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The privacy dyad

Privacy dyad

Antecedents of promotion- and prevention-focused online privacy behaviors and the mediating role of trust and privacy concern

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Abstract

Purpose – The purpose of this paper is to investigate how the business communication-related variables of reputation, communication quality and information sensitivity are mediated by trust and privacy concern to influence the privacy dyad (i.e. promotion- and prevention-focused privacy behaviors).

Design/methodology/approach – Regulatory focus theory (RFT) is used to build a framework to examine antecedents of promotion- and prevention-focused privacy behaviors as well as mediators of these relationships. Hypotheses were tested using a 2 (firm reputation: strong/weak) × 3 (communication quality: high/neutral/low) × 2 (data sensitivity: high/low) between-subjects factorial design.

Findings – The findings support the proposed model. Specifically, high reputation and communication quality increased promotion-focused behaviors and were mediated by trust. In contrast, low communication quality and high data sensitivity increased prevention-focused behaviors and were mediated by privacy concern. Consistent with RFT, higher trust led to promotion-focused behaviors such as willingness to invest in the relationship (e.g., by providing information to the service provider and investing time and energy) and loyalty behaviors. Furthermore, higher privacy concerns led to prevention-focused behaviors such as deflective (e.g., using privacy protection measures such as disguising one's IP address and disabling cookies) and defensive behaviors (e.g., taking action to have one's name removed from mailing lists).

Originality/value – This study contributes to the literature on customer relationship management, RFT and trust and privacy in an online context.

Keywords Privacy concern, Reputation, Business communication, Consumer trust

Paper type Research paper

1. Introduction

The internet marketing environment has embraced both customer self-service (e.g., electronic billing and statements, updating of account data, etc.) and customization of services (e.g., customized trading screens, portfolio information and watch lists of online brokers), as well as upselling and cross selling of products and services, all of which rely on an intimate knowledge of customers and their behaviors. Online businesses are using increasingly sophisticated customer relationship



management (CRM) tools to drive these strategies and forge lasting relational bonds with their customers to ultimately improve profitability. Online marketers in particular rely on customer willingness to share personal details and behavior information (Peltier *et al.*, 2009; Phelps and Milne, 2009). However, the targeting and customization of marketing messages is often at odds with customer privacy (Caravella, 2007). The marketing literature has long acknowledged this tension between customized interactions enabled through in-depth knowledge of customers and their behaviors, with recent literature considering contemporary issues such as “data fusion” of multiple sources of big data and implications for consumer privacy (Lazar, 2015). Consumers have been found to weigh the tradeoff of their privacy with the conveniences and benefits that follow the sharing of information with online entities (Wirtz *et al.*, 2007), a behavior known as the “privacy paradox” (KPMG, 2010).

Building on prior internet privacy literature (Wirtz and Lwin, 2009; Wirtz *et al.*, 2007), we use regulatory focus theory (RFT; Higgins, 1997) as a theoretical perspective to examine customer privacy behaviors in an online customer relationship context. Under RFT, two distinct motivational systems, promotion- and prevention-focus, guide people in their daily activities according to the underlying premise that people approach pleasure and avoid pain. Our research extends previous literature by examining the business communication antecedents of consumer privacy behaviors, as well as two potential mediators (trust and privacy concern) of those relationships. Self-regulatory theorists contend that regulatory focus can be induced by situational and relational factors (Atorough and Donaldson, 2011; Seung-A, 2012). Thus an individual’s specific interaction with an organization will induce either approach (promotion-focus) or avoidance (prevention-focus) responses in order to achieve desired end-states. In combination, we view promotion- and prevention-focused behaviors as a dyad of privacy-related behaviors that consumers utilize to manage their privacy risks in online environments. This research is motivated by the premise that characteristics and actions of online organizations can influence both approach and avoidance privacy behaviors among consumers, and those effects can be explained by established consumer privacy variables (trust and privacy concern).

While past studies examined the direct effects of trust and privacy concern (Akhter, 2012; McCole *et al.*, 2010; Nepomuceno *et al.*, 2013), they did not address the business communication factors that ultimately motivate such behaviors. We expand the investigation to include firm-level actions in addition to trust and privacy concern as looked at in the literature. For the successful implementation of online CRM, organizations need to not only understand the effects of trust and privacy concern on consumer attitudes and behaviors, but also understand the potential influence of business communications and marketing activities on those variables. Thus, the contribution of this research is twofold: we extend prior work in online consumer privacy by expanding the model to include practical antecedents of the privacy dyad that can be influenced by online organizations, and also broaden our understanding of the mediating mechanism of trust and privacy concern in that model. Specifically, this study is motivated by the following two research questions:

- RQ1. How do the business communication-related variables of reputation, communication quality and information sensitivity relate to promotion- and prevention-focused behaviors as would be predicted by RFT?
- RQ2. Are these effects mediated by trust and privacy concern?

2. Theoretical framework and hypotheses

RFT examines the different ways that people approach pleasure and avoid pain. According to Higgins (1997), “The critical characteristic of self-regulation is its approach motivation, the attempt to reduce discrepancies between current states and desired end-states [...] regulatory focus proposes that there are different ways of approaching different types of desired end-states,” (p. 1281). Those desired end-states fall into two categories: aspirations/accomplishments, which are promotion-focused (i.e. they approach pleasure), and responsibilities/safety, which are prevention-focused (i.e. they avoid pain) (Higgins, 1997).

While RFT has been well represented in the consumer finance literature (Zou *et al.*, 2014), as well as literature on consumer health behaviors (Keller, 2006), search advertising (Mowle *et al.*, 2014) and general e-commerce literature (Chung and Han, 2013; Van Noort *et al.*, 2008), this theoretical framework has been underutilized in the online privacy literature (see Boesen-Mariani *et al.*, 2010 for a review of other applications of RFT in marketing research). A notable exception has been the application of RFT to the online consumer privacy context by Wirtz and Lwin (2009), who found that in the context of unjust organizational communication, trust predicted promotion-focused behaviors, but not prevention-focused behaviors, whereas privacy concern predicted prevention-focused behaviors but not promotion-focused behaviors. The differential behavioral consequences arising from trust and privacy concern have also been documented in the consumer behavior literature. For example, trust engenders strong relationships that encourage repurchase opportunities (Milne and Boza, 1999) and reduces consumer risk perceptions related to transactions (Morgan and Hunt, 1994). In an online context, disclosing information to an online marketer requires some amount of trust that the marketer will not abuse the information and bring harm or unwanted solicitations to the customer (Milne and Culnan, 2004).

Increased privacy concern has been shown to motivate consumer protective behaviors such as fabrication of personal information and refusal to purchase (Wirtz *et al.*, 2007), and other counteractive measures to diminish privacy concerns (Lwin and Williams, 2003). However a gap still remains in the literature in terms of connecting trust and privacy concern to organization-level characteristics and business communication-related variables that may serve as antecedents to trust and privacy concern and their ultimate effects on consumer privacy behavior. Prior studies examine the direct consequences of trust and privacy concern on consumer privacy behaviors, but do not give insights to the business communication factors that motivate such behaviors. What organization actions or characteristics influence trust and privacy concern? We believe trust and privacy concern can be viewed as mediators to explain how other variables affect consumer privacy responses. As explained by the seminal work of Baron and Kenny (1986, p. 1173), the mediator “represents the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest.” We extend prior literature by examining additional focal antecedents of the privacy dyad and applying RFT to the online context as discussed next.

An individual’s decision to participate in promotion- or prevention-focused behaviors can be influenced by interactions with others, including organizations. An organization’s CRM activities, which are designed to help the organization connect with customers but by nature also require customer information, would likewise potentially affect customer privacy-related behaviors. The implicit cues people use in

traditional brick-and-mortar settings to build relationships and evaluate trustworthiness, such as face-to-face, voice and body signals, are absent in an online environment (Kracher and Corritore, 2004). This leaves online cues such as a firm's reputation and communication quality as potentially important influencers to shape consumer perceptions. To study the influence of marketer-influenced factors important to the online environment, we focus on how the marketing communication-related factors of reputation, quality of customer-targeted communication and sensitivity of the information requested will be mediated by trust and privacy concern when influencing privacy-related approach and avoidance behaviors (see Figure 1).

2.1 Drivers of trust and privacy concern

Reputation is defined as the extent to which buyers believe a seller is honest and concerned about customer welfare (Doney and Cannon, 1997). The reputation of a business, and thereby the trust customers have in that organization, can be improved via communication (Milne and Boza, 1999). In the online context, McKnight *et al.* (2002) showed a positive relationship between reputation and initial trust, and Pan *et al.* (2013) found trust to be an antecedent of online purchase intentions. We therefore also expect reputation to be an antecedent of trust in our model (with trust mediating the effect of reputation on promotion-focused behaviors such as repatronage).

Communication quality is defined as the quality of content and the frequency of communication in an organization's communications with the customer. One of the potential reasons why consumers provide information to marketers is for the benefit of receiving targeted offers (Milne and Gordon, 1993). In traditional marketing, relationship marketing instruments, such as direct mailings, serve as a CRM tool (Roberts and Berger, 1999). The personalization afforded by direct messages can increase perceived relationship quality, because customers are approached with individualized communications that appeal to their specific needs and desired manner of fulfilling them (De Wulf *et al.*, 2001). When the online marketer acts in a communicatively fair manner by sending communication of high quality, customers may feel that the promise has been fulfilled and the firm can be trusted, and Zhou (2011) found that the quality of information communicated enhances trust in the context of mobile banking. We expect communication quality to be a potential antecedent of trust. Additionally, if an organization acts in a communicatively unfair manner by sending communication of low quality, the attempt may in fact be viewed as intrusive; we thus expect communication quality to also be a potential antecedent of privacy concern.

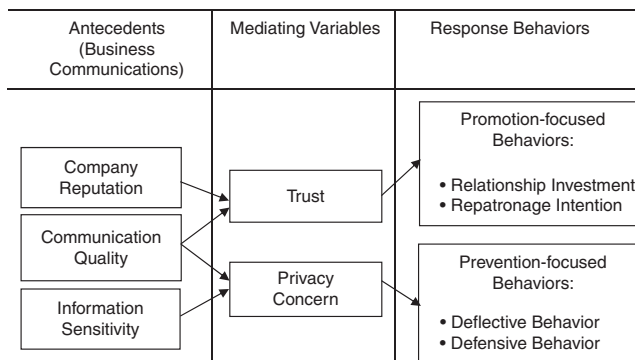


Figure 1. Conceptual framework

This is consistent with the findings of Wu *et al.* (2012), who found that online privacy policies (an example of high quality communication) increase consumer trust while decreasing privacy concerns.

Information sensitivity is defined as the “level of privacy concern an individual feels for a type of data in a specific situation” (Weible, 1993). Sensitivity appears to be contextual; that is, what is considered sensitive differs from person to person and from situation to situation (Lwin *et al.*, 2007; Weible, 1993). For example, consumers are typically more concerned about the collection and usage of medical records, social security numbers and financial information as compared to information regarding product purchases and media habits; likewise, they are also generally more willing to provide general demographic information (such as marital status) and lifestyle information (such as hobbies) than more sensitive information (Phelps *et al.*, 2000). Consumer willingness to share personal information has been found to be lower for credit card and purchase-related information, while higher for demographic and lifestyle information (Milne *et al.*, 2012), suggesting that consumer concern might be heightened by requests for personally identifying information. We propose that the level of sensitivity of information requested is an antecedent of privacy concern. When an organization requests more highly sensitive information such as personal identifiers, customers will have greater privacy concern as compared to an organization who asks for less sensitive information such as demographics and lifestyle information.

We hypothesize the following antecedents of trust and privacy concern:

- H1. Customer trust will be increased by (a) higher reputation of the organization, and (b) higher quality of communication to the customer.
- H2. Customer privacy concern will be reduced by (a) higher quality of communication to the customer, and (b) lower sensitivity of information requested by the organization.

2.2 Trust as a driver of promotion-focused behaviors

Trust is conceptualized as a confident positive expectation that is fundamentally promotion-focused in nature and uniquely associated with a willingness to contribute and make relationship investments (Hosmer, 1995). Trust is also necessary for successful relationship marketing (Doney and Cannon, 1997; Morgan and Hunt, 1994; Smith and Barclay, 1997). In online environments, trust has been shown to contribute to customer satisfaction (Zhu and Chen, 2012) and buying intentions (Ku, 2012), and positive attitudes toward online shopping (Hsu *et al.*, 2014). It is a fundamental principle of every business relationship and exists when one party has confidence in an exchange partner's reliability and integrity (Morgan and Hunt, 1994). McCole *et al.* (2010) found that trust toward an online vendor is an important component of consumers accepting risk associated with transactions. Applying RFT, when organizations meet the individual's goal of protecting his/her privacy, there is congruity with the individual's desired end state. This goal is seen as a positive outcome (approaching pleasure), and would thus support promotion-focused behaviors.

The promotion-focused behaviors examined in this research are relationship investment and repatronage intentions. These behaviors signal an interest in and commitment to the relationship between the customer and the organization.

Relationship investment refers to the willingness of the individual to undertake actions in time and effort to contribute to the maintenance of a relationship

(Wirtz and Lwin, 2009; Smith and Barclay, 1997). An investment of time, effort and other irrecoverable resources in a relationship creates psychological bonds that encourage customers to stay in a relationship (Smith and Barclay, 1997). According to reciprocal action theory (Li and Dant, 1999), the customer perceives the actions of the organization to be a signal of commitment to the relationship and hence would similarly reciprocate by showing his/her commitment to the relationship. Consistent with prior research (Wirtz and Lwin, 2009), we propose relationship investment to be a consequence of trust.

Repatronage intentions refer to the willingness of individuals to buy the product or patronize the services of an organization that they have bought from before. The customer's decision to remain in the relationship is the essence of repatronage intentions (Teo and Lim, 2001). In a relationship built on trust, relationship commitment becomes a primary predictor of future purchase intentions (Garbarino and Johnson, 1999), and customers will continue to visit a particular business because of this perception of trust (Zhou, 2011). Trust has been found to positively influence attitudes toward online purchasing (McCole *et al.*, 2010). We propose repatronage intentions to be a consequence of trust.

In summary, when customers have trust in an organization, they are more willing to contribute to the relationship with the organization through promotion-focused behaviors. Such customers will be willing to invest time and effort to maintain this relationship (relationship investment) and patronize the organization (repatronage intentions). Therefore, we hypothesize that:

- H3.* Trust increases promotion-focused behaviors in the form of (a) relationship investment, and (b) repatronage intentions.

2.3 Privacy concern as a driver of prevention-focused behaviors

Consumers are sometimes unwilling to disclose information online about themselves because of privacy concern, which is defined as apprehension toward another party with regards to the terms under which personal information is acquired and used (Schoenbachler and Gordon, 2002). The main reason for this concern is due to the lack of awareness of information collection and the lack of control over the usage of information beyond the original transaction (Sheehan and Hoy, 2000). Concerns over information disclosure can grow as consumers realize that information can sometimes be collected without their agreement or knowledge (Phelps *et al.*, 2000; Sheehan and Hoy, 2000).

Applying RFT, when organizations do not meet the individual's goal of protecting his/her interests and privacy, there is a mismatch to the individual's desired end state, triggering a drive to protect against potential threats and leading the individual towards a prevention focus. A prevention focus is anchored in protection and security (Higgins, 1997), and is related to negative emotions like dissatisfaction, agitation and threat, resulting in defensive behaviors. Prior studies have demonstrated that when consumers find their privacy being threatened, they may undertake countermeasures to retaliate and protect their privacy (Lwin and Williams, 2003; Wijnholds and Little, 2001). The prevention-focused behaviors addressed in this research are deflection behavior and defensive behavior.

Deflection behavior refers to the actions taken by an individual to avoid the marketer (Wirtz and Lwin, 2009). Customers are able to utilize many privacy-enhancing tools to deflect communications from the marketer, or to deflect attempts from the marketer to collect information (Lwin *et al.*, 2007), such as anonymizers to disguise

IP addresses, anti-spam filters and cookie-busters. As privacy concerns become important to consumers, the instances of defective behavior should subsequently increase. We propose defective behavior to be a consequence of privacy concern.

Defensive behavior refers to active attempts to discontinue contact with the marketer (Wirtz and Lwin, 2009). Customers exhibit such behavior when they actively contact the marketer and ask the marketer to stop contacting them. They may remove their names from contact lists or refuse to give further information to the organization, unsubscribe from a mailing list, etc. We propose defensive behavior to be a consequence of privacy concern.

In summary, when customers have privacy concerns toward an organization, they may take countermeasures to protect their privacy. Such retaliatory behaviors include avoiding the marketer (deflective behavior), and removing oneself from the contact list of the organization (defensive behavior). We hypothesize that:

- H4.* Privacy concern increases prevention-focused behaviors in the form of (a) deflective behavior, and (b) defensive behavior.

2.4 The mediating roles of trust and privacy concern

Trust is a major determinant of relationship commitment as it is the social glue that holds relationships together (Moorman *et al.*, 1993; Morgan and Hunt, 1994). With e-commerce, the shift to remote transactions and the need for more personal information set up the need for trust as an increasingly salient concept (Schoenbachler and Gordon, 2002). We advance that the antecedents of trust and privacy concern differ. Reputation drives trust which in turn drives promotive behaviors, whereas sensitivity of information drives concern which leads to preventive behaviors. Communication quality influences both trust and privacy concern as indicated by the findings of Zhou (2011) and Wu *et al.* (2012). We hypothesize that:

- H5.* Trust mediates the relationship between (a) reputation and promotion-focused behaviors, and between (b) communication quality and promotion-focused behaviors.

When privacy concern is high, consumers may react by exhibiting behavior to retaliate or protect their privacy (Lwin and Williams, 2003).

Hence, we hypothesize that:

- H6.* Privacy concern mediates the relationship between (a) the communication quality and prevention-focused behaviors, and between (b) sensitivity of information requested by the organization and prevention-focused behaviors.

3. Method

The hypotheses were tested using a 2 (firm reputation: strong/weak) × 3 (communication quality: high/neutral/low) × 2 (data sensitivity: high/low) between-subjects factorial design. A questionnaire was administered to undergraduate students of a large research university in Singapore who received course credit in exchange for their participation. Each respondent was randomly assigned to one of the 12 scenarios.

We used the scenario method in this study for several reasons. First, this method allows the injection of sufficient variance into the independent variables and it reduces issues involving individual differences in responses and personal circumstances to the research context (see Havlena and Holbrook, 1986; Wirtz and Bateson, 1999). It also

reduces random noise with a standardized setting for all respondents (Cook and Campbell, 1979). The scenario method has been shown to have ecological validity in the context of complex cognitive processes in service research (e.g., Bateson and Hui, 1992).

The scenario developed was that of a purchase situation at a fictitious online bookstore called BooksGalore.com. The experimental scenarios of high and low reputation were first pre-tested on ten individuals using pen and paper self-administered surveys. On another ten individuals, a second pretest was conducted. Personal information was classified into high and low sensitivity scenarios by first asking the respondents to rank a list of common personal information such as name, e-mail address and age that is usually requested when registering at websites. Following the process used by Lwin *et al.* (2007), the items highest and lowest in sensitivity were utilized for the high and low data sensitivity scenario, respectively. Finally, the communication quality was classified into high, neutral and low quality by asking the respondents the frequency of which e-mails received will be comfortable or irritate them. After conducting these pretests, the final scenarios were generated.

3.1 *Sample*

A convenience sample of 622 undergraduate and graduate student subjects participated in the final online survey in exchange for course credit. Five subjects were eliminated due to incomplete data, leading to a final sample size of 617 respondents, of which 53.7 percent were females. More than half of the respondents (64.4 percent) had been using the internet for five years or more and 90.1 percent of the respondents rated their online competency level as good or excellent. An advantage of using student subjects is the potential for a more homogeneous sample, which should reduce variance and provide more power for hypothesis testing (Aberson, 2010), and also to serve as a relatively conservative test of theory as these subjects report high levels of online competency and are plausibly more internet-savvy than the population at large.

3.2 *Manipulations and experimental procedure*

The scenario method (Lwin *et al.*, 2007) used was an online purchase encounter with a fictitious bookstore. Each participant was randomly assigned to one of the 12 experimental scenarios. Section 1 provided background information about the company which was used to manipulate firm reputation. In Section 2, respondents were asked to imagine that they were browsing through the pages of the bookstore and decided to purchase three books. At the check-out page, they were required to provide personal information before the transaction could take place.

In Section 3, to manipulate information sensitivity, the scenario continues to describe the subsequent frequency and likeability of the e-mails received from the online bookstore. The respondents were then asked to keep the scenarios in mind and answer questions about trust and privacy concern, and in the next section, promotion- and prevention-focused behaviors were measured. Finally, manipulation checks were measured, as well as demographics and respondent information such as internet usage and experience.

3.3 *Measures*

The measurement scales and their items were adapted to the context of this study from previous research. The independent variables consisted of reputation, communication

quality and data sensitivity. The dependent variables consisted of mediators trust and privacy concern, as well as promotion-focused behaviors (relationship investment and repatronage intentions) and prevention-focused behaviors (deflective behavior and defensive behavior). All items were measured on a seven-point Likert scale ranging from (1) – strongly disagree to (7) – strongly agree. See Table I for the scales and their items used in this study.

4. Analysis and results

4.1 *Confirmatory factor analysis and scale reliability*

CFA was carried out on all the constructs in the proposed model to assess their measurement properties. The measurement model had a good fit: $\chi^2(155) = 319.6$; $p < 0.001$; GFI = 0.94; AGFI = 0.92; CFI = 0.98; NFI = 0.95; TLI = 0.97; RMSEA = 0.05. All goodness-of-fit indices indicated a good fit, except the overall χ^2 . The latter was significant, probably because of the large sample size (Bagozzi and Yi, 1988). Furthermore, as shown in Table II, the construct reliability and variance extracted exceed the recommended values of 0.70 and 0.50, respectively, suggesting that our measures had good internal consistency and reliability.

4.2 *Manipulation checks*

We conducted a series of three-way ANOVAs with the three manipulations as the independent variables and the respective manipulation checks as the dependent variables. The ANOVA results showed significant main effects of the manipulated variables on their corresponding manipulation check items, and no other main or interaction effects reached significance at $p = 0.05$. First, respondents reported that firm reputation was greater in the strong reputation condition ($M = 5.61$) than in the weak reputation condition ($M = 2.83$, $F(1, 493) = 1,371.3$, $p < 0.001$). Second, communication quality was perceived as greater in the high communication quality ($M = 5.44$) than in the neutral communication quality condition ($M = 3.44$) as compared to the low communication quality condition ($M = 1.42$, $F(2, 614) = 1,815.9$, $p < 0.01$). A Bonferroni test showed that the three means were perceived as significantly different ($p < 0.001$). Finally, a significant main effect was found for the sensitivity manipulation whereby sensitivity was higher in the high sensitivity condition ($M = 5.47$) than in the low sensitivity condition ($M = 2.67$, $F(1, 493) = 1,399.4$, $p < 0.001$). Thus, the results suggest that clean manipulations of the independent variables were achieved.

4.3 *Hypotheses testing*

We used MANOVA to test our hypotheses, and Baron and Kenny's (1986) three submodel approach was used to test for mediation effects, first for trust and the promotion-focused behaviors, followed by privacy concern and the prevention-focused behaviors. According to Baron and Kenny, "A variable functions as a mediator when it meets the following conditions: (a) variations in the levels of the independent variable significantly account for variations in the presumed mediator, (b) variations in the mediator significantly account for variations in the dependent variable, and (c) when paths a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant" (p. 1176). Given the experimental nature of this study and the large number of variables, we chose to use MANOVA as it provides a robust test of the hypotheses and does not suffer from identification issues. Furthermore, MANOVA has been

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Construct	Scale item	Item code	Cronbach α
<i>Manipulation checks</i>			
Reputation	The bookstore is well known	R1	0.91
	The bookstore has a good reputation in the market	R2	
	The bookstore is an established company Adapted from Koufaris and Hampton-Sosa (2004)	R3	
Communication quality	I find the frequency of e-mails received from this website is at a comfortable level	C1	0.91
	I enjoy receiving these e-mails	C2	
	I look forward to the next e-mail this website sends out	C3	
Information sensitivity	The information asked by this website is sensitive	S1	0.91
	I find the information asked by the website to be personal	S2	
	I felt that the information requested by this website to be intimate Adapted from Bay (2003)	S3	
<i>Mediating variables</i>			
Trust	The website is always honest and truthful	T1	0.92
	I believe the website has high integrity	T2	
	I believe that the website keeps its promises to customers Adapted from Morgan and Hunt (1994)	T4	
Privacy concern	When this website asks me for personal information in the future, I would think twice before providing it	PC1	0.81
	I would be concerned about giving information to this website	PC2	
	I have concerns that this website would sell my personal information to other internet sites Adapted from Smith <i>et al.</i> (1996)	PC3	
<i>Promotion-focused behavior</i>			
Relationship investment	I am willing to volunteer additional information to this website	RB2	0.87
	I will devote time and energy to make my relationship with the website work	RIV1	
	I will make the effort to show my interest in my relationship with the website Adapted from Wirtz and Lwin (2009) and Smith and Barclay (1997)	RIV2	
Repatronage intention	I am likely to visit this website again	RPT1	0.90
	I will visit the website from time to time	RPT2	
	I will continue to use the services at the website in future Adapted from Blodgett <i>et al.</i> (1997)	RPT3	
<i>Prevention-focused behavior</i>			
Deflective behavior	I will set my server-level e-mail filter to discard e-mails from this website	DFL2	0.79
	I will disguise my IP address (e.g., using Anonymizer.com) to prevent this website from finding me in future	DFL3	
	I will use software to eliminate cookies that track my web-browsing behavior (e.g., JunkBuster) Adapted from Lwin <i>et al.</i> (2007) and Wirtz and Lwin (2009)	DFL4	
Defensive behavior	I will ask the website to remove my name and address from their mailing list	DFN1	0.92
	I will take action to have my name removed from this website's mailing list	DFN2	
	I will ask the website to stop contacting me in future Adapted from Culnan and Milne (2001) and Sheehan and Hoy (1999)	DFN3	

Table I.
Construct measures

	CR	AVE	1	2	3	4	5	6	7	8	9
1. Reputation	-	-	-								
2. Information sensitivity	-	-	0.01	-							
3. Communication quality	-	-	-0.06	-0.01	-						
4. Trust	0.92	0.80	0.08	-0.03	0.60***	0.90					
5. Privacy concern	0.82	0.61	0.02	0.27***	-0.38***	-0.55***	0.78				
6. Relationship behavior	0.89	0.73	-0.02	-0.06	0.42***	0.45***	-0.36***	0.86			
7. Repatronage behavior	0.90	0.75	0.08	-0.02	0.45***	0.53***	-0.40***	0.43***	0.87		
8. Defensive behavior	0.92	0.79	0.01	0.08	-0.54***	-0.52***	0.47***	-0.36***	-0.41***	0.89	
9. Deflective behavior	0.76	0.51	-0.003	0.12**	-0.50***	-0.49***	0.51***	-0.30***	-0.40***	0.62***	0.72

Notes: CR, composite reliability; AVE, average variance extracted. The diagonal elements in the table refer to the square root of AVE; the off-diagonal elements refer to Pearson correlation coefficients between the constructs; reputation, sensitivity and communication quality were single item scales. ** $p < 0.01$; *** $p < 0.001$

established as an analytical method for similar experimental studies in privacy research involving manipulated scenarios and hypothesized mediation effects (see Lwin and Williams, 2006).

4.3.1 Promotion-focused behaviors. Following the Baron and Kenny (1986) approach, we first tested hypotheses related to promotion-focused behaviors (*H1*, *H3* and *H5*). Submodel 1a shows that both reputation ($F=9.1$, $p=0.002$) and communications quality ($F=143.7$, $p<0.001$) had significant main effects on trust (see Table III). The means were in the expected direction with $M_{\text{weak reputation}}=3.98$ and $M_{\text{strong reputation}}=4.19$, and $M_{\text{low communications quality}}=3.07$, $M_{\text{medium communications quality}}=4.22$ and $M_{\text{high communications quality}}=4.97$. The sensitivity main effect and all of the interaction effects did not reach significance at $p<0.05$. These findings satisfy the first test for mediation; they illustrate that our independent variables, reputation and quality of communication, have positive direct effects on trust. Thus, *H1* is supported.

Next, submodel 2a used reputation and communications quality as our independent factors, and instead of trust, we used the promotion-focused behaviors (relationship investment and repatronage intentions) as dependent variables. Following the established approach, this served as the next step in testing mediation, i.e., showing significant main effects between the independent and dependent variables. As expected, the reputation and communications quality main effects were significant, establishing that those independent variables have a significant effect on the dependent variables. The next step is to show that the introduction of a mediating variable in the model obtains significance, while causing the independent variable(s) to no longer demonstrate significance (essentially showing that the mediating variable fully explains the effect previously found between the independent and dependent variables). Therefore, in submodel 3a, we introduced our two mediating variables, trust and privacy concern, as covariates into the MANOVA of submodel 2a. As expected, the effects of trust on relationship investment and repatronage intent were significant (as predicted by *H3*), and the effect of reputation became insignificant, indicating full mediation of the effects of reputation on promotion-focused behaviors by trust. However, the effect of communication quality on our dependent variables remained significant (although the *F*-values dropped drastically), indicating that trust did not fully mediate that effect. *H3*, which states that trust increases promotion-focused behaviors in the form of (a) relationship investment, and (b) repatronage intentions, was supported. *H5* was only partially supported: our results show that trust fully mediates the effects of reputation on promotion-focused behaviors, supporting *H5a*, however, trust does not fully mediate the effects of communication quality on promotion-focused behaviors, failing to support *H5b*.

4.3.2 Prevention-focused behaviors. Continuing to follow the Baron and Kenny (1986) approach, we next tested hypotheses related to prevention-focused behaviors (*H2*, *H4* and *H6*). Submodel 1b shows significant main effects for both communications quality ($F=49.1$, $p<0.001$) and sensitivity ($F=48.7$, $p<0.001$) on privacy concern, and the means were in the expected direction with $M_{\text{low communications quality}}=5.42$, $M_{\text{medium communications quality}}=4.50$ and $M_{\text{high communications quality}}=4.17$ and $M_{\text{low sensitivity}}=4.34$ and $M_{\text{high sensitivity}}=5.04$. The reputation main effect and all of the interaction effects did not reach significance at $p<0.05$. These findings satisfy the first test for mediation; they illustrate that our independent variables, sensitivity and quality of communication, have positive direct effects on privacy concern. Thus, *H2* is supported.

Submodel 1a – trust

Univariate ANOVA results for trust

Source	Type III sum of squares	df	Mean square	F	Sig.
Reputation (R)	9.95	1	9.95	9.99	0.002
Communication quality (C)	286.11	2	143.06	143.70	0.000
Sensitivity (S)	1.23	1	1.23	1.24	0.267
R × C	5.21	2	2.60	2.62	0.074
R × S	2.79	1	2.79	2.797	0.095
C × S	0.84	2	0.42	0.424	0.655
R × C × S	2.48	2	1.24	1.246	0.288
Error	479.83	482	1.00		

Submodel 2a – MANOVA results for promotion-focused behaviors

Testing of direct effects

Dependent variables	Multivariate Results		Univariate results		Repatronage intention	
	F	Sig.	Relationship behavior F	Sig.	F	Sig.
Reputation (R)	3.5	0.03	0.0	> 0.10	6.1	0.01
Communication quality (C)	40.2	< 0.001	49.5	< 0.001	64.3	< 0.001
Sensitivity (S)	1.5	> 0.10	3.0	0.08	0.2	> 0.10
R × C	0.3	> 0.10	0.2	> 0.10	0.1	> 0.10
R × S	4.8	< 0.01	8.0	< 0.01	0.1	> 0.10
C × S	0.9	> 0.10	1.6	> 0.10	0.5	> 0.10
R × C × S	2.7	0.03	1.2	> 0.10	3.4	0.03

Submodel 3a – inclusion of trust and privacy concern as covariates

Trust	22.9	< 0.001	18.9	< 0.001	36.5	< 0.001
Privacy concern	7.8	< 0.001	7.1	< 0.01	12.0	< 0.001
Reputation (R)	2.2	> 0.10	0.6	> 0.10	2.9	0.09
Communication quality (C)	7.4	< 0.001	9.3	< 0.001	9.0	< 0.001
Sensitivity (S)	0.8	> 0.10	0.3	> 0.10	1.0	> 0.10
R × C	0.6	> 0.10	0.1	> 0.10	1.1	> 0.10
R × S	4.3	0.01	6.1	0.01	1.0	> 0.10
C × S	0.7	> 0.10	1.3	> 0.10	0.2	> 0.10
R × C × S	2.3	0.06	1.6	> 0.10	2.3	> 0.10

Manipulations

		Cell means			
		Trust	Privacy concern	Relationship behavior	Repatronage intention
Reputation	Weak	3.98	4.66	2.45	4.29
	Strong	4.19	4.72	2.40	4.47
Communication quality	Low	3.07	5.42	1.88	3.66
	Neutral	4.22	4.50	2.46	4.50
Sensitivity	High	4.97	4.17	2.96	4.99
	Low	4.13	4.34	2.49	4.40
	High	4.04	5.04	2.36	4.36

Table III.
(continued) MANOVA results

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Submodel 1b – prevention-focused behaviors

Univariate ANOVA results for privacy concern

Source	Type III sum of squares	df	Mean square	F	Sig.
Reputation (R)	0.03	1	0.03	0.02	0.887
Communication quality (C)	131.41	2	65.70	49.103	0.000
Sensitivity (S)	65.12	1	65.12	48.669	0.000
R × C	7.44	2	3.72	2.779	0.063
R × S	0.86	1	0.86	0.643	0.423
C × S	1.54	2	0.77	0.575	0.563
R × C × S	1.82	2	0.91	0.681	0.507
Error	644.95	482	1.34		

Submodel 2b – MANOVA results for prevention-focused behaviors

Testing of direct effects

Dependent variables	Multivariate Results		Univariate results		Defensive behavior	
	F	Sig.	Deflective behavior	Sig.	F	Sig.
Reputation (R)	0.3	> 0.10	0.4	> 0.10	0.5	> 0.10
Communication quality (C)	57.6	< 0.001	86.9	< 0.001	99.6	< 0.001
Sensitivity (S)	6.0	< 0.01	11.9	< 0.001	3.5	0.06
R × C	0.7	> 0.10	0.4	> 0.10	1.0	> 0.10
R × S	1.3	> 0.10	2.7	> 0.10	0.7	> 0.10
C × S	1.1	> 0.10	1.1	> 0.10	0.3	> 0.10
R × C × S	0.7	> 0.10	0.7	> 0.10	0.6	> 0.10

Submodel 3b – inclusion of trust and privacy concern as covariates

Trust	7.9	< 0.001	7.3	< 0.01	14.3	< 0.001
Privacy concern	25.6	< 0.001	43.5	< 0.001	27.3	< 0.001
Reputation (R)	0.1	> 0.10	0.1	> 0.10	0.0	> 0.10
Communication quality (C)	18.6	< 0.001	23.3	< 0.001	28.4	< 0.001
Sensitivity (S)	0.9	> 0.10	1.4	> 0.10	0.0	> 0.10
R × C	0.5	> 0.10	0.0	> 0.10	0.8	> 0.10
R × S	0.8	> 0.10	1.6	> 0.10	0.1	> 0.10
C × S	1.1	> 0.10	1.4	> 0.10	0.1	> 0.10
R × C × S	0.4	> 0.10	0.4	> 0.10	0.2	> 0.10

Manipulations

		Cell means			
		Privacy concern	Trust	Deflective behavior	Defensive behavior
Reputation	Weak	4.66	3.98	3.97	4.18
	Strong	4.72	4.19	3.96	4.20
Communication quality	Low	5.42	3.07	4.87	5.19
	Neutral	4.50	4.22	3.78	4.15
	High	4.17	4.97	3.25	3.21
Sensitivity	Low	4.34	4.13	3.81	4.08
	High	5.04	4.04	4.13	4.30

Table III.

Next, submodel 2b used sensitivity and communications quality as our independent factors, and instead of privacy concern, we used the prevention-focused behaviors (deflective behavior and defensive behavior) as dependent variables. Again, this was conducted as the next step to test for mediation by showing significant main effects

between the independent variables and dependent variables. As expected, the sensitivity and communications quality main effects were significant, establishing that those independent variables have a significant effect on the dependent variables. As done in submodel 3a, we next show that the introduction of a mediating variable in the model obtains significance, while causing the independent variables to no longer demonstrate significance, signifying a significant mediation effect. Thus, in submodel 3b, we introduced trust and privacy concern as covariates into the MANOVA of submodel 2b. As expected, the effects of privacy concern on deflective and defensive behaviors were significant (as predicted by *H4*), and the effect of sensitivity became insignificant, indicating full mediation of the relationship between data sensitivity and prevention-focused behaviors by privacy concern. The effect of communication quality on the dependent variables remained significant, however, indicating that privacy concern did not fully mediate that effect. *H4*, which states that privacy concern increases prevention-focused behaviors in the form of (a) deflective behavior, and (b) defensive behavior, was supported. *H6* was only partially supported: our results show that privacy concern fully mediates the effects of data sensitivity on prevention-focused behaviors, supporting *H6b*, however, privacy concern does not fully mediate the effects of communication quality on prevention-focused behaviors, failing to support *H6a*.

5. Discussion and conclusions

5.1 Summary of findings

This research examined the antecedents of promotion-focused and prevention-focused privacy behaviors consumers utilize to lower their online privacy risks, including mediators of these relationships. Specifically, we investigated how the marketing communication-related variables of reputation, communication quality and information sensitivity are mediated by trust and privacy concern to influence the privacy dyad. We found that the reputation of the organization and the quality of communications to the customer both increase customer trust, and ultimately increase the promotion-focused behaviors of relationship investment and repatronage intentions. The relationship between reputation and promotion-focused behaviors was fully explained by the trust variable, demonstrating that it serves as a mediator of the relationship. However, trust did not fully mediate the relationship between communication quality and promotion-focused behaviors, indicating that communication quality still maintained a direct effect that was not fully explained by trust.

Likewise, we found that sensitivity of information requested and quality of communications to the customer both increase customer privacy concern, and ultimately increase the prevention-focused behaviors (deflective and defensive behaviors). The relationship between sensitivity and prevention-focused behaviors was fully explained by the privacy concern variable, demonstrating that it serves as a mediator of the relationship. However, as with trust, privacy concern did not fully mediate the relationship between communication quality and prevention-focused behaviors, indicating that communication quality still maintained a direct effect that was not fully explained by the privacy concern mediator.

These findings are consistent with prior literature as previously described in this paper (see Pan *et al.*, 2013; Zhou, 2011, etc.). Some of these relationships have been neglected in recent literature, so we provide an updated test to their usefulness in predicting consumer behavior in an online privacy context.

Consistent with RFT, customers who are trusting are willing to make contributions toward maintaining the relationship, therefore engaging in promotion-focused behaviors. Similarly, customers who have privacy concerns undertake countermeasures to retaliate and protect their privacy, hence engaging in prevention-focused behaviors. Thus our findings are consistent with the tenets of RFT. This makes sense given prior literature looking at the effects of trust on relationship-enhancing behaviors (such as Ku, 2012) as well as the inhibiting effects of privacy concern.

Essentially, trust fully explains the mechanism by which reputation affects promotion-focused behaviors. However, communication quality still significantly affects those behaviors even with trust in the model. These findings indicate that other processes may be at work in determining how communication quality influences the privacy dyad beyond those defined by trust and privacy concern.

Our research produces a number of contributions. This research is an extension of, but conceptually distinctive, from prior work applying RFT to a consumer privacy context. We corroborated the findings of Wirtz and Lwin (2009) that showed the effects of trust and privacy concern on the privacy dyad, but then we expanded the model to include practical antecedents that can be influenced by marketers at the organization level. Following this, the variables of trust and privacy concern take on a much more conceptually interesting role as mediating variables that explain the mechanism by which firm-affected variables can ultimately influence customer behavior.

First, we find that the variables of trust and privacy concern have both different antecedents and different consequences in their role as mediating variables in the privacy dyad. We examined antecedents that are business communication-level variables that practitioners can focus on to influence particular behaviors. Perhaps the most interesting of these antecedents is communication quality, which our results show to have a positive effect on both trust and privacy concern. Communication quality also contributes to a conceptually interesting finding when looking at how trust and privacy concern mediate the studied relationships – as found in our mediation analyses, trust does not fully mediate the effect of communication quality on promotion-focused behaviors, and privacy concern does not fully mediate the effect of communication quality on prevention-focused behaviors. In essence, communication quality is influencing the dependent variables (the privacy dyad) in ways not fully explained by trust and privacy concern as its mechanism. It is plausible that there is another variable that explains the full mechanism by which communication quality influences consumer privacy behaviors, which provides an interesting avenue for future research.

5.2 Managerial implications

RFT tells us that consumers will be motivated to “approach” privacy-relevant activities (e.g., providing information or allowing tracking of behavior) that enhance their service experience (e.g., improved convenience and customization), and to “avoid” situations that might present a privacy risk. Clearly, online marketers will want to maximize customer trust while minimizing customer privacy concerns, as this will lead to favorable behavior outcomes, i.e., encouraging relationship investment and repatronage behaviors while discouraging deflective and defensive privacy behaviors. Prevention-focused behaviors, in particular, involve consumers actively avoiding an organization, which is the antithesis of customer commitment and loyalty. Our findings begin to address the question: what managerial actions will stimulate

those processes (enhanced trust and reduced privacy concern) that will in turn influence privacy-related approach and avoidance behaviors of customers?

While the established mediators of trust and privacy concern explain the mechanism by which customers will choose various privacy behaviors, the identified antecedents provide some guidance as to activities marketers can pursue to encourage relationship-building behaviors. For example, it was shown in this study that requesting information of high sensitivity leads the customer to preventive behaviors with the retailer by avoiding contact from the retailer and requesting for his/her name to be removed from the mailing list. However such information is needed as marketers can gain competitive advantage by collecting and using such transaction data effectively for relationship marketing and CRM implementation. Therefore, to reduce privacy concern for customers, retailers should then delay or avoid asking for highly sensitive information, unless such information is pertinent for the transaction to proceed. When the organization first asks the customer to disclose information, low sensitive demographic or lifestyle information can be obtained, so privacy concern is not heightened. Such information is enough to help the marketer find out the kind of content the customer is likely to be interested in for further communication. The resulting high communication quality increases perceived relationship quality, hence building trust. Because privacy concern has not been triggered by requesting highly sensitive information in this case, the customer does not prematurely end the relationship (by requesting to unsubscribe, etc.). When trust is engendered, relationship investment takes place on the side of the customer, leading to a continued, committed relationship. Additionally, marketer actions can invite potential customers to share information while also promoting the benefits of the tradeoff – customers often will sacrifice privacy for certain benefits they view as attractive (special offers, preferred sale notifications, immediate promotional benefits, etc.). This thinking is in line with the “privacy paradox” which purports that despite consumer complaints about privacy, they are often willing to provide personal data when asked, especially if they gain tangible benefits from the exchange (KPMG, 2010; Norberg *et al.*, 2007; Wirtz *et al.*, 2007). It is possible that the effects on trust of the sensitivity of the information requested can be dampened if adequate benefits are offered to the customer as compensation. Further, research suggests that transparent and overt collection of personal information from consumers later results in more effective personalization efforts using that information (Aguirre *et al.*, 2015).

5.3 Future research and conclusions

As with any study, the results must be evaluated in light of certain limitations. This study was conducted primarily with university students. While future research should examine these effects across a range of demographic groups, we believe that our sample provides a conservative estimate of the examined effects since younger people have been shown to have low expectations for privacy and would likely not react strongly to scenarios that would threaten their privacy. The fact that subjects in our study did in fact exhibit intentions to engage in particular privacy-enhancing behaviors should strengthen our findings.

Additionally, privacy concerns have been found to vary by consumers' gender, (Garbarino and Strahilevitz, 2004) as well as age and income (Graeff and Harmon, 2002; Hugel, 2011), where female consumers, older consumers and consumers with a lower income have greater privacy concerns. These concerns, however, were in the context of online safety and have not been investigated in the context of online shopping.

Our study has extended previous research on online trust, privacy concerns, information disclosure and online CRM to business communication contexts and linked it with RFT and the self-regulatory behaviors. As this study focused on an internet-savvy student sample, future research should examine the applicability of the findings to other online segments. Further research is also needed to examine additional potential mediators in the relationship between communication quality and both promotion- and prevention-focused behaviors. Trust and privacy concern did not fully mediate the effects of communication quality and those behavioral outcomes, thus future studies are needed to develop a better understanding of the mechanism by which communication quality effects outcomes. This is a potentially promising avenue for future research efforts, as the communication quality variable appears to contribute in interesting and not completely understood ways to the set of relationships that explain the behaviors of the privacy dyad.

Additionally, future research could examine how different marketing communication modes may enhance perceived communication quality. What are other methods of increasing consumer trust and reducing privacy concern? Social media, though less customized and targeted than direct marketing, nevertheless provides a line of communication from a brand that may be viewed by consumers as less filtered and more sincere than other forms of marketing communication. Twitter followers of a brand, for example, have chosen to receive brand communications directly to their feed, and of course have the option to respond to those messages as they wish. High quality social media interactions with customers may signal that the online marketer is genuine in its intentions to develop a relationship with the customer. Reciprocal action theory (Li and Dant, 1999) proposed that the customer perceives the actions of the organization to be a signal of commitment to the relationship, and hence would similarly reciprocate by showing his/her commitment in the relationship (via brand advocacy, positive word of mouth, loyalty, etc.). This is an area that is ripe for research.

Finally, future research can examine privacy concerns relating to the different levels of personal information disclosed. So far, research on privacy studied information disclosure in terms of personal informational data such as demographics, lifestyle information and personal identifiers. With the advance of technology, organizations can use other kinds of personal information such as biometric data in their service delivery (Wirtz and Heracleous, 2005). Previously, biometric data such as fingerprints and retinal scans have been used for security purposes (such as the iPhone 6 fingerprint security feature). But today, such data can be used by organizations to enhance customer service. An example of such an organization is Singapore Airlines, who has recently introduced a biometric smart card check-in system that allows passengers to check in, select seats and clear immigration in a much shorter time than usual. Biometric data of the passenger are stored in the smart-chip of the smart card and are used to facilitate the check-in process. Such biometric data cannot be easily fabricated, unlike in the case of personal information data and hence are more intimate and sensitive to the customer; because of the intimacy of this information, such processes may increase privacy concerns to the customer. It is extremely important that customers are reassured of the security of their data as well as properly educated as to the benefits of divulging such sensitive data. The use of privacy trustmarks by organizations has been shown to reduce consumer privacy concern (Stanaland *et al.*, 2011), and might be used in combination with personal information requests to moderate consumer reactions.

In conclusion, this study has contributed to the literature of business communication, CRM, RFT and trust and privacy in an online context. It drew on Higgin's (1997) RFT and applied it to a new conceptual framework of customer behaviors on online trust and privacy concerns, corroborating and extending the research begun in this area. From the results, a number of communicative factors more strongly drive promotion- or prevention-focused behaviors. The mediators of trust and privacy concern explain the mechanism by which those marketer actions ultimately influence customer approach and avoidance behaviors. Our research corroborates prior findings, and identifies communication-related antecedents of these mediating variables that can be influenced by online marketers, reinforcing the importance of marketing actions at the organization level to influence consumer trust and privacy concern. This research thus provides marketers with some direction for building relationships and maximizing customer willingness to provide information. This can be done by maximizing trust and minimizing privacy concerns through the communicative factors of the organization. In doing so, effective CRM can be carried out, ensuring a continual exchange of information between the customer and the organization, and leading to an enduring relationship that is beneficial to both parties. We hope the contributions of this study will inspire further research in this field.

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