Abstract

Social Media Websites are used by individuals to find new friends, (re)connect with old friends, family and relatives, maintain relationships, share information, join groups, create and manage events, pass time, and much more. While many users consistently engage in disclosing their personal information on social media, several others hold themselves back due to privacy concerns. This study employs communication privacy management theory as a theoretical framework to examine the effects of individual motives, communication privacy management practices (boundary permeability & boundary ownership) and privacy concerns on the amount and depth of self-disclosure on Facebook. Results of Partial Least Square Analysis using a sample of 240 respondents provide evidence that individuals' communication privacy management practices influences the amount and depth of their self-disclosure. Implications for practice and future research areas are also discussed.

Keywords

Boundary permeability, boundary ownership, privacy, self-disclosure, social media

Introduction

Social media provides an online environment for individuals to find new friends and (re)connect with old friends, family and relatives. It not only allows people to know more about others, but also provides an opportunity to tell about themselves and socialize with others. Social media websites and applications have experienced astronomical growth in recent times. In a 2012 survey, Duggan & Brenner (2013) found that 67 percent of the Internet users utilize social media websites to interact with each other. Among the existing social media websites, Facebook is the largest social media website with an estimated 1.39 billion monthly active users as of December 31, 2014 (Facebook, 2015). Of them, on an average of 890 million active users log onto their Facebook account each day (Facebook, 2015).

Research shows that many social media website users consistently engage in disclosing their activities and information (Joinson et al., 2011; Nguyen et al., 2012). These users have integrated social media applications into their daily activities and use it to network with other users, share information, maintain existing relationships and make new friends, browse friends’ profiles, join groups, create and manage events, pass time, and others (Bumgarner, 2007; Hew, 2011; Special & Li-Barber, 2012; Tosun, 2012). Therefore, in order for these environments to flourish, users must generate and release content. Consequently, social media applications like Facebook provide the users the ability to disclose and share their information including personal details such as birthday, favorite activities, hobbies, place of work, education, daily activities, status updates, photos/videos, wall posts, links to their favorite websites, associations and interactions with other users and groups, relayed thoughts and conversations between others users and more.

Unlike face-to-face interaction, which has the ability to convey a range of non-verbal gestures and social cues, online social media websites lack the ability to transport the same (Schouten et al., 2007; Walther et al., 2008). Social media sites therefore call for increased self-disclosures in terms of amount and depth so
as to compensate for the missing cues and augment shared understanding among participants (Christofides et al., 2009; Gibbs et al., 2011), as unwillingness to disclose information restricts individuals from enjoying their experience and utility of using social media websites.

Despite the unparalleled popularity of social media websites and mounting interest in social media research, an area that is not yet fully explored is to what extent individuals’ motivations and privacy related issues influence their decision to disclose their amount and depth of self-disclosure to others on social media websites. The objective of this research is to examine the effects of individual motives, boundary ownership, and boundary permeability on the amount and depth of self-disclosure.

The rest of the paper is organized as follows. In the next section, we provide the theoretical background behind the study followed by development of the research model. Next we present the research methodology, followed by data collection, analysis and results. Lastly we present the discussions followed by limitations & scope for future research.

**Theoretical Background**

*Communication Privacy Management Theory*

The communication privacy management (CPM) theory is a well-established communication theory that has been shown to explain the process of self-disclosure in both social and online environments (Petronio, 2002; Metzer, 2007; Child et al., 2009; Thompson, 2011). CPM describes the ways in which both the disclosing individuals as well as the disclosure recipients manage their privacy boundaries and the disclosure of private information. The theory defines self-disclosure as the process of revealing information where individual is constantly balancing the opposing forces of revealing and concealing of private information. When individuals engage in self-disclosure, the disclosed information transforms from being privately owned to being co-owned (Petronio, 2002). Disclosure acts have the potential to make individuals vulnerable to exploitation by others. Because of the inherent risk involved in disclosure, individuals weigh both costs and benefits of disclosure and erect boundaries around what information they consider private or public. The boundaries allow individuals to determine when, how much and who to conceal or reveal private information as well as set expectations on co-ownership of information after disclosure (Petronio, 2002).

Individuals engage in self-disclosure activities when the disclosing individual and disclosure recipient’s privacy boundaries overlap, resulting in the creation of a collective privacy boundary. These boundaries are preferred as they lower participant’s privacy risk beliefs while increasing the rewards for participation. Boundary ownership rules deal with the responsibilities and rights co-owners have for containment or release of the co-owned private information. Boundary permeability rules determine the openness or closed ness of a collective boundary. These rules control how much (breadth and depth) private information is shared with others. Lastly, boundary linkage rules govern who has access to the information. The implementation of these rules help individuals maximize benefits and minimize costs related to self-disclosure.

In the present study, we are considering individuals who use Facebook to share their information with others. The amount and depth of self-disclosure will not matter if an individual will restrict the access to their information. As such, we are examining the effect of two boundary operations, boundary ownership and boundary permeability on self-disclosure amount and self-disclosure depth.

**Research Model**

*Self-Disclosure*

Self-disclosure is “an interaction between at least two individuals where one intends to deliberately divulge something personal to another” (Greene et al., 2006). Self-disclosure acts are both voluntary and intentional and comprise verbal and non-verbal acts, thoughts, feelings, experiences, aspirations, fears, likes and dislikes etc. (Pearce & Sharp, 1973; Derlega et al., 1993). Self-disclosure has been reported to be
generally rewarding in terms of forming intimate associations (Altman & Taylor, 1973), social contacts and friends (Hargittai et al., 2010; Steinfield et al., 2008) receiving social acceptance and approval (Derlega et al., 1993).

While “Amount of Disclosure” is the frequency and duration of user’s disclosures, “Depth of Disclosure” is the degree of intimacy in the communication (Wheeless & Grotz, 1976; Wheeless, 1978). In the current study, we evaluated both the amount and depth of self-disclosure as the dependent variables.

**Boundary Permeability**

Boundary permeability is the controlling of the depth and breadth of information shared with the collective boundary. Permeability rules determine the openness and closeness of the collective boundary and govern the extent of private information (amount and depth) is shared with others. When individuals desire to exercise high control over their private disclosures, they establish boundary structures with low permeability possibilities and tend to disclose less information about themselves, both in terms of the amount and depth (degree of intimacy), on Facebook. For example, individuals attempt to avoid a topic for discussion on social media websites indicates limits posed on boundary permeability. Similarly, individuals who desire to exercise low control over the private disclosures erect boundary structures with high permeability possibilities and disclose more information about themselves (Petronio, 2002) on Facebook. Therefore,

**H1** Boundary permeability is positively related to the amount of disclosure

**H2**: Boundary permeability is positively related to the depth of disclosure

**Boundary Ownership**

Boundary ownership deals with the disclosure of information in ways where less or more ownership of private information is allowed for. The rules for boundary ownership determine to what extent the original owner of private information believes that co-owners can make independent decisions about further containment or release of the co-owned private information. If individuals believe that the others with whom the information is being shared on Facebook will take appropriate decisions about further release of their information, or do not care if the others will make correct decisions or not, they will erect boundary structures with high ownership possibilities and disclose more information (amount and depth) about themselves. Therefore,

**H3**: Boundary ownership is positively related to the amount of disclosure

**H4**: Boundary ownership is positively related to the depth of disclosure

**Motive for Use**

Motive for use is defined as something (as a need or desire) that causes a person to use Facebook. Studies have demonstrated that people use social media websites for a wide range of motives including- keeping in touch with existing friends, forming and fostering relationships, disclosing and sharing information about themselves and others, making contacts, joining conversations, expressing opinions, etc. (Wilson et al., 2012; Lenhart & Madden, 2007; McKenna et al., 2002; Chiu et al., 2006; Chang Lee & Kwon, 2008). Ellison et al., (2007) studied students preferences in Facebook usage and found that majority of individuals used Facebook to learn about their offline contacts.

Uses and gratifications theory is used to understand how individuals use specific media to satisfy their specific needs. According to the theory, the use of media is goal oriented and the audience play an active role in the selection and use of media to satisfy their needs. The theory has been employed to explore why individuals use the internet in general for example, Papacharissi and Rubin, (2000) and social media sites in particular (for example, Raacke & Bonds-Raacke, 2008). Based upon the uses and gratifications theory, and prior research which has reported various motives to use Facebook, we conceptualize “Motive for use” as a second order construct with the following first order reflective dimensions: i) attention seeking, ii) developing connections, iii) enjoyment, iv) information sharing, v) maintaining relations, and vi) pass time. We are using these sub-dimensions as reflective in nature because i) these are classified as
manifestations of the focal construct (motive), and ii) we are interested in measuring a stable focal construct (MacKenzie et al, 2011).

Jiang et al., (2011) reported that in the CMC context, the amount and depth of self-disclosure is directly related to their perceived value of the desired outcome. Also, as found by Cho (2007) and Walrave (2012), motive towards using social networking sites influences users’ self-disclosure and applications of privacy settings available on them. Therefore,

**H5: Motive is positively related to the amount of disclosure**

**H6: Motive is positively related to the depth of disclosure**

![Research Model](image-url)

**Privacy Concern**

Privacy concern is defined as individuals’ concerns regarding how their information could be used or exploited when shared on Facebook. Though privacy was always valued, it has now become more significant, especially since the advent of Internet. Individuals worry that unwanted persons may retrieve,
use and abuse their private information without authorized access. Such abuses include online stalking, bullying, slandering one’s reputation, digital dossier aggregation, organizational threats and more (Hogben, 2007). While some research shows that privacy concerns hold individuals back from disclosing information online (Malhotra et al., 2004; Awad & Krishnan, 2006; Dinev and Hart 2006; Krasnova et al. 2009; Yang and Wang 2009), some others have found insignificant results or no influence of privacy concerns on online information sharing even though they were concerned about potential threats, risks and stranger’s actions (Acquisti et al. 2006; Young & Quan-Haase, 2009).

We posit that individuals tend to establish boundaries for the depth and breadth of their shared information by evaluating how their information might be used or exploited. Therefore, as individuals consider their privacy concerns when establishing their communication privacy management practices, we posit that the communication privacy management practices act as a mediator between privacy concerns and the amount and depth of disclosure.

Individuals who perceive the risks for sharing information to be high and have high privacy concerns will restrict the depth and breadth of information shared with others on Facebook and establishes boundary structures with low permeability possibilities. Therefore,

**H7: Privacy concern is negatively related to the boundary permeability**

Similarly, individuals who perceive the risks for sharing information to be high and have high privacy concerns will have less confidence that the co-owners of the shared information can make independent decisions about further containment or release of the co-owned private information. Such individuals with high privacy concerns will establish boundary structures with low ownership possibilities. Therefore,

**H8: Privacy concern is negatively related to the boundary ownership**

**Research Methodology**

All measurement items used for the research were drawn from existing literature and were adopted by using standard scale development procedures (Boudreau et al. 2001). Filter questions were used to confirm the respondents’ eligibility for participation. The instrument was pretested and revisions were made by getting feedback from two faculty members not involved in the study.

Items for amount and depth of self-disclosure were borrowed from Wheeless (1978). The respondents were asked to mark the statement to reflect how they communicate with others on Facebook in general. The higher score on amount indicate high frequency of user’s disclosures on Facebook. The high score on depth indicate high degree of intimacy in the communication with others on Facebook.

Items for Facebook privacy boundary ownership and Facebook privacy boundary permeability were borrowed from Childs (2009). Higher scores on Facebook privacy boundary ownership indicate that an individual freely shares the personal information disclosed on Facebook and are less concerned about who is reading the information posted. Higher scores on Facebook privacy boundary permeability indicate that an individual apply less control over private disclosures on Facebook.

Higher scores on Privacy concern questions indicate that an individual is has concerns that their information could be used or exploited when shared on Facebook. Motive is used as a second order measure consisting of the following first order reflective dimensions: Attention seeking, developing connections, entertainments, information sharing, maintaining relations and pass time. Items for the first order dimensions were aggregated from prior studies on Facebook.

The target population for this study consists of students that use Facebook to connect with friends, families and others. The questionnaire was personally administered to students at the start of their classes. The survey was completely voluntary and no incentive was given for participating in the survey. Out of 280 questionnaires distributed to the students, we received 279 completed instruments back. Response to the filter questions were used to confirm that the respondents were using Facebook, 10 surveys with more than 6 missing values were removed from the analysis. The final data contains 240 surveys.
Data Analysis & Results

We conducted Partial Least Square (PLS) analysis to analyze the data for its effectiveness against normality assumptions, multi-collinearity of the indicators, and misspecification of the structural model (Chin et al. 1996). Item loading, Cronbach alpha, average variance extracted (AVE) and composite reliability scores were analyzed to confirm the reliability of items for the first order reflective constructs. We followed Gefen and Straub (2005) to ascertain the discriminant validity. Overall, we were able to ascertain the psychometric properties of the survey instrument, thereby allowing us to test our proposed structural model. We used SmartPLS (Ringle et al. 2005) to evaluate the research model and explain variance using bootstrapping with 1000 samples.

Results

The proposed research model was found to explain 14.6% of the variance for self-disclosure amount and 15.6% of the variance for self-disclosure depth (Figure 2).
The strength of relationships between second order factor Motive and its first order dimensions implies that individual use Facebook more for enjoyment ($\beta=.844$, $t=46.427$, $p<0.01$), followed by information sharing ($\beta=.831$, $t=39.320$, $p<0.01$), pass time ($\beta=.806$, $t=35.444$, $p<0.01$), attention seeking ($\beta=.746$, $t=21.527$, $p<0.01$), developing connections ($\beta=.713$, $t=20.127$, $p<0.01$) and maintaining relations ($\beta=.625$, $t=13.218$, $p<0.01$).

Table 1 shows the strength of paths and T-Statistics values.

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<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Stat</th>
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<td>0.074</td>
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<tr>
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<td>Boundary Permeability $\rightarrow$ Self-Disclosure Depth</td>
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<td>0.084</td>
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<td>Privacy Concern $\rightarrow$ Boundary Ownership</td>
<td>-0.308</td>
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</tbody>
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Table 1: Strength of Paths and T-Statistics

Discussion & Conclusion

The findings suggest that boundary ownership, boundary permeability and motive have a direct positive relationship on self-disclosure amount. Among these variables, boundary permeability was found to exert strongest effect on self-disclosure amount with a path coefficient of 0.244, followed by boundary ownership (0.146) and motive (0.137). Facebook users with high boundary permeability are inclined to disclose more information, while those with low permeability are less likely to engage in self-disclosure amount. Likewise, Facebook users with strong conviction in boundary ownership tend to disclose more information relative to those that have less conviction in boundary ownership. These findings are consistent with prior research on self-disclosure which indicated that both high boundary permeability and boundary ownership is likely to increase the self-disclosure amount (Petronio, 2002; Child et al., 2009).

Results also showed a strong association between Facebook users’ motives and their self-disclosure amounts. The amount of self-disclosure was directly related to individuals’ perceived value of the desired outcome.

Both boundary permeability and boundary ownership have a significant positive effect on self-disclosure depth (0.250 and 0.230 respectively). Individuals with high boundary permeability and ownership tended to have more intimacy in their communication with others. However, against our expectations, Facebook users’ motive was not significantly associated with self-disclosure depth. One possible explanation for this interesting finding is that the individuals’ motives examined in this study such as enjoyment, passing time, sharing information with others, developing connections and maintaining relationships do not require disclosure of intimate information to realize desired goals. The organizing/archiving motivation for self-disclosure involves recording personal information, such as thoughts, daily experiences and so
forth on social media websites such as Facebook. Hollenbaugh’s study found that bloggers who disclosed highly intimate information in their blog entries were in general highly disclosive by nature, and primarily wrote the blogs for themselves to archive and organize their thoughts, and not for close friends and family (Hollenbaugh, 2010).

Facebook Privacy concerns significantly influenced boundary permeability and boundary ownership with a path coefficient of 0.131 and .308 respectively. Individuals with high privacy concerns regarding how their information might be used or exploited tended to lower their boundary permeability and boundary ownership. This finding is consistent with prior research on privacy concerns which indicates that individuals hold back from disclosing information online because of associated privacy risks (Malhotra et al., 2004; Awad & Krishnan, 2006; Dinev and Hart 2006; Krasnova et al. 2009; Yang and Wang 2009).

Our analysis revealed six primary dimensions of motives for voluntarily engaging in self-disclosure on Facebook. Among the first order dimensions to second order motive, the dimension that has the strongest effect on second order motive is enjoyment (.844), followed by information sharing (.831) pass time (.806), attention seeking (.746), developing connections (.713) and maintaining relations (.625).

Research shows that self-disclosure on social media is particularly rewarding in terms of forming and fostering relationships, building social capital and managing identity (Hargittai et al., 2010; Steinfield et al., 2008). Users not only upload and share personal and private information but also communicate and interact with others via, chats, messages, wall posts and statements that other users can view and comment on (Hum et al. 2011; Smock et al., 2011). It is interesting to observe that typical motives’ for joining social networks tends to be social in nature. As proliferation of personal data and the openness of social media websites could present several risks for users (Picazo-Vela et al., 2012), the results provide evidence that many individuals hold themselves back from disclosing information in online environments (Bryer & Chen, 2010; Malhotra et al., 2004; Awad & Krishnan, 2006). In addition, there are also fears about the negative consequences of users’ self-disclosures on social media (Bryer & Chen, 2010). Employers and other parties are known to use personal information / wall postings in assessing their employee qualifications and users were known to be punished and/or criminally charged for their activities on social media (Christofides et al., 2009). It is therefore important for users to be cautious and provide optimum level of breadth and depth of information necessary to fulfil their specific needs.

The findings of this study contribute to the self-disclosure and social media literature and offer insights into understanding about the usage of a popular social media websites, Facebook. It also provides practitioners useful insights on how Facebook is being used currently, and what site administrators can do to meet the user needs and increase site usage. To enhance the popularity and usage of Facebook, it is important that Facebook site administrators provide users with specialized tools that are dedicated to meeting their specific goals.

Limitations & Scope for Future Research

The present study has some limitations which can also shape directions for future research. First, our sample included students from a state university in the Southwest United States. Accordingly, the results may have a limited generalizability to other groups or culture, but this is atypical of similar studies done in the past. Future research will benefit from more heterogeneous samples. Future studies can be conducted by including other types of motives such as organizing / archiving information, developing romantic relationships, gaining social approval, social utility, voyeurism, herd instincts etc. and examining their influence on individuals’ decision to disclose specific types of information. Lastly, our study design uses cross-sectional data, rather than longitudinal data. Prior research on social media has shown that frequency of social media use increases self-disclosure online. Future longitudinal research should examine the frequency of social media use, and how users’ preferences for boundary permeability, ownership and motives develop over time and influence their decision to engage in self-disclosure on Facebook.
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