSs is a form of communication involving a technological artifact and a group of unknown others. As the group is not strictly defined, it is not possible for the individual to coordinate boundaries with the others. Since information ownership, control, and permeability rules cannot be worked out with each receiver directly, the negotiation must take place indirectly through the technological artifact of the web site (Burnett and Bonnici, 2003). In this context, information disclosure concerns have become commonplace among users (Dwyer *et al.*, 2007). As user-generated content is typically freely accessible to anyone, the public nature of a self-disclosure is increased (Goffman, 1963; Slevin, 2000). Further, because user content is stored within SNSs, it is persistent. This not only allows self-disclosures to be read, but also searched and read for an indefinite length of time by unknown future audiences. As a result, contributors lose control of their self-disclosures in an environment where the trustworthiness and morality of others who have access to the information is not governed (Ware, 1984). While individuals with profiles in social networking environments tend to have greater tolerance for risk taking (Fogel and Nehmad, 2009), all individuals seek to manage vulnerability and loss of face (Petronio, 2000). When individuals perceive too much vulnerability as a result of disclosure, they tend to become more concerned with information regulation (Derlega *et al.*, 1993). From the perspective of the SNS user, increased perceived publicness of a site will magnify the potential for detriment as a result of self-disclosing. As such, users who perceive a SNS to be more public will tend to regulate their disclosures and self-disclose less due to the increased risk.

P2. The perceived publicness of a social networking site is negatively associated with the intention of users to self-disclose in the environment.

H2a. The perceived publicness of a social networking site is negatively associated with an individual's intended amount of self-disclosure in the site.

H2b. The perceived publicness of a social networking site is negatively associated with an individual's intended depth of self-disclosure in the site.

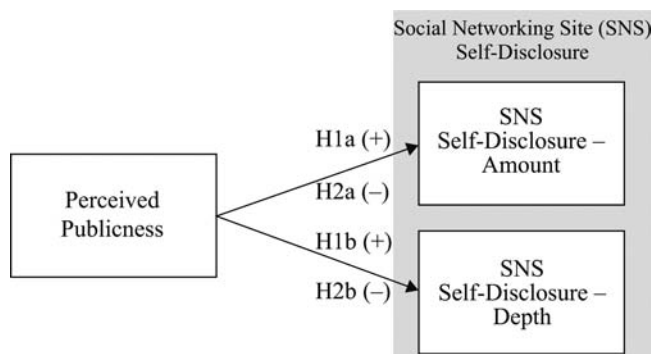The research model on the competing hypotheses developed above is summarized in Figure 1.

Figure 1.
Research model

Research method

Data for testing the competing hypotheses were collected via an online survey administered in two parts. Participants were recruited via postings in SNSs and via e-mails. Following recruitment, participants were linked to the first part of the study, which asked about their offline self-disclosure behaviors, demographics, and other control variables. Approximately ten days later, participants who completed the first part of the survey were e-mailed a link to the second part of the study. In this second stage, participants were told that user testing for a new social networking environment, thegreatgoodplace.net, was being conducted and asked to read a description of this new environment. This included a description of the technological features of the web site, including the ability to create a profile about oneself, enter information in a log format, upload images or video, and record social connections. It also indicated whether or not a referral was required to join the site, whether or not users must have an account and be logged in to view the site, and whether or not users could view a profile without a record of a social connection existing on the web site.

Respondents

To recruit participants, an invitation to provide feedback on a social networking web site was posted on existing SNSs (with administrator permission) and e-mailed to undergraduate and graduate business students (with instructor permission). This invitation was viewed 646 times, with 148 individuals selecting to provide feedback on the new site, leading to 140 starting part one of the study, and 87 completing part one. Of these participants, 54 undertook and completed the second part. Following established procedures for calculating response rates for surveys in online environments (Ridings *et al.*, 2002) produced a response rate for the first part of 58.7 percent of individuals who accessed the site completed part one or 13.4 percent of individuals who read the posted invitation to participate in the study completed part one. For the second part, 62.0 percent of eligible participants completed the study, or 8.4 percent of those who read the original invitation to participate completed. 82.5 percent of participants were male and 55.5 percent of participants were college graduates. Of the participants, 68.5 percent were ages 18-25, 25.9 percent were between 26 and 40, and 5.6 percent were between 41 and 55. The sample is skewed toward male users. This is different than gender demographics at several leading SNSs, which skews slightly towards female users (Lenhart, 2009). The sample is also skewed toward younger (18 to 25) users. While younger, this is not atypical of some SNSs, and the combined segment of users 18 to 40 is consistent with those found in many SNSs (Lenhart, 2009). Although prior research has found that the use of SNSs is not correlated with specific demographic variables, and that men and women are equally likely to both read and contribute in online settings (Preece, 2004), the gender and age variables were included as controls in the empirical model.

Measures

Following Dillman's (2000) approach, we developed a survey instrument for measuring the model constructs. The measurement items were adapted from previous established studies and modified to capture unique features of the SNSs context. Items measuring SNS self-disclosure – amount and SNS self-disclosure – depth were based on Wheeless and Grotz (1976). Perceived publicness was measured with items representing

respondents' perceptions of how public the SNS was believed to be, which were derived from the literature. All attitudinal items were measured on a seven-point Likert scale anchored on "1 = strongly disagree" to "7 = strongly agree". All items in the instrument were first vetted and refined by the authors. Control variables included offline self-disclosure – amount, offline self-disclosure – depth, age, gender, and SNS experience. The final items used in the analysis are shown in Appendix 1.

These data were employed in a simultaneous test of structural and measurement models using partial least squares, Smart PLS 2 (Ringle *et al.*, 2005), which is well suited for detecting differences with small sample sizes (e.g. Qureshi and Compeau, 2009; Barclay *et al.*, 1995; Chin, 1998). The adequacy of the measurement model was assessed using three common tests of convergent validity (Hulland, 1999; Chin, 1998). Items loaded on their intended constructs greater than 0.7, indicating that there was more shared variance between a construct and measure than error variance (Carmines and Zeller, 1979). Second, the internal consistency of each construct was assessed using composite reliability (Werts *et al.*, 1974), and the lowest found was 0.80, well in excess of Nunnally's (1978) 0.7 guideline. Third, the average variance extracted (Fornell and Larcker, 1981) was calculated for each scale. All scales exceeded Chin's (1998) guideline of 0.5, meaning that at least 50 percent of variance in indicators was accounted for by its respective construct. To assess discriminant validity, the correlations of items with their intended constructs was examined, and it was found that all items correlated most strongly with their intended construct. The square root of AVE for each construct exceeded all respective inter-construct correlations, providing further evidence of discriminant validity. Table I provides a summary of the results of the measurement model analyses.

Data analysis and results

We tested the competing hypotheses by examining the size and significance of the structural paths in the PLS analysis and the percentage of variance explained (Figure 2; see Appendix 2 for the full analysis model).

Of the two competing propositions, the model showed support for *P2* that stated the perceived publicness of a social networking environment is negatively associated with the willingness of users to self-disclose in the environment. First, support for *H2a* was found, as the model demonstrated a significant negative relationship between the perceived publicness of a social networking environment and SNS self-disclosure – amount (*H2a* supported, $\beta = -0.28$, $p < 0.01$). Perceived publicness, along with controls, explained 25.5 percent of the variance in the amount of online self-disclosure.

Second, support for *H2b* was found, as the model demonstrated a significant negative relationship between the perceived publicness of a social networking environment and SNS self-disclosure – depth (*H2b* supported, $\beta = -0.31$, $p < 0.01$). Perceived publicness, along with controls, explained 31.8 percent of the variance in the depth of online self-disclosure.

Control variables were significant in some instances. Offline self-disclosure – amount significantly predicted SNS self-disclosure – amount ($\beta = 0.39$, $p < 0.01$) and SNS self-disclosure – depth ($\beta = 0.37$, $p < 0.01$). Gender significantly predicted SNS self-disclosure – amount ($\beta = 0.21$, $p < 0.05$). Offline self-disclosure – depth, age, and SNS experience did not significantly predict any dependent variable.

	No. of items	Response mean	Std dev.	Cronbach's alpha	Internal consistency	AVE	1	2	3	4	5	6	7	8
1 Perceived publicness	6	3.95	1.99	0.95	0.94	0.76	0.89[a]							
2 SNS self-disclosure amount	4	3.25	1.24	0.80	0.93	0.78	−0.26	0.79						
3 SNS self-disclosure depth	5	2.73	1.22	0.89	0.89	0.72	−0.26	0.67	0.83					
4 Offline self-disclosure amount	5	3.43	1.29	0.86	0.86	0.75	0.096	0.35	0.46	0.79				
5 Offline self-disclosure depth	4	2.99	1.32	0.86	0.95	0.87	0.086	0.19	0.39	0.67	0.84			
6 Gender	1	1.19	0.39	n.a.	n.a.	n.a.	−0.10	0.31	0.19	0.27	0.20	1.00		
7 Age	1	2.35	0.62	n.a.	n.a.	n.a.	0.096	−0.03	−0.03	−0.11	0.05	−0.20	1.00	
8 SNS experience	1	2.09	1.7	n.a.	n.a.	n.a.	−0.29	0.07	0.15	0.11	0.082	−0.09	0.035	1.00

Note: [a]Diagonal elements are the square root of average variance extracted

Table I.
Convergent and
discriminant validity
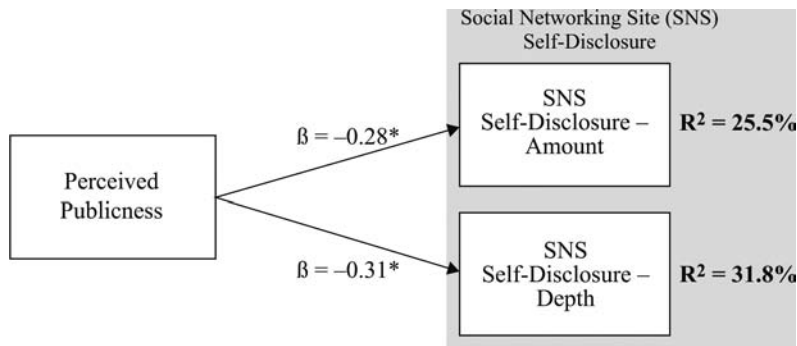
Note: Significance of path coefficients: *p < 0.01

Figure 2.
PLS empirical model

Post-hoc *analysis*

Data were also collected on respondents' intention to self-disclose particular items commonly found in SNSs (e.g. name, gender, favorite book, religious views, political orientation). Existing theory related to specific items of self-disclosure does not exist. However, given the degree to which this form of disclosure is utilized in the context of SNSs, it would be useful to examine how they are influenced by perceived publicness. Towards this end, an exploratory principal components factor analysis with varimax rotation of the items was conducted to determine if the items represent a singular, all encompassing construct of SNS self-disclosure, or multiple dimensions. After several rounds of refinement, three components emerged with no cross-construct loadings above 0.5, indicating good discriminant validity, and with factor loadings exceeding 0.5 for each construct, demonstrating convergent validity. The internal consistency of each construct was assessed using composite reliability (Werts *et al.*, 1974), with the lowest found to be 0.86, well in excess of Nunnally's (1978) 0.7 guideline. The three components and the associated self-disclosure items are provided in Figure 3. Using the same controls as in the research model, the influence of perceived publicness was then tested by examining the size and significance of the structural paths in the PLS analysis and the percentage of variance explained, as shown in Figure 3.

Of the three possible relationships between perceived publicness and the self-disclosure components, the model showed support for two of them. First, perceived publicness was negatively associated with the willingness of users to self-disclose the items of component 1 ($\beta = -0.30$, $p < 0.01$). Perceived publicness, along with controls, explained 19.9 percent of the variance in component 1. Second, perceived publicness was negatively associated with the willingness of users to self-disclose the items of component 2 ($\beta = -0.38$, $p < 0.01$). Perceived publicness, along with controls, explained 27.3 percent of the variance in component 2. Finally, the relationship between perceived publicness and component 3 was non-significant.

Control variables were significant in some instances. Offline self-disclosure – depth significantly predicted the self-disclosure of items of component 1 ($\beta = 0.22$, $p < 0.05$). Age significantly predicted the self-disclosure of items of component 1 ($\beta = -0.24$, $p < 0.05$) and component 3 ($\beta = -0.42$, $p < 0.01$). Offline self-disclosure – amount, gender, and SNS experience did not significantly predict any of self-disclosure item components.
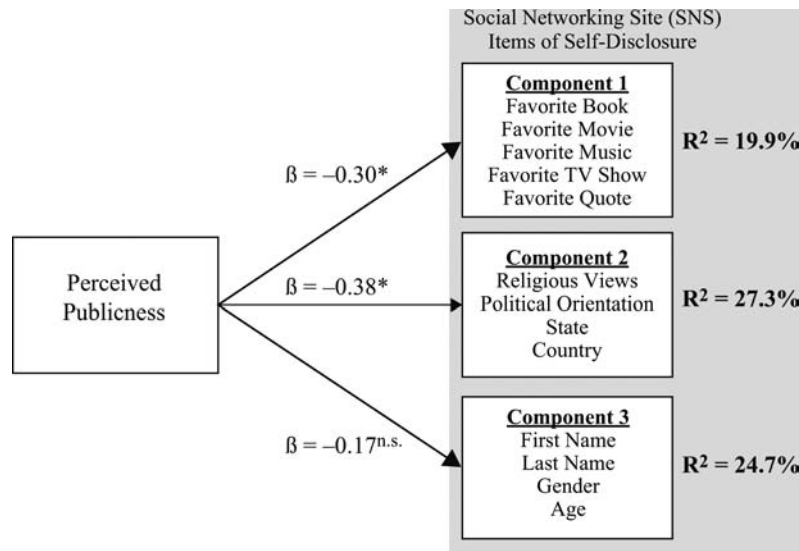
Social Networking Site (SNS)
Items of Self-Disclosure

Component 1
Favorite Book
Favorite Movie
Favorite Music
Favorite TV Show
Favorite Quote

$R^2 = 19.9\%$

$ß = -0.30*$

Perceived
Publicness

$ß = -0.38*$

Component 2
Religious Views
Political Orientation
State
Country

$R^2 = 27.3\%$

$ß = -0.17^{n.s.}$

Component 3
First Name
Last Name
Gender
Age

$R^2 = 24.7\%$

Note: Significance of path coefficients: $*p < 0.01$. n.s. = non-significance

Figure 3.
PLS exploratory empirical
model

Discussion

The self-disclosure and social networking literatures feature a range of contradictory claims about how self-disclosure might unfold within SNSs. Faced with competing perspectives as to how the public nature of these spaces influences users, this paper sought to take a step towards settling this debate. By theorizing hypotheses representing both perspectives and testing them in a competing fashion, we provide evidence that the perceived publicness of SNSs negatively influences users' intention to self-disclose, both in terms of the amount and depth of their self-disclosures. This result runs contrary to existing thought on SNSs that suggests users disclose information because they want other people to see it (Boyd, 2008). This research suggests that while users are self-disclosing in SNSs, they may not actually want everyone to have access to it.

Self-disclosures have become a form of currency users exchange in order to participate in the economy of social networking, and while many services are monetarily free to use, users pay for access to these tools with the information they share (Rooney, 2010). Business models utilizing social networking technologies rely on individuals' willingness to self-disclose, or pay the "fee", because the organizations need the disclosures to attract new and returning users. The business model is only successful if users visit the site because revenue is generated from ad sales, with advertisers paying a premium sites with strong traffic patterns. From the users' perspective, the use of SNSs can be beneficial if their goals are to communicate to a large, broad-ranged, public audience (Ellison *et al.*, 2006; Ellison *et al.*, 2007; Zywica and Danowski, 2008). However, the use of SNSs might be detrimental for users that do not seek this public audience (Hewitt and Forte, 2006; Finder, 2006; George, 2006; Mann, 2007). For example, anecdotal evidence demonstrates that users' relationships with family and friends and the ability to obtain or keep a job can be harmed (Mann, 2007; Rosenblum, 2007). The strong connection between users' offline identity and their online identity further magnifies the possibility of these detriments (Boyd and Ellison, 2007; Kennedy, 2006). This research provides a theoretical link

between the public nature of a social networking environments and users' willingness to self-disclose in them. Highlighting perceived publicness as an important aspect of an environment could be one way to address tensions that exist between social networking business models focused on high traffic and expansion and users' attempts to manage the boundaries around their self-disclosures.

SNSs have started to face a variety of issues brought about by the collection and storage of self-disclosures. This information can be misused or used with malicious intent with, or without, an individual's knowledge. This highlights the overlooked public nature of these spaces, and that self-disclosure of information can have unintended, or even unwanted, impacts. The potential for detriment is not only a problem for individual users, but also represents a potentially larger problem for the organizations that develop and manage SNSs. If users leave and encourage their acquaintances to leave after suffering detriments as a result of use, SNSs will lose their userbase. Even if users do not leave, at a minimum, they are going to be less likely to self-disclose in the future, which can affect traffic patterns and subsequently the amount which the organization can sell ad space for. As such, there is potential for the public nature and self-disclosure focus of these sites, characteristics that helps build and maintain them, to lead to their demise.

To mitigate this some SNSs have begun providing users with greater control over who can see their self-disclosures. However, approaches such as this can confuse users, as exemplified by Facebook that currently has 170 different customizable settings and a privacy policy with more words that the Constitution of the United States (Bilton, 2010). Further complicating things for users are the inconsistency of policies and practices across SNSs and over time (Bonneau and Preibusch, 2009). For example, Facebook's default settings do not tell profile owners who views their profiles, while LinkedIn's default setting show some information about the viewer to the profile owners if the profile is accessed. One of the constants in the emergence of SNS is that rules surrounding users' profiles are constantly changing, and as a result users and sites are learning how to manage their publicness through trial and error (Rooney, 2010).

The findings of this paper also provide a theoretical insight into the dissatisfaction expressed over the past several years by users towards the organizations running SNSs. There is a history of tension between Facebook and its users around the issue of rights to and publicness of user information (Jesdanun, 2006). In 2006, Facebook upset users by adding a "news feed" feature that culled new information that users self-disclosed on their profile pages and delivered it in a "headline news" format on the initial page seen by users' network connections (Hoadley *et al.*, 2010). Similar complaints surfaced in 2008 when feeds started showing users' interests to members. In 2009, Facebook began requiring users to have their network connections visible in their profiles (Banksont, 2009). In the spring of 2010, tensions around the issue of user privacy, publicness, and Facebook policies were once again in the spotlight, highlighted by a "Quit Facebook Day" orchestrated by a small group of protesting users (Paul, 2010). Then in the summer of 2010, questions about what is, and what is not, private on Facebook resurfaced when a file detailing the names, URLs, and unique Facebook IDs of 100 million of the site's users was posted for download worldwide (Emery, 2010; Null, 2010). In all of these instances, whether there was a formal policy change or not, what has been altered is the degree to which users believe that others have unrestricted access to their information – the perceived publicness. This study demonstrates that perceived publicness impacts self-disclosure tendencies and highlights the risk associated with altering this perception.

Last, an exploratory examination of particular self-disclosure items identified three components. These three components correspond to prior arguments that disclosures can be categorized into one of three layers (Altman and Taylor, 1973):

(1) peripheral;

(2) intermediate; and

(3) core.

The first self-disclosure component consisted of users' favorite book, favorite movie, favorite music, favorite quote, and favorite TV show. The items in this factor seemed to represent the "likes" of, or evaluations by, the user, which has been called emotional in the self-disclosure literature (Laurenceau *et al.*, 1998; Morton, 1978). The core layer is concerned with one's emotions, feelings, values and self-concept and aligns with the first component identified in the exploratory analysis. It has been suggested that individuals self-disclose from this layer to create greater intimacy when building relationships (Laurenceau *et al.*, 1998). This may explain why component 1 (and its related items) is negatively influenced by the perceived publicness of the SNS. The second self-disclosure component consisted of users' religious views, political orientation, state, and country. The items in this factor seemed to represent aspects of affiliation, or identity. Finally, the third self-disclosure component consisted of first name, last name, gender, and age. These items seemed to represent factual, or descriptive, self-disclosures (Laurenceau *et al.*, 1998; Morton, 1978). The peripheral layer, also called the public self-layer, is concerned with biographic data (e.g. age) and aligns with the third component identified in the exploratory analysis. It has been suggested that this layer is the one individuals are least resistant to self-disclose (Altman and Taylor, 1973). One explanation for this is that this type of information is already public in nature as it can easily be observed (Marx, 2001). This might explain why the disclosure of component 3 (and its related items) is not significantly influenced by the perceived publicness of the SNS, while the other two components are.

Potential limitations and future research

As with any empirical study, the findings presented here must be qualified by a number of potential limitations. First, the measures were based on survey responses, and as such are subject to the typical limitations of cross-sectional, self-reported, survey-based research. Specifically, this paper makes no claims of causality between perceived publicness and SNS self-disclosures. Disclosure and relationship development have been said to be related in complex and "mutually transformative" ways (Derlega *et al.*, 1993). Future research should seek to examine if, and how, self-disclosure changes over time, specifically seeking to understand how self-disclosure behaviors influence the perceived publicness of a site.

Second, the fact that data were gathered from a small group of users calls into question the generalizability of our results, which only repeated replication can determine. Similarly, our sample was made up of self-selected respondents, and may not be representative of SNS users. While we know nothing about the individuals who read the invitation but chose not to access the survey, our ability to track how many times invitations were viewed and how many surveys were started and completed allowed us to calculate a reliable response rate, thereby providing better metrics than are typical of online data collection efforts (Andrews *et al.*, 2003). At the same time, since responding to

a survey is itself an act of self-disclosure, it is possible that our sample of self-selected respondents may be biased towards members who are predisposed to self-disclosure. However, since respondents varied significantly in terms of their SNS and offline self-disclosure as well as their experience using SNSs, it seems unlikely that our findings are purely the result of such bias. In fact, if the sample were biased towards those with a predisposition to self-disclose more, it would be expected that perceived publicness would have a positive impact, not a negative influence.

Next, the demographics of the sample, specifically gender (skewed towards male users) and age (skewed towards younger users), can call into question the potential generalizability of the study's results. With respect to gender, prior research has found that women are more likely than men to use SNSs (Hargittai, 2008), which is consistent with prior literature on women's higher propensity to engage in person-to-person communication online (e.g. Pew Research Center Internet & American Life Project, 2000). However, women and men behave differently in online spaces (Gefen and Ridings, 2005). While privacy and self-disclosure has been identified as a concern of all SNS users (Dwyer *et al.*, 2007), it has been found to be less concern for men. Men are more likely to publish information within SNSs that display their phone number or home address than women (Fogel and Nehmad, 2009). As our sample is more skewed towards male users, it may be possible that it is biased towards users who are predisposed to more self-disclosure. However, if this were true, it would be expected that at a minimum, perceived publicness would have no impact, not a negative influence, on SNS self-disclosure. For this reason, the bias of the sample towards more male users represents a more conservative test of the relationship between perceived publicness and SNS self-disclosure. With respect to the age of the respondents, evidence suggests that older users are less trusting and comfortable using new technologies, such as SNS (Swan, 2009). As such, the sample being skewed younger also represents a more conservative test of the relationship between perceived publicness and SNS self-disclosure. In fact, the results found in this paper would be expected to be even stronger on a sample of older individuals who are generally more concerned about privacy than younger people.

While there has been a stream of SNS research (e.g. Boyd, 2008; Dwyer *et al.*, 2007; Hargittai, 2008) that has sought to understand how individual differences (e.g. gender, age, race) impact user behavior within SNSs, this paper does not explicitly engage individual differences as variables of interest, but rather controls for them. While we controlled for these characteristics of the sample, they may be affecting the findings in other ways, and thus comparison of this research to past studies could be questioned. Past studies of gender and SNS have largely sought to identify behavioral differences within SNSs by comparing the behavior of males and females. Future studies should build upon this by identifying specific behavioral differences and beginning to theorize why such differences occur. Finally, the issue of age and SNSs represents a ripe, and timely, area for future research as the demographics are changing quite dynamically. In fact, less than two years ago, the sample of this study mirrored the population of SNS users. However, the recent trend has seen the SNS population shift from being dominated by young users to a more broad and diverse userbase. As such, it will be increasingly important not only to better understand the dynamic age has on SNS usage, but also on factors such as self-disclosure and how self-disclosure might differ for SNSs that target specific age groups (e.g. Eons.com).

The study reported here utilized a description of a SNS fabricated by the researchers as a context for the survey. Utilizing this site allowed for control over any prior feelings towards the SNS across participants because this was each participant's first experience with the site. While designing the study in this fashion created a controlled environment to study the competing propositions, future research could examine the effect of perceived publicness on self-disclosure tendencies in existing SNSs, such as Facebook, LinkedIn, and Twitter. Utilizing an existing site in an empirical study will allow for the examination of trust in and familiarity with a SNS and how it develops over time and through use would make a strong addition to the literature.

Finally, one could argue that the competing propositions model developed and tested in this paper is overly simple given its focus on a single construct – perceived publicness. However, this approach was by design, employing a somewhat unique, but not novel, approach – competing hypotheses. This research technique has been employed in a variety of organizational (e.g. Singh *et al.*, 1986; Starbuck, 1983; Young *et al.*, 2004) and information systems (e.g. Swanson and Dans, 2000; Kim *et al.*, 2005; Dedrick *et al.*, 2008) studies. It is worthy of note that this approach is not one that merely calls into action a proverbial "straw man" (Cummings and Bridgman, 2008), but one that fairly acknowledges a tension of competing perspectives in the literature (Gray and Cooper, 2009). As such, this technique of competing hypotheses has been espoused as making direct empirical comparisons of competing explanations of a phenomenon, which can provide needed focus and clarity (Pfeffer, 2005; Gray and Cooper, 2009; Leavitt and Peterson, 2010).

Conclusion

SNSs have blurred boundaries between private and public spaces. The impact of the public nature of these new public spaces on users' self-disclosure is a question with competing explanations in the literature. By theorizing each of the competing perspectives and testing them against one another, we sought to provide clarity and focus on this issue. Our research suggests that the public nature of these virtual spaces serves as a barrier to self-disclosure, a crucial part of the business model employed by organizations running SNSs. We hope that this research will help designers of these environments, as well as their users, better understand the public aspect and how publicness impacts behavior within them.

Notes

1. Available at: www.google.com/adplanner/planning/site_profile#siteDetails?identifier = facebook.com&geo = 001&trait_type = 1&lp = true (accessed August 15, 2010).

2. Available at: www.google.com/adplanner/planning/site_profile#siteDetails?identifier = myspace.com&geo = 001&trait_type = 1&lp = true (accessed August 15, 2010).

3. Available at: www.google.com/adplanner/planning/site_profile#siteDetails?identifier = linkedin.com&geo = 001&trait_type = 1&lp = true (accessed August 15, 2010).

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Further reading

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Appendix 1. Survey items

GGP is the "TheGreatGoodPlace.net", the name of the fictitious social networking site participants were asked to consider. The full name appeared in the administered items.

SNS self-disclosure amount

(1) I would not often talk about myself on the GGP.[a]

(2) My statements of my feelings would usually be brief on the GGP.[a]

(3) I would usually talk about myself for fairly long periods of time on the GGP.

(4) My conversation would last the least time when I am discussing myself on the GGP.[a,b]

(5) I would often talk about myself on the GGP.

(6) I would often discuss my feelings about myself on the GGP.

(7) Only infrequently would I express my personal beliefs and opinions on the GGP.[a,b]

SNS self-disclosure depth

(1) I would intimately disclose who I really am, openly and fully in my conversation on The GGP.

(2) Once I got started, my self-disclosures would last a long time on The GGP.

(3) I would often disclose intimate, personal things about myself without hesitation on The GGP.

(4) I feel that I sometimes would *not* control my self-disclosure of personal or intimate things I tell about myself on The GGP.[1]

(5) Once I got started, I would intimately and fully reveal myself in my self-disclosures on The GGP.

Perceived publicness

(1) The GGP is open for any internet user to view.

(2) The transparency of the GGP allows internet users to view information on the web site.

(3) Information created by users of the GGP is available for anyone on the internet to read.

(4) The information on the GGP is available to the general public.

(5) An Internet user does not have to pay to view the information on the GGP.[b]

(6) Barriers to viewing the information on the GGP are transparent.[b]

(7) The information available on the GGP is free and open.

(8) User information on the GGP is as free as using a public park.

Offline self-disclosure amount

(1) I do not often talk about myself.[a]

(2) My statements of my feelings are usually brief.[a]

(3) I usually talk about myself for fairly long periods of time.[b]

(4) My conversation lasts the least time when I am discussing myself.[a]

(5) I often talk about myself.

(6) I often discuss my feelings about myself.

(7) Only infrequently do I express my personal beliefs and opinions.[a,b]

Offline self-disclosure depth

(1) I intimately disclose who I really am, openly and fully in my conversation.[b]

(2) Once I get started, my self-disclosures last a long time.

(3) I often disclose intimate, personal things about myself without hesitation.

(4) I feel that I sometimes do *not* control my self-disclosure of personal or intimate things I tell about myself.

(5) Once I get started, I intimately and fully reveal myself in my self-disclosures.

Social networking site experience
How many years have you been using social computing web sites?

(1) Less than 1 year.

(2) 1 to 4 years.

    (3) 5 to 10 years.

    (4) 11 to 20 years.

Gender
What is your gender?

    (1) Male.

    (2) Female.

Age
What is your age?

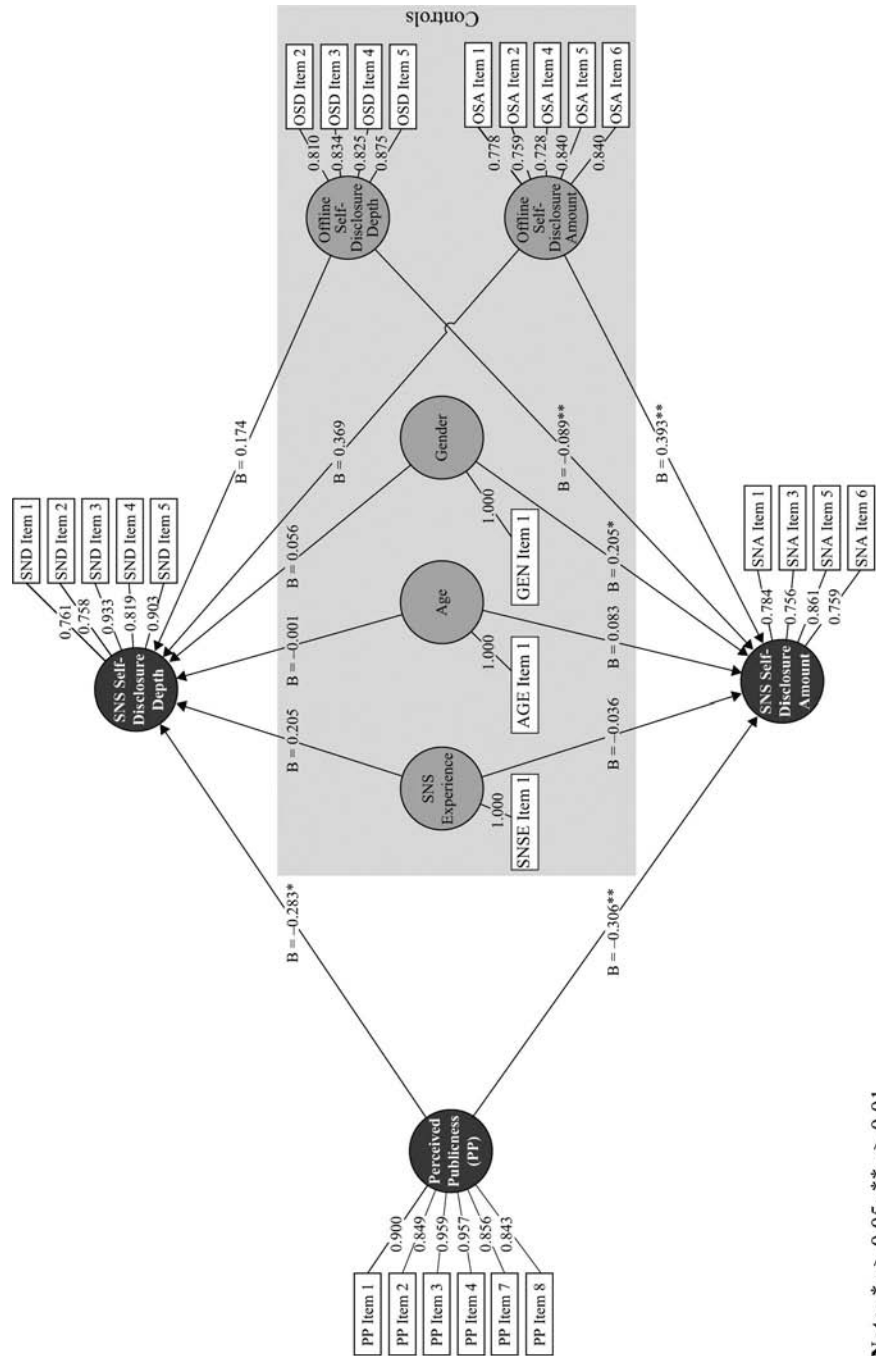   (1) < 18.

    (2) 18-25.

    (3) 26-40.

    (4) 41-55.

    (5) > 55.

[a]Reverse coded items. [b]Items dropped from final analysis.

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Appendix 2

Figure A1.
Full analysis model

Note: *$p > 0.05$; **$p > 0.01$