Who are you talking about? Contrasting determinants of online disclosure about self or others

Nik Thompson and Jack Brindley
School of Management, Curtin University, Perth, Australia

Received 16 May 2019
Revised 12 November 2019
5 May 2020
Accepted 23 June 2020

Abstract

Purpose – This paper contrasts the determinants of online disclosures about self and others in social media.
Design/methodology/approach – Data from 216 respondents were collected through an online survey. The formal research model was tested with covariance based structural equation modeling.
Findings – The determinants of online disclosures vary whether the subject is self or others. Social networking site (SNS) users who self-disclose are also more likely to share information about others. Furthermore, there are significant gender effects in the influences of disclosure as revealed by multi-group SEM.
Research limitations/implications – Future research models should incorporate the construct of disclosure about others and examine the intertwining of different types of disclosure on SNS. Future work should include behavioral measures, as this study relied on self-report measures.
Practical implications – The current understanding of information sharing does not accommodate different forms of disclosure. Employers or systems administrators concerned about data sharing may need to tailor interventions to the subject of the disclosure. Furthermore, the significant gender differences in determinants of disclosure suggest that this should be considered in practical applications.
Originality/value – Disclosure about others has not been examined in prior work. This study contributes by offering empirical data on the contrasting determinants of disclosure as well as gender differences. It improves the understanding of online information sharing, a topic of particular relevance in today's information oriented society.

Keywords Self-disclosure, Disclosure about others, Privacy, Information security, Social media, SEM
Paper type Research paper

1. Introduction

Social networking sites (SNSs) are finely calibrated machines, designed to extract the maximum amount of user information and then to process, package and monetize it. Notwithstanding any privacy concerns, much of this information is divulged voluntarily by users (Zhang, 2015). This continuous self-disclosure has supported and enabled the tremendous growth of SNSs over the last decade. In fact, in the ten minutes that it will take to read this paper, Facebook will gain 5,000 new users (Kemp, 2018).

As the number of online individuals continues to rise (Cole *et al.*, 2017), so too does the concern for privacy. Parallel advances in mobile technology mean that many individuals are in a state of being always online (Baron, 2010). For many, choosing not to self-disclose personal information, such as names, addresses and payment details restricts participation in modern society (Lampinen *et al.*, 2011). This has the potential to habituate society toward information sharing and normalize the heightened level of information disclosures even in voluntary settings (Wirth *et al.*, 2019).

The fuel that feeds the social network machines are these volumes of information, voluntarily surrendered by users. Social networking site providers monetize this data by selling it to advertisers who are interested in reaching specific demographic audiences (Turban *et al.*, 2017). Media theorist Douglas Rushkoff was among the first to point out the reality that "*with Facebook, you are the product, not the customer*" (2011). While platforms often profess concern for their users' privacy, they are in the practice of making information available that was once private.

Information Technology & People

0959-3845
DOI 10.1108/ITP-04-2019-0197

Prior work has almost exclusively focused on the topic of self-disclosure - the information that users divulge about themselves. However, this perspective does not fully consider a primary affordance of social network sites, the fostering of *associations* between individuals (Treem and Leonardi, 2013). These associations which are formally established through "friend lists" and supported through features such as photo tagging, almost always require some level of disclosure about others. Affordances of SNS are considered to be the most influential stimuli that affect user behavior (Evans *et al.*, 2017), and this includes disclosure behavior (Jung and Sundar, 2018). This is a threat to privacy, and while privacy-conscious users are aware of the risks of self-disclosure, they are even more concerned about the risk that someone else may disclose information about them (Chen *et al.*, 2015). In practice, social media users are exposed to this threat from many third-party actors ranging from the careless disclosures that may be made by a friend or parent (Moser *et al.*, 2017) to the deliberate exposures of personal information with malicious intent, a form of cyber-attack now known as "doxing" (Pittman, 2018).

The affordance of *association* provides an environmental driver for behavior (Gibson, 1986), in this case for disclosure about others. In short, SNS afford association, so that users may be linked together and exchange information (Trepte *et al.*, 2020), and the subjects of the information shared may be either one's self or others. Though previous SNS research has focused heavily on online self-disclosure (e.g. Contena *et al.*, 2015; Krasnova and Veltri, 2011; Tufekci, 2008; Xu *et al.*, 2013), little empirical research has analyzed how users disclose information about others (Chen *et al.*, 2015; Koohikamali *et al.*, 2017).

Our research is thus driven by the following question: "*What are the differences between determinants of online disclosure about self or about others?*"

Several important contributions are made by this study. In particular, the determinants of disclosures both about self and others are clarified. Through this, a link from self-disclosure to disclosure about others is revealed. Path analysis also shows that there are contrasting influences on disclosures about either self or others. Finally, through multi-group SEM, substantial gender effects are discovered in the determinants of online disclosure. These results provide timely new insight into the complex domain of online disclosures and have implications for researchers and practitioners.

2. Theoretical foundation

Culnan and Armstrong's (1999) theory of Privacy Calculus has established a framework within which we may study disclosures about self and others. According to this theory, individuals undertake a calculation of perceived benefits and (privacy) costs during the process of information disclosure. This has roots in the proposition from social exchange theory that interpersonal relationships are influenced by subjective evaluations of costs and benefits (Homans, 1958). In its basic form, the privacy calculus theory considers privacy concerns, disclosure benefits and disclosure behavior. Any perceived benefits will increase levels of disclosure, while conversely, any perceived privacy concerns will diminish the levels of disclosure (Dinev and Hart, 2006). When viewed from the perspective of utility maximization, disclosure will take place when benefits are high and perceived costs are low. This theory has been successfully applied in numerous studies on self-disclosure (e.g. Min and Kim, 2015; Xu *et al.*, 2008). We extend this prior work by including a new dimension of disclosure about others to reveal any differences in determinants of disclosure about self or others.

Self-disclosure can be broadly defined as *"any message about the self that a person communicates to another"* (Wheeless and Grotz, 1976, p. 338). Before the uptake of the internet, the audience for such disclosures would be limited to friends, family and those who

are geographically close. With the possibilities for open communication that have been enabled through the internet, self-disclosure has reached new heights, with everyday users having an audience far beyond their social sphere (Satici and Uysal, 2015).

Prior research has been conducted through many disciplines, pre-dating social media and centering around psychologists and specialists in interpersonal communication (Derlaga and Berg, 1987). More recently, this research has been extended to attempt to explain determinants of online disclosure behaviors (e.g. Krasnova *et al.*, 2009; Krasnova *et al.*, 2010; Krasnova and Veltri, 2011). Online self-disclosure is not restricted to social media. It can occur across a wide variety of platforms, including social networking sites, chat rooms, forums, online gaming platforms, blogs or general websites which permit user content (Agichtein *et al.*, 2008; Quan-Haase and Young, 2010). Furthermore, these disclosures can also take place in multiple media including descriptive text, pictures or videos.

On the other hand, disclosure about others is the action of one individual sharing the personal information of another (Koohikamali *et al.*, 2017). This can take place with or without their permission (Chen *et al.*, 2015). Unlike self-disclosure, where there is only one individual concerned, in disclosure about others there are two parties: 1. the individual disclosing the information (the discloser) and 2. the individual that the information concerns (the other and original owner of the information). This presents a different type of concern as the disclosing party and the individual identified (the other) are not the same entity (Chen *et al.*, 2015). Due to differences in individuals' personal experiences and perceptions, there will inevitably be a clash in disclosure expectations in some situations (Koohikamali *et al.*, 2017). This kind of third-party disclosure can have negative consequences for privacy not only from malicious intent on the part of the discloser but simply through misguided, uneducated or unintentional sharing of others' information (Chen *et al.*, 2015).

When a SNS user uploads information about themselves they retain control over what is posted and whether that information is accurate or inaccurate (Taddei and Contena, 2013). In self-disclosing, a user maintains the ability, and perhaps even the right, to scramble, misrepresent or actively share false information online to uphold their privacy needs, or for any other reason they see fit (Metzger, 2006). This control ceases when personal information is uploaded by a third-party, exposing that individual's private information to other people (Koohikamali *et al.*, 2017).

Building on the privacy calculus theory, we consider the key determinants of disclosure benefits, platform trust and privacy concerns. We extend prior work by adding a new dimension of disclosure about others and contrasting the effects of these determinants on the two forms of disclosure. For clarity, the remainder of the literature review is organized according to these constructs and related hypotheses.

2.1 Disclosure benefits

Scholars, policymakers and industry executives are all interested and invested in understanding why people go online and disclose such huge amounts of personal information with no obvious benefit, such as financial gain (Krasnova *et al.*, 2010). One branch of reasoning for why individuals choose to disclose is around a perceived benefit that users feel they are gaining through their information disclosure (Ellison *et al.*, 2007). Though benefits in this regard are quite difficult to quantify (Ellison *et al.*, 2007), there is a common view among researchers that SNS users are disclosing information online due to a perceived benefit (Richey *et al.*, 2018; Sledgianowski and Kulviwat, 2008) For instance, social validation or self-expression may be perceived benefits, which may encourage a user to self-disclose on social media (Bazarova and Choi, 2014).

Krasnova *et al.* (2010) identified that no systematic research had addressed the direct benefits of online self-disclosure. However, some studies have given insight into what perceived benefits there might be in online disclosure. Rosen and Sherman (2006) suggest that the construct of perceived enjoyment of SNS is stronger than the construct of usefulness; they also identify a strong relationship between an SNS ease of use and that site's uptake. Sledgianowski and Kulviwat (2008) gave further support claiming that SNS usage is positively influenced by a user's sense of enjoyment and playfulness in using that site, and their level of online disclosure reflects this. Boyd (2007) and Brooks (2015) emphasized the hedonic rather than utilitarian perspective, given that SNS are socio-technical systems, showing that social factors such as "presenteeism" are among factors influencing social media use. There is some level of validation through disclosing online which gives users fulfillment and enables them to continue this cycle of developing their social presence.

In addition, people may disclose information online due to the benefit of cultivating and maintaining social relationships, and SNS simply act as a new technological medium to enable these connections across geographical boundaries. Ellison *et al.* (2007) identify this benefit as a form of social capital. They further argue that a knock-on effect of the disclosure benefit to the individual is a wider social benefit to society. SNS users will perceive online disclosure as participation and inclusion within a community, which allows them to form new friendships and continue to develop existing ones (Policarpo, 2019). In keeping with prior literature, it is hypothesized that:

H1. Disclosure benefits will positively influence self-disclosure

2.2 Privacy concerns

The level of concern that an individual has for privacy can influence their disclosure behaviors on social media (Posey *et al.*, 2010). Once data are uploaded to the internet the user has lost control over that information (Barnes, 2006). For example, a unique photo that is stored physically offline can never be digitally manipulated or appropriated by a third-party. Once that picture is stored online, some element of control is lost and complete security can never be recovered (Pfleeger and Pfleeger, 2002).

Previous studies have addressed privacy concerns concerning online services such as e-commerce (Berendt *et al.*, 2005). Malhotra *et al.* (2004) conducted a quantitative study to see what privacy concerns influence behavioral intentions when using online services. The strongest three factors were control (to selectively choose which information to disclose), awareness (companies should be open in how data will be used) and collection (how and when companies collect information). Posey *et al.* (2010) confirmed the relationship between privacy risk beliefs and the level of disclosure that takes place online. A cross-cultural study confirmed the existence of a privacy boundary to minimize risk within electronic communities, with respondents stating a willingness to share inside this boundary. Further research confirmed that consumers with a greater concern for privacy were willing to forego personalized online services (Awad and Krishnan, 2006). Taddei and Contena (2013) modeled privacy concerns as a direct influence of self-disclosure behavior, showing the significance of this relationship. More recently, Zlatolas *et al.* (2015) tested various dimensions of privacy including values, knowledge and concerns showing different effects of various antecedents. This finding is mirrored by Kininmonth *et al.* (2018), who show that privacy is a multi-dimensional construct and must be studied at a sufficiently granular level to attain meaningful results. Thus, in this research, the *collection* dimension of privacy is considered, and the following hypothesis is made:

H2. Privacy concern will negatively influence self-disclosure

2.3 Trust in social networking sites

Trust may be defined as "*the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party*" (Mayer *et al.*, 1995, p. 712). Trust is a key component of social exchange theory (Homans, 1958), which is related to the amount of control that an individual has in a relationship (Heath and Bryant, 2013). Krasnova *et al.* (2010) found that trust helps to mitigate any concerns that platform users may have, ultimately leading to greater self-disclosure. This link between trust and self-disclosure is a component of the privacy calculus (Dinev and Hart, 2006), which has been re-tested more recently with consistent findings (Wu *et al.*, 2012). When users believe that the SNS platform has sufficient safeguards, they may be more comfortable and have a stronger intention to share information with others on that platform (Wu and Sukoco, 2010). This factor may be especially relevant for online communications due to their permanent nature. Offline social exchanges are generally not recorded, providing a greater level of control over the interaction and a lower risk that the other party will misuse or re-share any information. Failing that, with interpersonal communication, there is also the prospect of deniability. On the other hand, SNS aggregate and archive all communication that takes place on their platforms in repositories which are described as "always on and always able to deliver content" (Hogan, 2013, p. 13). Therefore there must be an enduring trust that platforms will act responsibly with any information disclosed to them. Thus it is hypothesized that:

H3. SNS trust will positively influence self-disclosure

2.4 Self-disclosure and disclosure about others

Prior research has identified five affordances as being especially relevant to the study of social networking sites. These include anonymity, persistence, visibility, editability and association (Evans *et al.*, 2017; Treem and Leonardi, 2013). Treem and Leonardi (2013) suggest that association – established connections between individuals – is of particular relevance, mirroring the stance of Boyd and Ellison (2007) that association is a defining feature of social networks. It is this support for association that enables social networking site users to attain benefits such as access to relevant information and social connectedness (Kwon, 1998). Within a social network, some elements of association are explicit and static. For example, a "friend" connection between two users demonstrates that some form of social association (of indeterminate strength) exists between these users. The designation of *friend*, however, is far broader than in an offline context as this says nothing of the strength of their relationship. Thus SNS users may seek to strengthen their associations, and perhaps attach more visibility to the bounds of their social network by sharing information about others. Similarly, SNS providers desire not just the information but also the connections between these individual pieces of information – this provides the *network* structure, without which SNS would simply cease to exist. SNS elicit this information by prompting users with shortcuts to tag others in status updates or provide location check-ins. Through this process, disclosures may be made about others, without prior consultation with or permission from them (Croeser, 2014). We hypothesize that during self-disclosure that social media users will seek to strengthen and advertise their associations through further disclosure about those others:

H4. Self-Disclosure will positively influence disclosure about others

2.5 Gender differences in online disclosures

Individual preferences about media consumption and usage are subject to gender effects (Brown and Pardun, 2004). This phenomenon has been observed in numerous studies on

computer-mediated communication (Stewart-Williams and Thomas, 2013). For instance, levels of disclosure are generally higher for females than for males (Highlen and Gillis, 1978), and in an online context, gender remains to be a good predictor of disclosure level (Xie and Kang, 2015). This can be partly explained by the gratifications that females or males may seek through their media use. Previous literature has suggested that the balance of whether the Internet is used for social, professional or information seeking may be influenced by gender (Colley and Maltby, 2008). Specifically, research has revealed that while females tend to use the Internet for communication, males are more likely to use it as a source of entertainment (Joiner *et al.*, 2005).

In the context of social media, gender difference exists in the association between attitude and self-disclosure extent (Chen and Sharma, 2015). Similarly, gender differences are found in the extent to which different features are used. Females tend to comment on posts rather than simply viewing them (Yuan, 2011) and the level of posting of photos and videos tends to be higher (Hargittai, 2007). Differences have also been discovered in the types of information shared (Tufekci, 2008) and the goals of the disclosure (Bazarova and Choi, 2014).

As social role theory suggests that males and females show different behavior because of the different expectations for them (Eagly and Wood, 2011), it is expected that the perception of costs and benefits inherent in the privacy calculus will too vary by gender. Though differences in the factors which influence disclosures about others have not been studied in prior work, we hypothesize that

H5. The determinants of disclosures about others will differ between males and females.

The research model and relationships to be tested are illustrated in Figure 1.

2.6 Contrast between disclosures about self or others

Any disclosure can potentially have relevant consequences for not only the person making the disclosure but any others who may be referenced. This is a common, yet under-researched scenario where the person evaluating whether to share or disclose the information is not the owner of that information (Wirth *et al.*, 2019). As privacy research emphasizes the

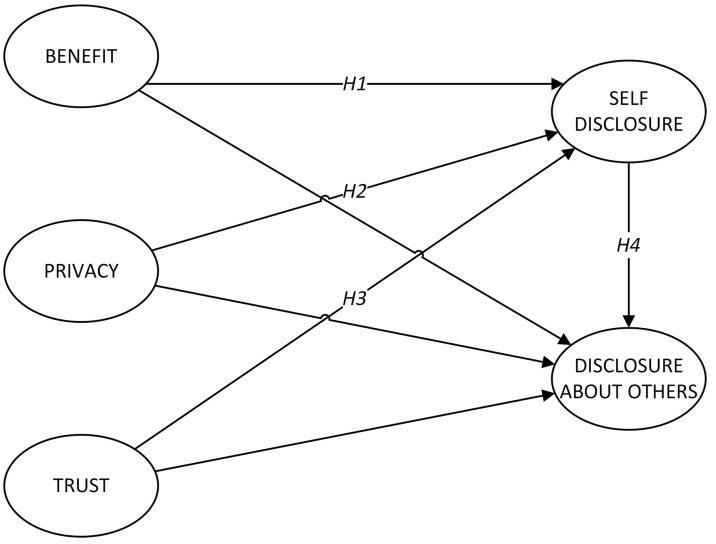

Figure 1.
Research model

consequences to the information originator, there is little understanding of the common privacy violation where an individual may make disclosures about others (Biczók and Chia, 2013). For instance, while the original owners' perceptions of information sensitivity influence their levels of disclosure (Alashoor *et al.*, 2015), it cannot be assumed that a third-party will have identical perceptions when they are considering making a disclosure. In the context of Facebook applications, Biczók and Chia (2013) conclude that an unfavorable situation is created around information disclosures due to a lack of user awareness of the implications and underlying incentives. Thus, this decision-making about when or what information to disclose about others rests on individual differences and judgment (James *et al.*, 2017).

As work studying disclosure about others is sparse, it is desirable to ascertain if there are significant differences in the determinants of self-disclosure and disclosure about others. The presence of such differences will suggest that the existing body of work, which has focused often exclusively on self-disclosures, may not directly translate into new contexts. By testing the strength of any determinants of self-disclosure (H1, H2, H3) alongside disclosure about others in the same model, we address our central research question:

RQ1. What are the differences between determinants of online disclosure about self or about others?

3. Methodology

3.1 Instrument

As the research model was operationalized as a set of pre-determined questions drawn from prior research, a survey approach provided an appropriate way to gather data from a large sample of users. The research model includes five constructs, privacy concerns (PRIV) (Hallam and Zanella, 2017), disclosure benefits (BEN) (Hallam and Zanella, 2017), SNS trust (TRUST) (Contena *et al.*, 2015; Krasnova and Veltri, 2011), self-disclosure (SD) (Contena *et al.*, 2015; Krasnova and Veltri, 2011) and disclosure about others (DAO) (Koohikamali *et al.*, 2017). Each construct is measured by multiple items and modeled reflectively in the path model. The introductory section of the survey gathered general demographic information about participants including age and gender. All items were adapted from the above mentioned validated studies to ensure consistency and content validity. Survey items were measured on 7-point Likert scales from 1 "Strongly Disagree" to 7 "Strongly Agree". The full listing of items is provided in the Appendix. A summary of all constructs is presented below in Table 1

3.2 Participants

An anonymous online survey was developed and administered using the Qualtrics platform. All participants were 18 or over. Snowball sampling was employed; with the initial distribution being conducted through social networks, including LinkedIn and Facebook.

Construct	Definition
Disclosure Benefit (BEN)	The value and needs fulfillment that users derive from participating in disclosure on social media
Privacy Concern (PRIV)	Individuals' concern that data about their personalities, background or activities are being accumulated
SNS Trust (TRUST)	Individuals' level of trust in social networking platforms
Self-Disclosure (SD)	Information about the self that SNS users communicate to others
Disclosure about Others (DAO)	The action of sharing the personal information of others on SNS

Table 1. Constructs and definitions

Data collection was completed in early 2019. Human Research Ethics Committee approval was obtained prior to commencing data collection.

At the conclusion of the data collection period, a total of 263 responses had been gathered. Incomplete responses or those showing invariance in answering over half of the questions were screened out, yielding a final sample of $n = 216$. There was a good gender balance in the survey sample, with 50% male respondents and 48.1% female. Four respondents chose not to identify their gender; these were included in the full model testing but were excluded from the specific analysis of gender differences. Details of the survey sample are shown below in Table 2.

4. Results and analysis

Data were analyzed using a two-step process using covariance based structural equation modeling (CB-SEM) in SPSS 25 and AMOS 25. The first step involved assessing the measurement model, by testing the validity of the measures, their distribution and the goodness of fit of the measurement model. This measurement model was then subjected to common method variance (CMV) tests and invariance checks before testing the causal model. As both dependent and independent variables were measured with the same tool, CMV tests are necessary to ensure that no systematic bias was present in the results. Moreover, before conducting the multi-group analysis for gender effects, the measurement model was checked to ensure model invariance. Having established a robust measurement model, the structural model could be tested to assess the relationships between constructs.

4.1 Measurement model

Key assumptions about the data were first tested by assessing normality and variance inflation factors (VIFs) to reveal any potential collinearity among the constructs in the research model. In every instance, the VIF was below the most conservative thresholds, and none of the constructs possessed even moderate levels of non-normality. All skewness and kurtosis values were below an absolute value of one.

Since a single survey was used to collect all of the variables, the potential threat of CMV was assessed through two tests. First, a Harmon one-factor analysis was conducted by performing an exploratory factor analysis with the number of factors to be extracted constrained to one factor and no rotation. This showed that CMV was not a concern, as less than 50% of the variance (28.8%) was explained by the single factor (Podsakoff and Organ, 1986). Second, a common latent factor (CLF) was added to the measurement model and connected to all observed variables in the data set. After calculating this model, the standardized loadings had not changed by more than 0.2 in value as compared to the model without the CLF (Podsakoff *et al.*, 2003). Therefore CMV is unlikely to be a serious concern in this data set.

Table 2. Participants

	Level	*N*	(%)
Gender	Male	108	50.0
	Female	104	48.1
	Other	4	1.9
Age	18–24	58	26.9
	25–34	100	46.3
	35–44	31	14.4
	45+	27	12.5

Reliability and validity tests were performed on the set of measurement items for all latent constructs. For this data set, all item loadings are acceptable, with composite reliabilities ranging from 0.81–0.87, above the recommended 0.7 threshold (Chin, 1998). Average variance extracted (AVE) was next tested to ensure item reliability and convergent validity. All AVEs were above the minimum threshold of 0.5, demonstrating that the items satisfy the convergent validity requirement. Furthermore, the square roots of the AVE are greater than other cross-correlations, demonstrating that variance explained by each construct is much larger than the measurement error variance. Discriminant validity was tested by calculating the maximum shared variance (MSV) metric and ensuring that these scores are lower than the respective AVE. This condition was satisfied in all cases, confirming the discriminant validity of the constructs because the items load more on their respective latent constructs than on any other constructs (Fornell and Larcker, 1981). Finally, the model fit for the measurement model, including all latent constructs, was tested and found to be excellent (χ^2/df = 1.604, CFI = 0.95, and SRMR = 0.06). Details of the reliability and validity tests are summarized in Table 3.

4.2 Structural model

Following the establishment of instrument validity, the structural model was tested to assess the hypotheses. To ensure that results were conservative and easily comparable with related work, the maximum likelihood estimation method was used throughout. The structural model was retested for fit using multiple criteria including a combination of goodness of fit, normed chi-square and badness-of-fit (SRMR) measure. The structural model demonstrated excellent fit (χ^2/df = 1.814, CFI = 0.94, and SRMR = 0.06) and analysis proceeded on to testing the hypothesized relationships. Causal model testing results are illustrated below in Figure 2.

The model explained 48% of the variance (R^2) in SD and 30% of DAO, respectively. Support was found for H1 and H3. Disclosure benefits positively influence self-disclosure ($\beta = 0.671, p < 0.001, f^2 = 0.75$) and SNS trust positively influences self-disclosure ($\beta = 0.107$, $p < 0.05$, $f^2 = 0.02$). A significant p-value was also observed for the relationship between privacy concern and self-disclosure, however, this was in the opposite direction to what was hypothesized in H2 and therefore does not support the hypothesis ($\beta = 0.129$, $p < 0.05$, $f^2 = 0.04$). Finally, H4 was also supported. There is a strong relationship between self-disclosure and disclosure about others. Those who self-disclose are also more likely to disclose about others ($\beta = 0.350, p < 0.001, f^2 = 0.08$).

H5 considered whether the determinants of SD and DAO differed across genders. To evaluate this hypothesis, multi-group structural equation modeling was conducted with separate testing for the male and female cohort. The standardized regression coefficients and significance levels of this testing were compared. For males, the model explained 52% of the

	Reliabilities				Correlations				
	CR	AVE	MSV	Mean	TRUST	SD	PRIV	BEN	DAO
TRUST	0.860	0.553	0.086	3.23	*0.744*				
SD	0.852	0.591	0.369	3.43	0.260	*0.769*			
PRIV	0.877	0.643	0.051	5.86	−0.221	−0.054	*0.802*		
BEN	0.875	0.638	0.369	4.27	0.294	0.608	−0.225	*0.799*	
DAO	0.814	0.530	0.203	3.50	0.260	0.451	−0.174	0.421	*0.728*

Note(s): CR: Composite reliability, AVE: Average Variance Extracted, MSV: Maximum Shared Variance, Square root of AVEs are on diagonal

Table 3.
Reliability and validity

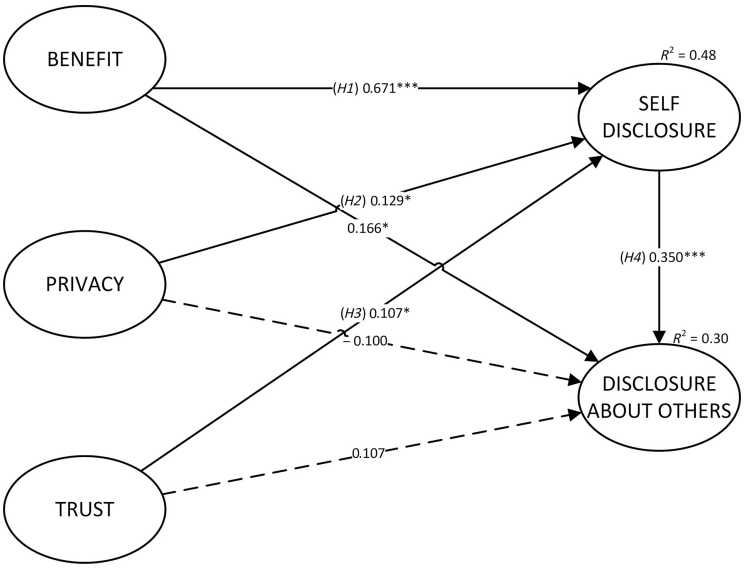

Figure 2.
Causal model results

Note(s): Significance of Correlations: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

variance for SD and 47% for DAO. For females, the model explained 36% of the variance in SD and 16% of the variance in DAO.

Based on an initial inspection of ß coefficients and p-values, several paths differed between males and females. As these coefficients come from different structural models with different standard errors, a more robust analysis supplemented the initial comparison of beta values to ascertain if the differences were statistically significant.

The revised Z-test was employed to correctly compare the differences in regression coefficients' without the downward bias of their standard deviation. This is considered to be a conservative test, created in direct response to other methods which were shown to incorrectly reject the null hypotheses (Paternoster *et al.*, 1998). The formula used is:

$$Z = \frac{\beta_1 - \beta_2}{\sqrt{\mathrm{SE}\beta_1^2 - \mathrm{SE}\beta_2^2}}$$

The difference between male and female groups is considered statistically significant if the Z-score is larger than the common thresholds of 1.96 or −1.96 (Field, 2009). Based on this analysis, three paths were confirmed to have statistically significant differences at the $p < 0.05$ level. These paths are BEN→DAO, PRIV→DAO and SD→DAO. TRUST→DAO was not significant for either males or females so could not be compared. Thus, the analysis shows that gender is an influencing factor in DAO. We find support for H5, as significant gender differences have been observed.

Our central research question aims to consider whether the determinants of disclosure about others differed from self-disclosure. To examine this, we revisit the results from hypothesis testing of H1, H2 and H3. The standardized regression weights of the predictors of both SD and DAO are presented in Table 4.

In two paths, the standardized beta is lower for DAO as compared to SD. This is consistent with the model explaining less of the total variance in DAO. Only one of the predictors (BEN)

was significant in determining disclosures in both contexts. These findings suggest that DAO may be driven by different factors, and that these have not emerged in prior work focusing on SD.

5. Discussion

This study examined the determinants of online disclosures and how they vary across contexts, addressing the paucity of investigation into disclosure about others. To sum up our findings for our central research question, we demonstrate that the tested factors have different effects on disclosures about self as compared to others. This generates new avenues for theory development and research, as it suggests that the extant models and literature may not adequately explain the range of expression and communication in the modern Internet.

To address our research question, we first clarified the determinants of self-disclosure, finding that the effect of perceived benefits is markedly significant, with a large effect size indicating that this influence is likely to translate to real-world behavioral effects. Interestingly, the hypothesized effects of trust and privacy concerns were far less apparent in the privacy calculus. Trust in the social network was not influential, with a small effect on SD and no effect on DAO. This finding may explain the real-world observation that although recent and ongoing negative media attention toward social networks such as Facebook may shake public trust, the platforms continue to flourish (Kemp, 2018). It seems that despite declining SNS trust, users can and will continue to disclose information. Curiously privacy concerns influenced self-disclosure in the opposite direction to the hypothesis, albeit weakly. Inconsistent findings appear to be a hallmark of privacy research (Kokolakis, 2017) and suggest as-yet uncontrolled sources of variance in the environment. This finding is consistent with other recent work which suggests that respondents may not feel that privacy risks affect their disclosure decisions (Liu *et al.*, 2018).

Taken together, the findings suggest that when individuals disclose information about others, they may be driven by different factors than those which drive self-disclosure. Furthermore, these factors are expressed in different ways for females as compared to males. This study has important implications for theory and practice.

5.1 Implications for theory

The multi-group analysis revealed gender effects in the determinants of online disclosure. While the research model explained 52% of the variance in disclosures for males, this figure dropped to 36% for females. Furthermore, statistically significant differences in three paths were found between genders, all of which related to disclosure about others. This suggests that there may be further elements to this model which may contribute to this unexplained variance, and that these may influence females more than males.

An explanation for this gender difference lies in the theories of self that males and females hold. Research on interpersonal communication has consistently supported the fact that females tend to disclose more frequently than males (Highlen and Gillis, 1978), indeed this is reflected in this study with mean disclosure levels of females being higher (M = 3.50,

Predictor	Outcome	Beta	Outcome	Beta
BEN	SD	0.671***	DAO	0.166*
PRIV	SD	0.129*	DAO	–0.100
TRUST	SD	0.107*	DAO	0.107

Note(s): Significance of Correlations: ***$p < 0.001$, *$p < 0.05$

Table 4. Predictors of SD and DAO

$S = 1.22$) than males ($M = 3.34$, $S = 1.56$). This can be explained by how males and females are socialized throughout life and subsequently disclose information in different ways and levels. Women are socialized to be open, and empathetic, whereas men do not necessarily share this trait and may be closed or less expressive (Petronio and Martin, 1986). Thus, the boundary between "self" and "other" in interpersonal communication may be subject to gender differences. The kinds of sharing and disclosures made by females may not only be more frequent but are likely to differ in terms of the level of disclosure. This is supported by recent work from James *et al.* (2017) who find that females tend to perceive exposing information through social media as less problematic than males.

Our findings are consistent with our prior theorization of social role theory (Eagly and Wood, 2011). This expects males to be more agentic (e.g. independent or task-focussed) and females to be more communal (e.g. focused on establishing bonds within social interactions). Accordingly, prior research has found that females use technology for more social connectivity (Kimbrough *et al.*, 2013), and therefore the affordance of *association* provided in SNS, may be realized differently in males or females.

5.2 Implications for practice

The results of this study also have organizational and technical implications in the age of social media. Information disclosure, whether about self or others is a primary function of social media, and this is further emphasized for information that draws high user interaction (James *et al.*, 2017). This is relevant to individuals, and also to businesses who increasingly communicate with important stakeholders through social media. These interactions may be initiated by the vendors or platform users, sharing and disclosing information about their own and others' experiences. In practice, the notion of disclosure about others may be particularly fitting when considering the discourse that takes place in a public forum when users exchange comments, feedback and experiences about a product or service. The finding that disclosure benefits, and not privacy concerns, are the key driver of disclosure about others has organizational implications, as this may be the lever that managers can operate in order to promote or reduce levels of disclosure on a topic and to shape their brand message and online presence.

A possible explanation and practical implication of the weak influence of platform trust and privacy concerns on disclosure behaviors may lie in the behavioral response that these concerns elicit. Though the privacy calculus suggests that individuals should only disclose information when benefits outweigh the risks (Krasnova and Veltri, 2011), prior research has also revealed cases where disclosure takes place in spite of low perceived benefits (Dinev and Hart, 2006). It could be that platform users attempt to balance this calculus in other ways, while ultimately disclosing. Low trust or high privacy concerns may stimulate protective behaviors in the SNS user, which may moderate the real-world impact of their disclosures. These protective behaviors may include setting a profile to "private" or using a pseudonym. Under the perceived cover of these protections, a user may feel free to self-disclose, while satisfying the need to balance benefits and risks. In this instance "publicness" may be more relevant than privacy (Bateman *et al.*, 2011). It may be that certain protections directly affect the perceived "publicness" of social media and may predispose different levels of disclosure. Since prior work has shown that males and females commonly employ different information security protective behaviors (McGill and Thompson, 2018), this is compatible with our discovery of gender differences in some determinants of disclosure. Thus, a new dimension to consider is the role of protective behaviors, and this is an area with excellent prospects for further investigation.

Though technology continues to advance and present new ways for users to widely share information (Hess *et al.*, 2014), there is less emphasis on the provision of means for users to

regulate and control this information sharing. This is perhaps unsurprising given that the platforms may perceive such control as a potential threat to a business model, which is wholly dependent on the volumes of data. Since tools to control information sharing and spreading are so limited, users must depend on the disclosure decisions of others (James *et al.*, 2017). A technological implication is, thus, the opportunity for a platform or third-party to use their technical expertise to provide support to users and increase their awareness of the scope and extent of sharing decisions. A valuable first step would be for platforms to detect when disclosure about others is taking place, and to notify the "other" in question so that they may be able to respond accordingly. Such notification would put the original owners of the data in a position to make decisions about when, where and how information about them is shared.

5.3 Limitations and future work

As these data were collected at a single point in time, it is not possible to infer patterns of information sharing or how these influences evolve. For many theorists, "*the medium is the message*" (McLuhan, 1964), suggesting that the pace of technological advancement may bring further changes in types and levels of information sharing. Take for example the concept of "live-streaming" video on Facebook – although now a staple part of social media, this was only introduced in late 2015. As new features get introduced, these exert an influence over the billions of users who may adapt their behaviors in light of the new affordances provided by technology and the associated evolution of social norms. Thus an interesting area of future work would be to map key epochs in the technology and investigate how these have changed how information is shared.

Another limitation of the approach is the nature of the self-report measures. Although attempts were made to avoid systematic and social desirability biases (e.g. by ensuring that respondents know that the survey is voluntary, anonymous and they can opt-out at any time), there is some possibility that self-reports may not always match real behavior precisely. Thus, another future avenue of work and an extension to this work is to directly observe user behaviors. This poses logistical challenges; however, one approach is to employ the types of browser instrumentation used by usability researchers (e.g. Loop11, 2019) to directly observe behavior.

Self-disclosure was shown to influence disclosure about others as hypothesized. The nature of current social media platforms is such that disclosure about other individuals is encouraged and users are primed for this behavior. For instance, the act of creating a basic status update on Facebook triggers prompts to tag others or divulge a location. Similarly, photo uploads are subject to automatic prompting encouraging users to disclose the identity of others (Bunn, 2013). We term this phenomenon "collateral disclosure", and define it as the *incidental disclosure about third-parties that takes place during self-disclosure.* Those who disclose widely and frequently may disclose about others, and in ways which may not be acceptable to the individual mentioned in those disclosures. The discovery of this strong association has practical implications, and we suggest that collateral disclosure is a topic that should be addressed in future theory development.

6. Conclusion

In the words of Facebook founder Mark Zuckerberg, "*the days of having a different image for your work friends or coworkers and for the other people you may know are probably coming to an end pretty quickly*" (Kirkpatrick, 2011, p. 199). In recent years, social media platforms have systematically scanned, aggregated and data-mined a path toward this statement becoming a reality. On the one hand, users' self-disclosure decisions are kept in check by various internal and external factors. At the same time, competing forces strive to increase the propensity of

individuals to share information. These forces emerge from the platforms encouraging sharing or through the increasing normalization of online disclosures in modern society. Left unchecked, a dangerous equilibrium is possible, where even routine levels of sharing are extremely revealing and potentially problematic for the subjects of the disclosures.

The research described in this paper has contrasted the determinants of disclosures about self and about others, finding that these conceptually related behaviors may have significantly different determinants. We also find that while self-disclosing, an individual may also disclose information about others through tagging or check-ins and we term this collateral disclosure. The role of gender was also examined through multi-group modeling, showing significant gender differences in the determinants of disclosure and that theoreticians and practitioners alike should consider these differences in their understanding of SNS use. It is hoped that this research stimulates interest and further investigation into the various facets of online disclosures; especially where information is being shared about a third-party.

References

Agichtein, E., Castillo, C., Donato, D., Gionis, A. and Mishne, G. (2008), "Finding high-quality content in social media", *Proceedings of the 2008 International Conference on Web Search and Data Mining*, California, USA, pp. 183-94.

Alashoor, T., Keil, M., Liu, L. and Smith, J. (2015), "How Values Shape Concerns about Privacy for Self and Others", *Proceedings of the International Conference on Information Systems, Forth Worth*.

Awad, N.F. and Krishnan, M.S. (2006), "The personalization privacy paradox: an empirical evaluation of information transparency and the willingness to be profiled online for personalization", *MIS Quarterly*, Vol. 30 No. 1, pp. 13-28.

Barnes, S.B. (2006), "A privacy paradox: social networking in the United States", *First Monday*, Vol. 11 No. 9.

Baron, N.S. (2010), *Always on: Language in an Online and Mobile World*, Oxford University Press, New York.

Bateman, P.J., Pike, J.C. and Butler, B.S. (2011), "To disclose or not: publicness in social networking sites", *Information Technology and People*, Vol. 24 No. 1, pp. 78-100.

Bazarova, N.N. and Choi, Y.H. (2014), "Self-disclosure in social media: extending the functional approach to disclosure motivations and characteristics on social network sites", *Journal of Communication*, Vol. 64 No. 4, pp. 635-57.

Berendt, B., Günther, O. and Spiekermann, S. (2005), "Privacy in e-commerce: stated preferences vs. actual behavior", *Communications of the ACM*, Vol. 48 No. 4, pp. 101-6.

Biczók, G. and Chia, P.H. (2013), "Interdependent Privacy: Let Me Share Your Data", *Proceedings of the International Conference on Financial Cryptography and Data Security*, Berlin, pp. 338-53.

Boyd, D.M. and Ellison, N.B. (2007), "Social network sites: definition, history, and scholarship", *Journal of Computer-Mediated Communication*, Vol. 13 No. 1, pp. 210-30.

Boyd, D. (2007), "Why youth (heart) social network sites: the role of networked publics in teenage social life", *MacArthur Foundation Series on Digital Learning–Youth, Identity, and Digital Media*, Vol. 119, p. 142.

Brooks, S. (2015), "Being Social Isn't Just about Fun: An Examination of Personal Social Media Usage", *Proceedings of the Americas Conference on Information Systems*, Puerto Rico.

Brown, J.D. and Pardun, C.J. (2004), "Little in common: racial and gender differences in adolescents' television diets", *Journal of Broadcasting and Electronic Media*, Vol. 48 No. 2, pp. 266-78.

Bunn, A. (2013), "Facebook and face recognition: kinda cool, kinda creepy", *Bond Law Review*, Vol. 25, p. 35.

Chen, R. and Sharma, S.K. (2015), "Learning and self-disclosure behavior on social networking sites: the case of Facebook users", *European Journal of Information Systems*, Vol. 24 No. 1, pp. 93-106.

Chen, J., Ping, J.W., Xu, Y.C. and Tan, B.C. (2015), "Information privacy concern about peer disclosure in online social networks", *IEEE Transactions on Engineering Management*, Vol. 62 No. 3, pp. 311-24.

Chin, W.W. (1998), "Commentary: issues and opinion on structural equation modeling", *MIS Quarterly*, Vol. 22 No. 1, pp. vii-xvi.

Cole, J., Suman, M., Schramm, P. and Zhou, L. (2017), *The 2017 Digital Future Report: Surveying the Digital Future*, USC Annenberg School Center for the Digital Future, Los Angeles, CA.

Colley, A. and Maltby, J. (2008), "Impact of the Internet on our lives: male and female personal perspectives", *Computers in Human Behavior*, Vol. 24 No. 5, pp. 2005-13.

Contena, B., Loscalzo, Y. and Taddei, S. (2015), "Surfing on Social Network Sites: a comprehensive instrument to evaluate online self-disclosure and related attitudes", *Computers in Human Behavior*, Vol. 49, pp. 30-7.

Croeser, S. (2014), "Changing Facebook's architecture", *An Education in Facebook*, pp. 185-95.

Culnan, M.J. and Armstrong, P.K. (1999), "Information privacy concerns, procedural fairness, and impersonal trust: an empirical investigation", *Organization Science*, Vol. 10 No. 1, pp. 104-15.

Derlaga, V.J. and Berg, J.H. (Eds) (1987), *Self-disclosure: Theory, Research, and Therapy*, Springer Science & Business Media, New York.

Dinev, T. and Hart, P. (2006), "An extended privacy calculus model for e-commerce transactions", *Information Systems Research*, Vol. 17 No. 1, pp. 61-80.

Eagly, A.H. and Wood, W. (2011), "Social Role Theory", *Handbook of Theories in Social Psychology*, Sage Publications, London, Vol. 2.

Ellison, N.B., Steinfield, C. and Lampe, C. (2007), "The benefits of Facebook "friends:" Social capital and college students' use of online social network sites", *Journal of Computer-Mediated Communication*, Vol. 12 No. 4, pp. 1143-68.

Evans, S.K., Pearce, K.E., Vitak, J. and Treem, J.W. (2017), "Explicating affordances: a conceptual framework for understanding affordances in communication research", *Journal of Computer-Mediated Communication*, Vol. 22 No. 1, pp. 35-52.

Field, A. (2009), *Discovering Statistics Using SPSS*, Sage publications, Los Angeles.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Gibson, J. (1986), *The Ecological Approach to Visual Perception*, 1st, LEA, Hillsdale, NJ.

Hallam, C. and Zanella, G. (2017), "Online self-disclosure: the privacy paradox explained as a temporally discounted balance between concerns and rewards", *Computers in Human Behavior*, Vol. 68, pp. 217-27.

Hargittai, E. (2007), "Whose space? Differences among users and non-users of social network sites", *Journal of Computer-Mediated Communication*, Vol. 13 No. 1, pp. 276-97.

Heath, R.L. and Bryant, J. (2013), *Human Communication Theory and Research: Concepts, Contexts, and Challenges*, Routledge, New York.

Hess, T., Legner, C., Esswein, W., Maaß, W., Matt, C., Österle, H., Schlieter, H., Richter, P. and Zarnekow, R. (2014), "Digital life as a topic of business and information systems engineering?", *Business and Information Systems Engineering*, Vol. 6 No. 4, pp. 247-53.

Highlen, P.S. and Gillis, S.F. (1978), "Effects of situational factors, sex, and attitude on affective self-disclosure and anxiety", *Journal of Counseling Psychology*, Vol. 25 No. 4, p. 270.

Hogan, M. (2013), "Facebook data storage centers as the archive's underbelly", *Television and New Media*, Vol. 16 No. 1, pp. 3-18.

Homans, G.C. (1958), "Social behavior as exchange", *American Journal of Sociology*, Vol. 63 No. 6, pp. 597-606.

James, T.L., Wallace, L., Warkentin, M., Kim, B.C. and Collignon, S.E. (2017), "Exposing others' information on online social networks (OSNs): perceived shared risk, its determinants, and its influence on OSN privacy control use", *Information and Management*, Vol. 54 No. 7, pp. 851-65.

Joiner, R., Gavin, J., Duffield, J., Brosnan, M., Crook, C., Durndell, A., Maras, P., Miller, J., Scott, A.J. and Lovatt, P. (2005), "Gender, internet identification, and internet anxiety: correlates of internet use", *CyberPsychology and Behavior*, Vol. 8 No. 4, pp. 371-8.

Jung, E.H. and Sundar, S.S. (2018), "Status update: gratifications derived from Facebook affordances by older adults", *New Media and Society*, Vol. 20 No. 11, pp. 4135-54.

Kemp, S. (2018), "Social media use jumps in Q1. We are social", available at: https://wearesocial.com/uk/blog/2018/04/social-media-use-jumps-in-q1-despite-privacy-fears (accessed 2 April 2019).

Kimbrough, A.M., Guadagno, R.E., Muscanell, N.L. and Dill, J. (2013), "Gender differences in mediated communication: women connect more than do men", *Computers in Human Behavior*, Vol. 29 No. 3, pp. 896-900.

Kininmonth, J., Thompson, N., McGill, T. and Bunn, A. (2018), "Privacy concerns and acceptance of government surveillance in Australia", *29th Australasian Conference on Information Systems (ACIS 2018)*, Sydney, NSW.

Kirkpatrick, D. (2011), *The Facebook Effect: The inside Story of the Company that Is Connecting the World*, Simon and Schuster, New York.

Kokolakis, S. (2017), "Privacy attitudes and privacy behaviour: a review of current research on the privacy paradox phenomenon", *Computers and Security*, Vol. 64, pp. 122-34.

Koohikamali, M., Peak, D.A. and Prybutok, V.R. (2017), "Beyond self-disclosure: disclosure of information about others in social network sites", *Computers in Human Behavior*, Vol. 69, pp. 29-42.

Krasnova, H. and Veltri, N.F. (2011), "Behind the curtains of privacy calculus on social networking sites: the study of Germany and the USA", *10th International Conference on Wirtschaftsinformatik*, pp. 891-900.

Krasnova, H., Kolesnikova, E. and Guenther, O. (2009), "It Won't Happen to Me!: Self-Disclosure in Online Social Networks", *Proceedings of the Americas Conference on Information Systems*, San Francisco, pp. 1-9.

Krasnova, H., Spiekermann, S., Koroleva, K. and Hildebrand, T. (2010), "Online social networks: why we disclose", *Journal of Information Technology*, Vol. 25 No. 2, pp. 109-25.

Kwon, K.H. (1998), "The analysis of social capital in digital environments", in Welles, B.F. and Gonzalez-Bailon, S. (Eds), *The Oxford Handbook of Networked Communication*, Oxford University Press, Oxford.

Lampinen, A., Stutzman, F. and Bylund, M. (2011), "Privacy for a Networked World: bridging theory and design", *CHI'11 Extended Abstracts on Human Factors in Computing Systems*, pp. 2441-4.

Liu, Z., Wang, X. and Liu, J. (2018), "How digital natives make their self-disclosure decisions: a cross-cultural comparison", *Information Technology and People*, Vol. 32 No. 3, pp. 538-558.

Loop11 (2019), "What is Loop11", available at: https://www.loop11.com/ (accessed 2 April 2019).

Malhotra, N.K., Kim, S.S. and Agarwal, J. (2004), "Internet users' information privacy concerns (IUIPC): the construct, the scale, and a causal model", *Information Systems Research*, Vol. 15 No. 4, pp. 336-55.

Mayer, R.C., Davis, J.H. and Schoorman, F.D. (1995), "An integrative model of organizational trust", *Academy of Management Review*, Vol. 20 No. 3, pp. 709-34.

McGill, T. and Thompson, N. (2018), "Gender differences in information security perceptions and behaviour", *29th Australasian Conference on Information Systems*.

McLuhan, M. (1964), *The Medium Is the Message*, MIT Press, Cambridge, MA.

Metzger, M.J. (2006), "Effects of site, vendor, and consumer characteristics on web site trust and disclosure", *Communication Research*, Vol. 33 No. 3, pp. 155-79.

Min, J. and Kim, B. (2015), "How are people enticed to disclose personal information despite privacy concerns in social network sites? The calculus between benefit and cost", *Journal of the Association for Information Science and Technology*, Vol. 66 No. 4, pp. 839-57.

Moser, C., Chen, T. and Schoenebeck, S.Y. (2017), "Parents? And Children?s preferences about parents sharing about children on social media", paper presented to *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, Denver, Colorado, USA. doi: 10.1145/3025453.3025587.

Paternoster, R., Brame, R., Mazerolle, P. and Piquero, A. (1998), "Using the correct statistical test for the equality of regression coefficients", *Criminology*, Vol. 36 No. 4, pp. 859-66.

Petronio, S. and Martin, J.N. (1986), "Ramifications of revealing private information: a gender gap", *Journal of Clinical Psychology*, Vol. 42 No. 3, pp. 499-506.

Pfleeger, C.P. and Pfleeger, S.L. (2002), *Security in Computing*, Prentice Hall Professional Technical Reference, New York.

Pittman, J. (2018), "Privacy in the age of doxxing", *Southern Journal of Business and Ethics*, Vol. 10, pp. 53-8.

Podsakoff, P.M. and Organ, D.W. (1986), "Self-reports in organizational research: problems and prospects", *Journal of Management*, Vol. 12 No. 4, pp. 531-44.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, p. 879.

Policarpo, V. (2019), "The personal life of facebook: managing friendships with social media", *Families, Relationships and Societies*, Vol. 8 No. 3, pp. 445-461.

Posey, C., Lowry, P.B., Roberts, T.L. and Ellis, T.S. (2010), "Proposing the online community self-disclosure model: the case of working professionals in France and the UK who use online communities", *European Journal of Information Systems*, Vol. 19 No. 2, pp. 181-95.

Quan-Haase, A. and Young, A.L. (2010), "Uses and gratifications of social media: a comparison of Facebook and instant messaging", *Bulletin of Science, Technology and Society*, Vol. 30 No. 5, pp. 350-61.

Richey, M., Gonibeed, A. and Ravishankar, M.N. (2018), "The perils and promises of self-disclosure on social media", *Information Systems Frontiers*, Vol. 20 No. 3, pp. 425-37.

Rosen, P. and Sherman, P. (2006), "Hedonic information systems: acceptance of social networking websites", *Proceedings of the Americas Conference on Information Systems*, Acapulco, Mexico, p. 162.

Rushkoff, D. (2011), "Does Facebook really care about you?", available at: https://edition.cnn.com/2011/09/22/opinion/rushkoff-facebook-changes/ (accessed 2 April 2019).

Satici, S.A. and Uysal, R. (2015), "Well-being and problematic Facebook use", *Computers in Human Behavior*, Vol. 49, pp. 185-90.

Sledgianowski, D. and Kulviwat, S. (2008), "Social network sites: antecedents of user adoption and usage", *Proceedings of the Americas Conference on Information Systems*, Toronto, Canada, p. 83.

Stewart-Williams, S. and Thomas, A.G. (2013), "The ape that thought it was a peacock: does evolutionary psychology exaggerate human sex differences?", *Psychological Inquiry*, Vol. 24 No. 3, pp. 137-68.

Taddei, S. and Contena, B. (2013), "Privacy, trust and control: which relationships with online self-disclosure?", *Computers in Human Behavior*, Vol. 29 No. 3, pp. 821-6.

Treem, J.W. and Leonardi, P.M. (2013), "Social media use in organizations: exploring the affordances of visibility, editability, persistence, and association", *Annals of the International Communication Association*, Vol. 36 No. 1, pp. 143-89.

Trepte, S., Scharkow, M. and Dienlin, T. (2020), "The privacy calculus contextualized: the influence of affordances", *Computers in Human Behavior*, Vol. 104, p. 106115.

Tufekci, Z. (2008), "Can you see me now? Audience and disclosure regulation in online social network sites", *Bulletin of Science, Technology and Society*, Vol. 28 No. 1, pp. 20-36.

Turban, E., Outland, J., King, D., Lee, J.K., Liang, T.-P. and Turban, D.C. (2017), *Electronic Commerce: A Managerial and Social Networks Perspective*, Springer, New York.

Wheeless, L.R. and Grotz, J. (1976), "Conceptualization and measurement of reported self-disclosure", *Human Communication Research*, Vol. 2 No. 4, pp. 338-46.

Wirth, J., Maier, C., Laumer, S. and Weitzel, T. (2019), "Perceived information sensitivity and interdependent privacy protection: a quantitative study", *Electronic Markets*, Vol. 29 No. 3, pp. 359-78.

Wu, W.-Y. and Sukoco, B.M. (2010), "Why should I share? Examining consumers' motives and trust on knowledge sharing", *Journal of Computer Information Systems*, Vol. 50 No. 4, pp. 11-9.

Wu, K.-W., Huang, S.Y., Yen, D.C. and Popova, I. (2012), "The effect of online privacy policy on consumer privacy concern and trust", *Computers in Human Behavior*, Vol. 28 No. 3, pp. 889-97.

Xie, W. and Kang, C. (2015), "See you, see me: teenagers' self-disclosure and regret of posting on social network site", *Computers in Human Behavior*, Vol. 52, pp. 398-407.

Xu, H., Dinev, T., Smith, H.J. and Hart, P. (2008), "Examining the formation of individual's privacy concerns: toward an integrative view", *ICIS 2008 proceedings*, p. 6.

Xu, F., Michael, K. and Chen, X. (2013), "Factors affecting privacy disclosure on social network sites: an integrated model", *Electronic Commerce Research*, Vol. 13 No. 2, pp. 151-68.

Yuan, Y. (2011), "A survey study on uses and gratification of social networking sites in China", PhD Thesis, Ohio University.

Zhang, J. (2015), "Voluntary information disclosure on social media", *Decision Support Systems*, Vol. 73, pp. 28-36.

Zlatolas, L.N., Welzer, T., Heričko, M. and Hölbl, M. (2015), "Privacy antecedents for SNS self-disclosure: the case of Facebook", *Computers in Human Behavior*, Vol. 45, pp. 158-67.

Appendix

Construct	Items
PRIV	It usually bothers me when online companies ask me for personal information
	When online companies ask me for personal information, I sometimes think twice before providing it
	It bothers me to give personal information to so many online companies
	I'm concerned that online companies are collecting too much personal information about me
BEN	Disclosure on Social Networks
	.. fulfills my social needs in some way
	.. helps me cultivate good relationships
	.. makes me feel included
	.. provides me satisfaction
TRUST	In general SNS
	.. are open and receptive to the needs of their members
	.. make good-faith efforts to address most member concerns
	.. are honest in their dealings with me
	.. keep commitments to their members
	.. are trustworthy places
SD	I have a comprehensive profile on social media
	I always find time to keep my online profile up-to-date
	My profile tells a lot about me
	From my social media profile it would be easy to find out my preferences in music, movies, or books
DAO	I share information about other people on SNS
	I share images of other people on SNS
	I always post images of other people on SNS
	I have posted images of other people on SNS

Table A1.
Survey instrument

Corresponding author
Nik Thompson can be contacted at: nik.thompson@curtin.edu.au