Journal of Service Research
Volume 12 Number 2
November 2009 190-207
© 2009 The Author(s)
10.1177/1094670509335772
http://jsr.sagepub.com

Regulatory Focus Theory, Trust, and Privacy Concern

Jochen Wirtz
National University of Singapore
May O. Lwin
Nanyang Technological University

Relationship marketing typically requires organizations to continually collect customer information. Two distinct approaches coexist to encourage customers to disclose information: reducing privacy concern and building trust, which in the past have been examined in isolation. In the present study, regulatory focus theory is used to integrate both approaches and examine their distinct response behaviors concurrently. The findings are robust across two studies with different methods and contexts. As suggested in the proposed model, trust and privacy concern are the two central mediating variables with differentiated effects on promotion and prevention-focused behaviors. Specifically, trust mediates fairness perceptions on promotion-focused behaviors (i.e., relational behavior, relationship investment, and repatronage intentions), whereas privacy concern mediates fairness perceptions on prevention-focused behaviors (i.e., defensive, deflective, and disruptive behaviors). Implications for theory and practice are discussed.

Keywords: *regulatory focus theory; justice; trust; privacy concern; information disclosure; promotion- and prevention-focused behaviors*

Many successful marketers have embraced relationship marketing to create long-term, mutually beneficial customer relationships with the objective of achieving higher loyalty and resultant revenue growth. Detailed information about individual customers and their behavior is a crucial ingredient for effective relationship marketing. However, marketers implementing relationship strategies are seeing a growing reluctance of consumers to disclose information and allow tracking of their behaviors because of privacy concerns (e.g., Miyazaki 2008).

Technically, it is easier than ever to gather vast amounts of personal data. Individuals can be tracked across the globe as they leave electronic footprints, for example, when using credit cards, ATM networks, cell phones, loyalty program cards, and online services. Online technology in particular enables firms to consolidate consumer information, even without the customer's knowledge. Miyazaki (2008) paints a scenario where through the use of cookie files and nonconsensual identification, vast amounts of customer search data can be pooled with publically accessible information (e.g., from assorted social networking sites and blogs that contain demographic and socioeconomic data). There are even commercial services available that combine company-collected data with rich, third-party online and offline data sources. Experian, one of the globally leading providers in this market, states on its Web site: "We can help you to build a richer picture of your customers' behavior so you can predict and engineer how they behave in the future. Using internal and external data sources, our proven customer management tools allow you to tailor strategies to an individual. … Powered by up to 6,000 variables … uses lifestyle, demographic, transaction, permissible credit and consumer classification data," and "In total, Experian holds consumer marketing information on about 130 million households globally" (Experian, 2009).

In addition to the vast amount of customer information being collected, breaches of confidential consumer data have further heightened privacy concerns. For example, the Bank of America Corp. lost computer data tapes containing personal information of some 1.2 million clients, and TJX Co., the parent company of T.J. Maxx and other retailers, has been under investigation for a customer

Authors' Note: The authors gratefully acknowledge the research assistance of Jacqueline Chow, who was an MSc student at the National University of Singapore during the conduct of this study.

data breach as more than 45 million credit and debit card numbers were stolen from its IT systems.

The excessive collection of personal information and the threat of security breaches can potentially create a situation where consumers hesitate with every transaction involving personal information. While continual collection and updating of consumer information are necessary for relationship marketing, marketers need to balance consumer privacy needs in their quest for personal information (Fletcher 2003).

Information privacy issues become especially relevant in any customer-service firm relationship where deeper customer insight fosters efficiency and effectiveness of marketing efforts and, perhaps more important, enables more convenient and customized service delivery (Wirtz, Lwin, and Williams 2007). For example, a potential benefit of an organization providing customer information to its front line at each customer touch point is having all customer and transaction data at hand for better customization and faster service delivery. A disadvantage is that personal customer information is accessible to many frontline employees, and customer movements are constantly being recorded, both of which may raise personal information privacy concerns of customers. As such, understanding and managing consumer responses related to information privacy are important topics for service marketers.

Problem Background and Contribution

Research has largely focused on defensive consumer responses to information disclosure, typically using privacy concern to explain customer response behaviors (Lanier and Saini 2008). However, there are two distinct approaches to the management of consumer information exchange: reducing privacy concern and building trust (Gefen 2000; Milne and Boza 1999). Furthermore, the literature in a number of fields holds that the response behaviors to concern and trust differ in nature, with concern responses being defensive or preventive in nature (e.g., Dowling and Staelin 1994) and trust responses tending to be promotive (e.g., Hosmer 1995). Likewise, we suggest in this study that privacy concern and trust responses differ in nature, with privacy concern responses being largely defensive (Sheehan and Hoy 2000) and trust responses promotive (Milne and Boza 1999).

Distinguishing preventive and promotive response behaviors and their distinct drivers has important implications. Treating information disclosure behavior largely defensively limits our theoretical understanding of consumer responses as well as managerial approaches to privacy issues. Milne and Boza (1999) presented empirical evidence in their national consumer survey across 17 industries that reducing privacy concern and improving trust are two distinct approaches to managing consumer information disclosure. For example, a marketing manager would need to concentrate on privacy assurances, statements, and so on to alleviate privacy concerns, when the overall strategy should also encompass trust-enhancing strategies such as communication of fair privacy policies prior to any data collection, whether covert and overt (Petty and Andrews 2008). In fact, Milne and Boza (1999) even suggest that improving trust is a more effective strategy than reducing privacy concern.

The privacy literature has largely focused on privacy concern and to a lesser extent on trust (for notable exceptions, see Gefen 2000; Milne and Boza 1999) but not on the joint effects of both variables. To examine how trust and privacy concern relate to positive as well as negative relationship actions in tandem in an information disclosure context, we use regulatory focus theory (RFT; Higgins 1997) to develop and test an integrative model. In the proposed model, privacy concern is the mediating variable between antecedents and preventive behaviors, while trust is the mediating entity between its antecedents and relationship promotion behaviors. This approach is novel as neither RFT nor the combined mediating variables of privacy concern and trust with their respective distinctive response behaviors have been applied to study privacy-related behaviors before.

The focus on privacy concerns in the literature perhaps originated from the initial focus on ecommerce adoption, where most studies explicitly or implicitly examined first-time or one-time information disclosure situations. Typical contexts include providing personal information for a transaction with a new online service provider, such as opening a bank account (e.g., Lwin, Wirtz, and Williams 2007) or registering with an online service (e.g., Miyazaki and Krishnamurthy 2002). In a first-time information disclosure situation, immediate perceptions matter most in reducing privacy concerns (e.g., brand familiarity, size of firm, third-party seals, and privacy policy statements, cf. Culnan and Milne 2001; Miyazaki and Krishnamurthy 2002). In repeated transactions with a Web site, however, firm behavior can be observed and experienced over time, and trust can be built (Gefen and Straub 2004). Furthermore, ongoing customer-firm relationships would be the most typical situations consumers face with their online broker, online book shop, or music download service. Therefore, the present study examines information disclosure in repeated customer-firm interactions where the importance of trust is likely to be enhanced.

In sum, the contribution of this study is three-fold. First, we integrate two distinct approaches to explain customer information privacy response behaviors: reducing privacy concern and building trust, which in the past have largely been examined in isolation. Second, we apply RFT to the information privacy context and propose that trust and privacy concern relate to distinct information privacy response behaviors. Third, most privacy research has explored information disclosure in a first-time or one-time transaction context. This study examines the more common situation of information disclosure in repeated customer-firm interactions where the importance trust is likely to be enhanced. We discuss next how RFT can integrate both the privacy concern and trust perspectives and their distinctive response behaviors.

Model Development

Regulatory Focus Theory

To examine the underlying psychological processes of data exchange along with their respective consumer response behaviors, we apply regulatory focus theory (Higgins 1997). RFT concentrates on self-regulation toward desired end-states and proposes that people are guided by two distinct motivational systems: promotion focus and prevention focus (Higgins 1997). Promotion focus is founded on nurture-related needs (e.g., growth and advancement) and reflects an approach orientation and positive outcomes. In contrast, prevention focus is anchored in protection, safety, and security needs, and indicates an avoidance orientation (i.e., an aversion to risk and loss). The presence and absence of negative outcomes are salient for people who are prevention-focused. That is, goals and standards that drive behaviors are associated with the absence of negative outcomes.

Self-regulatory theorists contend that regulatory focus can be induced by situational and relational factors. Higgins (1997) proposed that people learn from interactions with others to regulate themselves in relation to promotion-focused ideals or in relation to prevention-focused thoughts. It is thus conceivable that an individual's interaction with an organization will induce mainly promotion-focused (approach) or prevention-focused (avoidance) inclinations to achieve desired end-states.

The two self-regulatory motivational systems have been shown to differentially predict individual preferences for behaviors within relationships. Research in psychology and organizational behavior has shown that trust is predominantly promotion focused (e.g., Hosmer 1995). Likewise, in marketing, trust is seen as crucial in relationships to stimulate cooperation (Morgan and Hunt 1994), especially so in online contexts (Luo 2002). In contrast, concern has been shown to be mostly prevention focused. For example, in purchase contexts, the intended use of risk-handling activity increases with higher levels of concern (e.g., Dowling and Staelin 1994). For our context, we likewise propose that trust is fundamentally promotion focused and involves response behaviors such as relational behavior, relationship investment, and repatronage intentions. In contrast, privacy concern is proposed to be prevention focused, with responses such as deflective, defensive, and disruptive behaviors.

Although this concept of offensive versus defensive behavior has been studied in the marketing field before, this is the first time such a bipolar approach has been applied to the information privacy context with trust and privacy concern as the key mediating variables. The two mediating variables are discussed next.

Trust and Privacy Concern

Trust has been defined as the confidence in an exchange partner's reliability and integrity (Morgan and Hunt 1994). In the context of information disclosure, trust implies that customers have faith in the organization's reliability and integrity and feel secure about sharing their personal information with the organization (Gefen and Staub 2004; Milne and Boza 1999). Trust aims to reassure the parties involved that they will not be exploited in the process or after the transaction, and this will motivate consumers to transact and provide personal information to the firm, allowing companies to build deeper relationships with their consumers (Bhattacherjee 2002).

Privacy concern refers to the customers' apprehension and uneasiness over the acquisition and use of their personal data (Westin 2003). Privacy concern has been shown to result in a wide range of privacy-protective and defensive response behaviors, including refusal to provide personal data or misrepresentation of these data (Son and Kim 2008) and use of privacy-enhancing technologies such as anonymizers and cookie busters (Lwin, Wirtz and Williams 2007). As the response behaviors to privacy concern are largely anchored in concerns regarding vulnerability and give rise to vigilance in loss avoidance, they can therefore be seen as being prevention focused (cf. Higgins 1997).

Trust and privacy concern are often naturally negatively correlated, but they are not the same construct (e.g., Milne and Boza 1999). Rather, they can diverge and they have distinct response behaviors. For example, Milne

and Boza (1999) showed that consumers can perceive little trust and little privacy concern at the same time (e.g., when insensitive data are involved, such as general interest data collected by a book retailer) or have high trust but still perceive high privacy concern when highly sensitive data are involved (e.g., financial data held by banks).

Response Behaviors to Trust and Privacy Concern

As trust is promotion oriented and privacy concern is prevention oriented, we propose that the consumer response behaviors for trust and privacy concern differ in nature. To be able to explore and test for the differentiated impact of trust and privacy concern on promotive and preventive behaviors, respectively, we focus in this study on common direct and immediate individual consumer responses in customer-firm relationships. These response categories are discussed next for both promotion- and prevention-focused behaviors, respectively. There are, of course, other potential response behaviors to trust and privacy concern, ranging from "withholding," which is a strategy to refrain from any action to more covert behavior such as fabrication, to group or public responses such as lobbying or public boycotts (cf. Lwin, Wirtz, and Williams 2007). For model parsimony, we focus the current study on the important common positive and negative actions by individuals responding to post–initial transactional environments.

Promotion-Focused Behaviors

Promotion orientation is concerned with positive outcomes and advancement. We therefore examined the range of positive consumer responses in the literature and identified three key promotion-focused behaviors that are relevant in a customer-firm relationship context. They are, in increasing level of consumer involvement, relational behavior, relationship investment, and repatronage intentions.

Relational behavior. Relationship behavior refers to the willingness of an individual to undertake actions that contribute to maintaining a relationship, which in our context includes the provision and updating of personal information. Trust has been found to influence the level of commitment to a relationship, creating desire within the parties to treasure and maintain the relationship (Moorman, Zaltman, and Deshpandé 1992). Within a relationship, consumers who trust the organization will internalize the benefits of the relationship and are more willing to accede to requests to update or provide further personal information (Gefen 2000; Phelps, D'Souza, and Nowak 2001). In our context, relational behavior relates to simple, fast, and low-effort actions regarding the provision and updating of customer information (cf. Phelps, Nowak, and Ferrell 2000). We discuss next relationship investment, which refers to a higher degree of effort and involvement from the customer compared to relational behavior.

Relationship investment. Relationship investment is the willingness of the individual to spend significant amounts of personal time and effort to contribute to the maintenance of an ongoing relationship. For example, a relationship investment might include regular unprompted visits to the Web site to proactively make postings, provide feedback, and update personal preferences in the customer's profile. Such investments of time, effort, and other irrecoverable resources in a relationship create psychological bonds that encourage customers to stay in a relationship (Smith and Barclay 1997).

Repatronage intentions. Repatronage intentions refer to the willingness of the individual to repatronize a services organization. In a relationship built on trust, relationship commitment is engendered and becomes a primary predictor of future purchase intentions (Morgan and Hunt 1994). Customers continue to visit a particular business because of the perception of trust—that is, they believe the company has their best interest at heart when providing a service (Caudill and Murphy 2000).

Prevention-Focused Behaviors

Prevention-focused behaviors are concerned with safety and with the absence and presence of negative outcomes. In the context of our study, prevention-focused behavior relates to individuals using strategies to protect their privacy (Bies 1993). The literature has identified a number of key prevention-focused behaviors, which can be categorized as deflective, defensive, and disruptive (Lwin, Wirtz, and Williams 2007).

Deflective behavior. Deflective behavior refers to shielding actions taken by an individual to avoid the marketer's communications. For instance, individuals can delete unopened electronic mail and can opt out of receiving information at the start of a relationship (e.g., at registration with a Web site) (Sheehan and Hoy 1999). Customers can use privacy-enhancing tools to deflect the marketer's communications or fabricate their personal information (Lwin and Williams 2003). They can also use digital tools like anonymizers to disguise IP addresses, anti-spam filters, and cookie busters (Lwin, Wirtz, and Williams 2007). Deflective behavior typically refers to

the recipient's personal responses to information collection efforts and does not involve proactive customer interactions with the firm. This is in contrast to defensive behavior, discussed next.

Defensive behavior. Defensive behavior refers to customers' proactive (and sometimes prolonged) attempts to force an organization to discontinue collection of customer information and communications. Customers exhibit such behavior when they proactively contact and ask the marketer to stop trying to communicate with them and request that their names be removed from mailing lists (Sheehan and Hoy 1999). Dissatisfied consumers may also contact both their own and the senders' Internet service providers to prevent future communication from that organization (Son and Kim 2008).

Disruptive behavior. Disruptive behavior refers to the individual expressing dissatisfaction with an organization's privacy practices through some form of retaliation. This can include complaints to third parties, such as consumer watchdogs, consumer panels, and newspaper columns, and "flaming" (which refers to highly negative electronic retaliation) the company directly (cf. Sheehan and Hoy 1999); spreading negative word-of-mouth through Internet chat rooms, blogs, newsgroups, and online forums (cf. Culnan and Armstrong 1999); and sending negative comments through instant messaging (e.g., via MSN messenger, SMS; cf. Son and Kim 2008).

Contextual Antecedents Emerging From the Justice Framework

To be able to realize the full potential of relationship marketing, marketers need to manage trust and privacy concern in the information disclosure process. We suggest that whether customers are willing to partake in the continual exchange of information depends on their past experiences with regards to the perceived fairness of past information exchanges (cf. Culnan and Bies 2003). A number of privacy researchers have suggested that the concept of justice in interactions could hold the key to better understand consumer response behaviors (e.g., Culnan and Armstrong 1999).

Social justice theory posits that fair perceived interactions create closer exchange relationships (cf. Cropanzano et al. 2001). That is, with each interaction, individuals are attuned to the perceived fairness experienced and develop expectations for future transactions. Treating consumer personal information fairly builds trust in the customer-firm relationship, and at the same time fair information practices reduce consumer privacy concerns (Culnan and Armstrong 1999). We therefore suggest that social justice is an important underlying influencer of both trust and privacy concern. Justice is often operationalized through the three dimensions of distributive, procedural, and interactional justice (e.g., Blodgett, Hill, and Tax 1997). While a small number of studies have examined the relationship between privacy concern and one or two of the justice dimensions (e.g., Ashworth and Free 2006) or have conceptually argued the importance of all three dimensions (e.g., Culnan and Bies 2003), no research has empirically studied the effects of all three justice dimensions on privacy concern and the link between justice and trust in a privacy context.

The present study takes an ongoing relationship perspective beyond the preliminary transaction. Many customer-firm service relationships are contractual in nature (e.g., with an electricity provider or a retail bank), occur over extended periods of time with repeated transactions (e.g., online retailing such as i-Tunes or Amazon.com), and have been transformed from transactional to more formalized relationships (e.g., through membership or loyalty programs).

As we discuss in the hypothesis development section, fairness perceptions are expected to influence trust and privacy concern strongly in an ongoing relationship where, in contrast to the one-time transaction context, customers can observe the firm's behavior over time. Our approach is akin to what Milne, Bahl, and Rohm (2008) refer to as a multistage exchange framework, where they separate initial from subsequent transactions. Over time, we would expect customers' fairness perceptions to become finely developed, and a wider set of fairness perceptions is expected to come to bear. Therefore, a recurring or repeated transaction perspective captures a relationship perspective better and is more likely to require the explicit consideration of all three justice dimensions as discussed next.

Distributive justice. Distributive justice refers to the perceived equity of resources received versus resources provided (Greenberg 1987). A party experiences distributive justice if she or he perceives the benefits received to be proportional to the investments made (Cropanzano et al. 2001). In the context of information disclosure, the personal information an individual provides should be commensurate with what is received in return, such as enhanced convenience, customized service, and loyalty rewards. Hence, we define distributive justice as whether the consumer's own input (e.g., providing personal information) is seen as commensurate with the outcomes received (e.g., a customized hotel experience or a personalized Web site interface).

Procedural justice. Procedural justice refers to the perceived fairness of how procedures are enacted in a transaction or relationship (Greenberg 1987). In a privacy context, procedural justice has been operationalized as fair information-handling practices (Culnan and Armstrong 1999). A central element of procedural justice is the control over information disclosure, or what has been referred to as "voice" in organizational justice research (Greenberg and Folger 1983), allowing consumers to make informed choices. This includes, for example, informing consumers on how their personal information will be used during the information disclosure process and providing a clear opportunity for name removal. Adequate information disclosure in the privacy context typically includes a good company privacy policy. Although few online consumers fully read privacy policies, their mere presence on Web sites is crucial, can be reassuring, and offers customers the choice to inform themselves (Miyazaki 2008).

Interactional justice. Interactional justice broadly refers to the fairness of the interpersonal treatment that people receive during the enactment of procedures. Research suggests that people react strongly to the quality of interpersonal treatment, where the nature of treatment they receive from others acts as a determinant of fairness (Greenberg 1987). The interactional factor helps to explain why some customers feel unfairly treated even though they would characterize the procedure and outcome as fair. For example, fair treatment is characterized by the consumer's perception of a Web site honoring statements made in its privacy policy such as not to contact the customer with promotional offers or not to pass on customer information to third parties.

Hypotheses

Trust and Promotion-Focused Behaviors

The marketing literature views trust as a factor that is created by past experiences with an organization. We apply RFT and suggest that positive consumer responses are primarily related to trust. Trust encourages long-term orientation and creates commitment (Morgan and Hunt 1994). We propose that when consumers have had positive and fair experiences with an organization, the level of trust increases and affects the overall relationship quality between a marketer and its customers.

Over time, as consumers interact with organizations, the level of trust and the nature of the antecedents will shift either upwards or downwards (Milne and Boza 1999). Hence, based on the fairness of past progression of information exchange experiences, trust becomes the primary predictor of promotion-focused behaviors (cf. Gefen 2000). Consumers who trust a firm will seriously consider the organization's stated benefits and be willing to attend to an organization's information requests, such as providing and updating personal information (Moorman, Zaltman, and Deshpandé 1992). Therefore, we advance that when consumers experience justice in their interactions with a service firm, they are likely to trust that firm, which subsequently leads to promotion-focused behaviors. In sum, we propose

> Hypothesis 1: Trust mediates the relationship between the three justice dimensions (i.e., distributive, procedural, and interactional justice) and promotion-focused behaviors, including relational behavior, relationship investment, and repatronage intentions.

Privacy Concern and Prevention-Focused Behaviors

Unfair treatment of an individual's personal information can act as an antecedent to privacy concerns (Culnan and Armstrong 1999). Literature illustrates that organizations can address privacy concerns by observing fairness (e.g., Eddy, Stone, and Stone-Romero 1999), whereby service providers who establish fair information practices can greatly reduce consumer privacy concerns. Just as a lack of procedural justice can heighten privacy concerns (Alge 2001), so can the perceived unfairness with which such systems are applied (Culnan and Bies 2003). If an organization fails to uphold its promises, consumers perceive their privacy to be violated, which in turn arouses privacy concerns (Bies 1993). Hence, a lack of perceived justice negatively influences consumer privacy concerns.

Regulatory focus theory suggests that consumers respond with predominantly negative responses to a protection orientation, which we here apply to prevention-oriented privacy concern response behaviors. Preventive behaviors include defensive behaviors such as request for name removal from mailing lists (Sheehan and Hoy 2000) and deflective and even disruptive behaviors (Lwin, Wirtz, and Williams 2007). With increasing privacy concerns, the frequency and intensity with which consumers engage in defensive behaviors rise (Culnan and Milne 2001; Lwin and Williams 2003). Hence, when consumers detect injustice in an interaction, they are likely to have heightened privacy concerns, which subsequently lead to prevention-focused behaviors in dealing with an organization. We therefore advance

Hypothesis 2: Privacy concern mediates the relationship between the three justice dimensions (i.e., distributive, procedural, and interactional justice) and prevention-focused behaviors, including defensive, deflective, and disruptive behaviors.

We next describe two empirical studies that test our model with trust and privacy concern as the mediating variables between the three justice dimensions and promotion- and prevention-focused behaviors.

Study 1—Experiment Set in an Online Context

Method

We used two very different methods to test our research hypotheses. To first establish internal validity, in Study 1 we used a true experimental design in which the three justice dimensions were manipulated using the scenario method. Study 2 was conducted to enhance the external validity of our findings. Specifically, a survey design was used in which a random half of respondents were asked to recall a fair or an unfair information disclosure situation. Both studies were set in an online context, as privacy issues are high on people's mind in online environments (e.g., Miyazaki and Krishnamurthy 2002). Furthermore, online transactions allow for a tangible and credible manipulation of fairness as they can offer potentially enormous customer benefits including customization, personalization, and fast and convenient transactions, and customers can experience how their personal data are being collected and subsequently used. We present the method and findings for Study 1 in this section and then proceed to Study 2 in the following section.

Experimental design and procedure. Distributive, procedural and interactional justice were manipulated in a $2 \times 2 \times 2$ between-subject factorial design. A scenario method was used which asked respondents to imagine themselves buying a music CD from an online retailer. The scenario shows two phases. In the first step, the online Web site asked subjects to disclose information, and procedural justice was manipulated in the process. In the second phase, a future interaction with that Web site was simulated, and in the process, distributive and interactive justice were manipulated.

Procedural justice was manipulated through scenarios in which we varied the information provided at the point of collection of personal customer data (i.e., the first interaction with the Web site) and whether customer consent was obtained for usage of those data. The scenario for the high procedural justice condition read: "You note that the Web site gives notice as to why your personal information is collected and explains how your information will be kept secure. To purchase the CDs, you provide your particulars. At the end of the process, the Web site seeks your consent to the manner in which your personal information will be used, and it provides the opportunity to opt-out of the Web site's future marketing activities." The low procedural condition read: "You note that the Web site does not give any notice as to why your personal information is collected and does not explain how your information will be kept secure. To purchase the CDs, you provide your particulars. At the end of the process, the Web site does not seek your consent to the manner in which your personal information will be used and does not provide an opportunity to opt out of the firm's future marketing activities." Subjects were asked to imagine that they proceeded to purchase the CDs and were then exposed to the next set of scenarios. This manipulation is consistent with the privacy literature that has shown that the mere presence of privacy statements, even though they are often not or not fully read, provides customers with an important indicator of a Web site's privacy practices (Petty and Andrews 2008).

Distributive justice was operationalized as personalization of service delivery in the second interaction with the Web site. This operationalization is based on the findings that consumers are willing to make a nonmonetary exchange for intangible benefits such as higher quality service and personalized offers when disclosing personal information to an organization (Lwin and Williams 2003). In our scenarios, either the customer at the second visit to the Web site in the scenario enjoyed a personalized Web interface (high distributive justice) after providing personal information, or no personalization of Web page (low distributive justice) was noticeable. The manipulation for high distributive justice read: "On your next visit, the Web page is personalized to your music preferences and contains promotional information (e.g., weekly specials and bargains), updates, and reviews of new CDs you are interested in." The low distributional justice scenario was "On your next visit, you notice the Web page is the same as before."

Interactive justice was operationalized through whether the firm sold or rented customer information to other companies. The high interactive justice manipulation read: "You think that the Web site has honored your privacy and did not rent or sell your information to other companies as you did not receive more junk mail from companies you had not interacted with previously." The

low manipulation was "You think that the Web site has violated your privacy and rented or sold your information to other companies as you received more junk mail from companies you had not interacted with previously."

Respondents. A total of 300 undergraduates participated in Study 1. Respondents obtained course credits for their participation. Of the collected sample, 29 subjects were eliminated due to incomplete data. The final sample consisted of 271 respondents, of which 60% were male, and 96% of the respondents rated themselves at least as "good" in terms of their Internet competency.

Measures. Table 1 provides an overview of all measures used which were adapted from previous research. All scales showed good reliability. Confirmatory factor analysis (CFA) was used to assess the measurement model. The overall chi-square was significant with $\chi^2(224) = 314.0$, $p < .05$, which is not unexpected given the large sample size ($N = 271$). All other indices indicated a good fit (GFI = 0.91, AGFI = 0.88, NFI = 0.93, CFI = 0.98, TLI = 0.98, and RMSEA = 0.04), suggesting that the measurement scales can be used for hypothesis testing.

Discriminant validity was tested between all construct using chi-square difference tests (Jöreskog and Sörbom 1993). Multiple constrained and unconstrained models were created with two constructs at a time. First, the correlation between any two constructs was fixed at 1.00 assuming that the two constructs (Ø) were identical (i.e., have no discriminant validity). Next, the correlation between the two constructs was estimated freely. Third, the chi-square of the constrained model was compared to that of the freely estimated model. Since the difference in degrees of freedom between the two models is 1, a difference in chi-square greater than 3.84 shows that the two models are statistically different at $p < .05$ and therefore suggests discriminant validity. The high chi-square values observed suggest good discriminant validity between all our constructs (the smallest chi-square was 79.9 between trust and relationship investment).

Results

Manipulation checks. Three-way analyses of variance (ANOVAs) showed the expected main effects of the manipulated variables on their corresponding manipulation checks for distributive justice ($M_{low} = 2.59$ vs. $M_{high} = 4.96$) $F(1, 264) = 296.6$, $p < .01$; procedural justice ($M_{low} = 2.50$ vs. $M_{high} = 5.16$), $F(1, 264) = 401.2$, $p < .01$; and for interactive justice ($M_{low} = 2.78$ vs. $M_{high} = 4.90$), $F(1, 264) = 209.7$, $p < .01$. No other main or interaction effect reached significance. These findings suggest that the manipulations were successful and clean.

Hypotheses testing. Before testing for mediation, we first specified our theoretical model (MT). All hypothesized links were included, and we allowed a negative correlation between trust and privacy concern, because past research has shown a natural negative correlation between these two constructs (Milne and Boza 1999). The overall chi-square of the theoretical model was significant, $\chi^2(296) = 431.0$, $p < .01$, which was expected given the large sample size. All other fit indices were above generally recommended values and suggest that the data fit our theoretical model reasonably well (GFI = 0.90, AGFI = 0.87, NFI = 0.92, CFI = 0.97, TLI = 0.97, and RMSEA = 0.04).

All path estimates are shown in Figure 1 and Table 2. With the exception of the path from procedural justice to trust ($b_{pj\text{-}t} = 0.06$, $p > .05$), all path estimates were significant and in the expected direction. Specifically, we found significant positive paths from distributive and interactional justice to trust ($b_{dj\text{-}t} = 0.42$, $b_{ij\text{-}t} = 0.56$, all at $p < .01$). All three justice factors had negative paths to privacy concern ($b_{dj\text{-}pc} = -0.33$, $b_{pj\text{-}pc} = -0.30$, $b_{ij\text{-}pc} = -0.45$, all at $p < .01$). Trust had positive paths to the three promotion-focused behaviors of relationship behavior, relationship investment, and repatronage intentions ($b_{t\text{-}re} = 0.60$; $b_{t\text{-}rb} = 0.47$; $b_{t\text{-}ri} = 0.76$, all at $p < .01$), and privacy concern had positive paths to the prevention-focused behaviors of defensive, deflective and disruptive behaviors ($b_{pc\text{-}de} = 0.28$; $b_{pc\text{-}df} = 0.44$; $b_{pc\text{-}dr} = 0.15$, all at $p < .01$).

Test for trust and privacy concern mediation. The MT showed that trust and privacy concern mediated justice factors to promotion- and prevention-focused behaviors, respectively. In addition, two further steps were performed to test for mediation. First, a direct effects model (MD) was specified to establish that the three fairness dimensions indeed had direct effects on promotion and defensive behaviors, which is a necessary but not sufficient condition for mediation. The fit indices of the direct effects model indicate an acceptable model fit (AGFI = 0.86, NFI = 0.92, CFI = 0.97, TLI = 0.98, and RMSEA = 0.05), and the direct path coefficients were all significant at $p < .05$ (except the link from procedural justice) to the three promotion-focused behaviors, satisfying this condition for mediation. Note that the link from procedural justice to trust did not reach significance in our theoretical model, and we therefore also did not expect the links from procedural justice to the three promotion-focused behaviors to be significant as there

Table 1
Construct Measures for Studies 1 and 2

Construct	Scale Item	Item Code
Manipulation checks/ independent variables		
Distributive justice	(1) I was fairly rewarded for providing information to the Web site.	DJ1
	(2) I feel that the outcome I received for providing information to the Web site was fair	DJ2
	(3) The outcome I received for providing information to the Web site was more than fair.	DJ3
	Adapted from Maxham and Netemeyer (2003); Tax, Brown, and Chandrashekaran (1998)	
Procedural justice	(1) With respect to the Web site's policies and procedures, the Web site handled my information in a fair manner.	PJ1
	(2) I was given the opportunity to express my opinions concerning how the Web site handled my information.	PJ2
	(3) The Web site provided information explaining the information-handling procedures thoroughly.	PJ3
	Adapted from Colquitt (2001); Maxham and Netemeyer (2003); Tax, Brown, and Chandrashekaran (1998)	
Interactional justice	(1) The Web site honored the commitment of protecting my privacy.	IJ1
	(2) I can count on the Web site to keep their promises of protecting my privacy.	IJ2
	(3) Overall, I feel the Web site has treated me fairly in protecting my privacy.	IJ3
	Adapted from Clemmer and Schneider (1996)	
Mediating variables		
Trust	(1) The Web site can be counted on to do what is right.	T1
	(2) I believe the Web site has high integrity.	T2
	(3) I trust the Web site to keep my best interest in mind.	T3
	Adapted from Morgan and Hunt (1994)	
Privacy concern	(1) When this Web site asks me for personal information in the future, I would think twice before providing it.	PC1
	(2) It bothers me when this Web site asks me for personal information.	PC2
	(3) I would be concerned about giving information to this Web site.	PC3
	Adapted from Smith, Milberg, and Burke (1996); Culnan and Milne (2001)	
Promotion-focused responses		
Relational behavior	(1) I will continue to update my personal information on this Web site's database.	RI1
	(2) I will inform this Web site of changes in my personal information.	RI2
	(3) I am willing to volunteer additional information to this Web site.	RI3
	Adapted from Phelps, Nowak, and Ferrell (2000); Phelps, D'Souza, and Nowak (2001)	
Relationship investment	(1) I will devote time and energy to make my relationship with the Web site work.	RE1
	(2) I will make the effort to show my interest in my relationship with the Web site.	RE2
	(3) I will provide the Web site information I may not share with other organizations.	RE2
	Adapted from Smith and Barclay (1997)	
ReTatronage intentions	(1) I would visit this Web site again.	RB1
	(2) What is the likelihood that you would visit this Web site in future?	RB2
	(3) In future, I would return to this Web site.	RB3
	Adapted from Blodgett, Hill and Tax (1997)	
Prevention-focused responses		
Deflective behavior	(1) I elect not to receive mail and phone solicitations from the Web site.	DF1
	(2) I will set my server level e-mail filter to discard e-mails from this Web site.	DF2
	(3) I will disguise my identity to prevent this Web site from finding me in future.	DF3
	Adapted from Sheehan and Hoy (1999), Lwin and Williams (2003)	
Defensive behavior	(1) I will ask the Web site to remove my name and address from their mailing list.	DE1
	(2) I will ask the Web site not to share my name or other personal information with other companies.	DE2
	(3) I will take action to have my name removed from this Web site's mailing list.	DE3
	Adapted from Culnan and Milne (2001), Sheehan and Hoy (1999)	
Disruptive behavior	(1) I will say negative things about this Web site in Internet chat rooms and/or online bulletins.	DIS1
	(2) I will flood this Web site's customer support account with negative messages.	DIS2
	(3) I will send highly negative messages to this Web site.	DIS3
	Adapted from: Sheehan and Hoy (1999)	

Table 2
Loadings for the Theoretical Model

		Study 1			Study 2		
Latent Variable	Item Code	Standardized Loading	Construct Reliability	Extracted Variance	Standardized Loading	Construct Reliability	Extracted
Variance							
Distributive justice	DJ1	.86			.79		
	DJ2	.88	.79	.57	.81	.85	.66
	DJ3	.78			.83		
Procedural justice	PJ1	.85			.59		
	PJ2	.87	.92	.80	.56	.73	.47
	PJ3	.84			.86		
Interactional justice	IJ1	.74			.86		
	IJ2	.73	.83	.55	.92	.92	.79
	IJ3	.67			.89		
Trust	T1	.64			.86		
	T2	.83	.87	.70	.85	.88	.71
	T3	.65			.82		
Privacy concern	PC1	.75			74		
	PC2	.92	.93	.81	.94	.89	.74
	PC3	.77			.88		
Relational behavior	RB1	.87			.91		
	RB2	.78	.91	.76	.76	.84	.68
	RB3	.77			.80		
Relationship investment	RE1	.53			.84		
	RE2	.61	.82	.60	.75	.86	.68
	RE3	.68			.87		
Repatronage intentions	RI1	.90			.95		
	RI2	.93	.97	.91	.96	.97	.90
	RI3	.90			.94		
Defensive behavior	DE1	.53			.60		
	DE2	.72	.89	.68	.97	.83	.65
	DE3	.78			.70		
Deflective behavior	DF1	.74			.85		
	DF2	.61	.79	.56	.67	.81	.58
	DF3	.68			.76		
Disruptive behavior	DR1	.62			.63		
	DR2	.62	.84	.63	.96	.86	.68
	DR3	.64			.85		

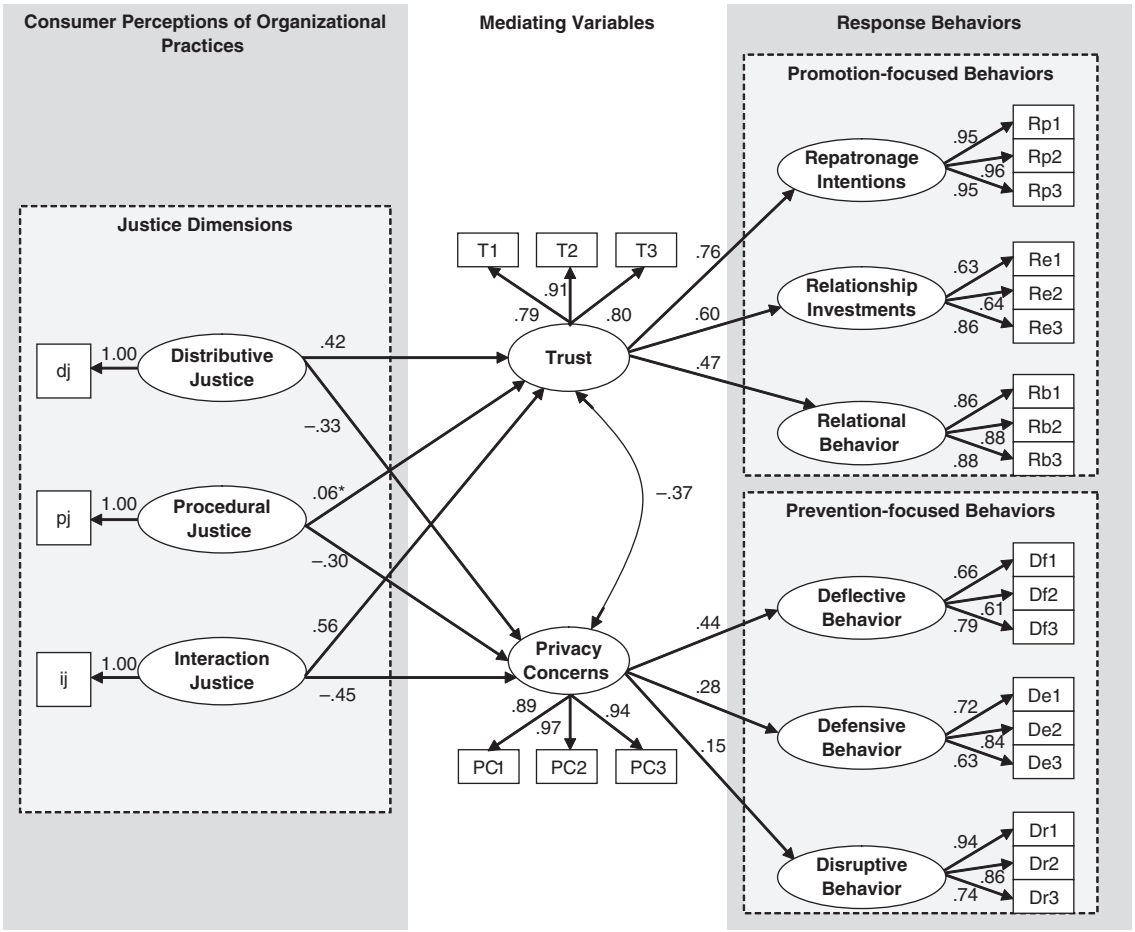
was no direct relationship that could have been mediated by trust.

Next, to assess the final condition for full mediation, we compared saturated models with the theoretical model. As we have two mediating variables, two saturated models were specified, one for trust (MS-T) and one for privacy concern (MS-PC). Each saturated model focused on one mediator and its response behaviors at a time. An insignificant chi-square difference between each of the individual saturated models and the theoretical model would support the final condition for full mediation.

To test for potential mediating effects of trust, we added direct links from distributive and interaction justice to the three promotion-focused response behaviors into the saturated model. As the link from procedural justice to trust was insignificant, making mediation impossible, we did not include direct links from procedural justice to the three promotion-focused behaviors. That is, a total of six links were added in MS-T. The results showed a reasonably good fit for the saturated model with trust (MS-T with AGFI = 0.87, NFI = 0.92, CFI = 0.97, TLI = 0.97, and RMSEA = 0.04). The change in chi-square between the saturated model and theoretical model was insignificant, Δ in $\chi^2(6) = 5.05$, $p > .10$, suggesting full mediation of the variance from the fairness dimensions to promotion-focused behaviors via trust.

The mediation test for privacy concern included the three justice dimensions as all had significant effects on privacy concern. That is, we added a total of nine links

Figure 1
Linking Justice, Trust and Concern to Promotive and Preventive Responses



Note: * = not significant at $p = .05$

to the saturated model, three from each of the justice dimensions to the three prevention-focused behaviors. The overall fit indices for the saturated model with privacy concern were good (MS-PC with AGFI = 0.87, NFI = 0.92, CFI = 0.97, TLI = 0.97, and RMSEA = 0.04). Again, the chi-square difference between saturated model with privacy concern and the theoretical model was insignificant, Δ in $\chi^2(9) = 5.88$, $p > .10$. The insignificant chi-square difference suggests that the final condition for full mediation was satisfied for both trust and privacy concern. Hence, trust and privacy concern act as full mediators between the justice dimensions, and promotion- and prevention-focused behaviors, respectively.

Drivers of promotion- and prevention-focused behaviors. Regulatory focus theory predicts that trust drives promotion- but not prevention-focused behaviors and vice versa for privacy concern. To test this proposition directly, we added a total of six causal links into our theoretical model: three from trust to prevention-focused behaviors and three from privacy concern to promotion-focused behaviors.

As expected, the chi-square difference between this alternative model and the theoretical model was insignificant, Δ in $\chi^2(6) = 5.69$, $p > .10$. Furthermore, the links from trust to promotion focused behaviors all remained highly significant ($b_{t\text{-}ri} = 0.71$, $b_{t\text{-}re} = 0.55$, $b_{t\text{-}rb} = 0.41$, all at $p < .01$), whereas none of the links from trust to prevention focused behaviors reached significance ($b_{pc\text{-}ri} = –0.08$, $b_{pc\text{-}re} = –0.07$, $b_{pc\text{-}ri} = –0.12$, all at $p > .05$). Similarly, privacy concern also maintained strong links from privacy concern to prevention focused behaviors ($b_{pc\text{-}df} = 0.35$, $b_{pc\text{-}de} = 0.22$, $b_{pc\text{-}dis} = 0.29$, all at $p < .01$) and showed insignificant paths to promotion focused behaviors ($b_{t\text{-}df} = –0.13$, $b_{t\text{-}de} = –0.15$, $b_{t\text{-}dis} = –0.18$, all at $p > .05$). Our results confirm that the

consumer response behaviors to trust and privacy concern are different in nature. Specifically, trust was related to promotion- but not prevention-focused behaviors, whereas the opposite held true for privacy concern.

Study 2—Survey on Recalled Web Transactions

Method

Survey design and procedure. We used a survey in Study 2 to enhance the external validity of our findings in Study 1. To ensure variance in the data and to capture real-world information disclosure situations that were meaningful to customers, a random half of the respondents each were primed to recall a fair or an unfair information disclosure situation they had recently experienced (cf. Tax, Brown, and Chandrashekaran 1998). Respondents were informed that the questions in the survey pertain to their information disclosure experience with a Web site they had recently interacted with. To enhance recall of the particular encounter, respondents were requested to provide details on the type of information provided, the information disclosure process and aftermath of providing their information.

Sample. Participants in the final survey were 495 undergraduates; 26 responses were removed due to incomplete data. Respondents obtained course credits for their participation. The final sample consisted of 469 respondents, of which 60% were female, and 98% of the respondents rated their online competency level to be at least "good."

Measures. The same measures as for Study 1 were used. All scales showed good reliability and variance explained (see Table 1). CFA was performed, and the results showed a significant chi-square value, $\chi^2(408) = 524.4$, $p < .01$, probably as a result of the large sample size of 469. The other fit indices showed a reasonably good fit (GFI = 0.88, AGFI = 0.88, NFI = 0.94, CFI = 0.94, TLI = 0.98, and RMSEA = 0.04). Together, the findings suggest that the measures worked well and can be used for hypothesis testing.

Again, discriminant validity was tested between all constructs using chi-square difference tests (Jöreskog and Sörbom 1993). The chi-square values were high, suggesting good discriminant validity between all our constructs (the smallest chi-square was 50.5 between interactive and procedural justice).

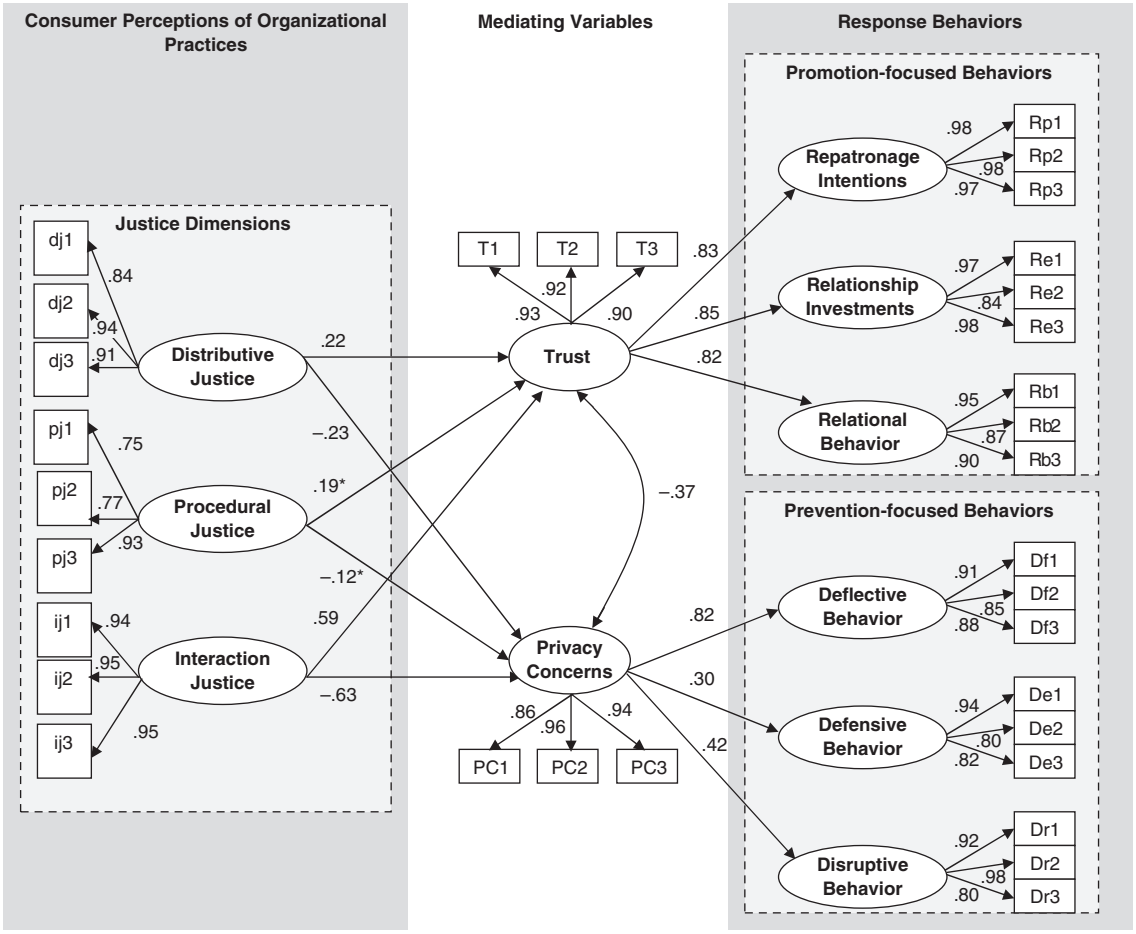
Results

Hypotheses testing. The overall chi-square of the theoretical model (MT) was significant, $\chi^2(439) = 524.6$, $p < .001$, which again was expected given the large sample size. The other fit indices were moderate to good (GFI = 0.88, AGFI = 0.85, NFI = 0.94, CFI = 0.99, TLI = 0.99, and RMSEA = 0.03). The path coefficients were mostly as expected (see Figure 2). Distributive and interactional justice had positive paths to trust ($b_{dj} = 0.22$, $b_{ij} = 0.59$, $p < .01$) and negative paths to privacy concern ($b_{dj} = –0.23$, $b_{ij} = –0.63$, $p < .01$). However, the procedural justice paths to trust ($b_{pj} = 0.19$, $p > .05$) and privacy concern ($b_{pj} = –0.12$, $p > .05$) were insignificant.

As expected, trust had positive path coefficients to our three promotion-focused behaviors of relationship behavior, relationship investment, and repatronage intentions ($b_{t\text{-}re} = 0.85$; $b_{t\text{-}rb} = 0.82$; $b_{t\text{-}ri} = 0.83$, all at $p < .01$), and privacy concern had positive path coefficients to the three prevention-focused behaviors of defensive, deflective, and disruptive behaviors ($b_{pc\text{-}de} = 0.30$; $b_{pc\text{-}df} = 0.82$; $b_{pc\text{-}dr} = 0.42$, all at $p < .01$). Also as expected, trust and privacy concern were negatively correlated ($b_{t\text{-}pc} = –0.37$, $p < .01$).

Test for trust and privacy concern mediation. The same procedure for the mediation test was used as for Study 1. Overall, the direct effects model (MD) showed an acceptable fit (AGFI = 0.84, NFI = 0.94, CFI = 0.99, TLI = 0.99, and RMSEA = 0.03). All justice dimensions that had a significant path coefficient to trust and privacy concern (i.e., distributive and interactional justice) also showed significant path coefficients to the six response behaviors, satisfying the first condition of mediation. Procedural justice had no significant impact on trust or privacy concern and, as expected, did not have significant effects on any of the response behaviors. Therefore, our analysis here focused on the mediating effects of distributive and interactional justice. To assess the final condition of mediation, two saturated models (MS) were specified, one with trust (MS-T) and the other with privacy concern (MS-PC) as the mediating variable. The fit indices suggested an acceptable fit for both models (MS-T: AGFI = 0.85, NFI = 0.94, CFI = 0.99, TLI = 0.99, and RMSEA = 0.03; MS-PC: AGFI = 0.85, NFI = 0.94, CFI = 0.99, TLI = 0.99, and RMSEA = 0.03). For both models, the chi-square difference to MT was insignificant: MS-T, Δ in $\chi^2(6) = 1.14$, $p > .10$; MS-P, Δ in $\chi^2(6) = 2.27$, $p > .10$. The insignificant chi-square differences suggest that the final condition for full mediation was satisfied. Hence, trust and privacy concern acted as full mediators between the

Figure 2
Linking Justice, Trust, and Concern to Promotive and Preventive Responses



Note: * = not significant at $p = .05$

justice dimensions and their respective promotion- and prevention-focused behaviors.

Drivers of promotion- and prevention-focused behaviors. To test directly whether trust only drives promotion-focused behaviors and not prevention-focused behaviors, and vice versa for privacy concern, a final structural model was created. Here, links were added from trust to prevention-focused behaviors and from privacy concern to promotion-focused behaviors in the theoretical model. As for Study 1, the chi-square difference between the models was insignificant, and the hypothesized links were all significant, whereas none of the links from trust to prevention-focused behaviors and from privacy concern to promotion-focused behaviors reached significance, all at $p > .05$.

Discussion, Implications, and Further Research

Summary of Findings

A theory-driven model was used as a conceptual foundation for antecedents and the duality of consequences of trust and privacy concern in a repeat customer-firm interaction context. We used two studies: an experimental study to enhance internal validity of our model, and a survey to boost external validity and confirm that the constructs and relationships we explored have relevance to consumers in real-world situations. The findings were robust across methods and research contexts, and both studies supported our research hypotheses. Specifically, we showed that consumers' justice perceptions drove

their promotion- and prevention-focused behaviors. The link from the anteceding justice dimensions to promotion-focused behaviors was fully mediated by trust, whereas the link to prevention-focused behaviors was fully mediated by privacy concern. Furthermore, the findings showed that trust predicted promotion-focused behaviors (relational behavior, relationship investment, repatronage intentions) but not prevention-focused behaviors. In contrast, privacy concern predicted prevention-focused behaviors (defensive, deflective, and disruptive behavior) but not promotion-focused behaviors. These results support the use of regulatory focus theory in a privacy context for delineating the promotion-oriented trust and prevention-oriented privacy concern and their respective response behaviors. The implications of these findings are discussed in the following sections.

Theoretical Implications

The empirical findings of this study, set in a repeated transaction context, support broadening existing theoretical approaches by combining trust and privacy concern in an integrative model using regulatory focus theory with both trust and privacy concern acting as mediators to clearly differentiated user responses. The implications are three-fold, as discussed next.

Trust and privacy concern have differentiated response behaviors. Our findings support the notion that trust and privacy concern contribute independently to consumer responses that are different in nature. Past research tended to use either privacy concern or trust, often interchangeably, and because both constructs are naturally negatively correlated, researchers frequently found statistical relationships between them and/or their response behaviors. Clearly separating trust from privacy concern and showing that they have very different response behaviors in nature add a new perspective and clarity to our understanding of information disclosure behavior, and this paves the way for further and perhaps more structured investigation of consumer responses in the information privacy context.

Focusing on trust and its unique response behaviors in addition to privacy concern is important and links well to other research streams in marketing where trust has been shown to stimulate cooperation and increase the willingness to contribute and make relationship investments and is seen as a central tenet for successful relationship marketing (Morgan and Hunt 1994).

Regulatory focus theory is applicable to the information privacy context. We used RFT (Higgins 1997) as the theoretical backbone for this study, which is novel as RFT has not been used to study privacy-related behaviors before. RFT is well suited to this context, as our findings confirm that privacy concern and trust responses differ in nature, with privacy concern responses being largely defensive and trust responses being promotive.

The theoretical perspective of RFT adds a balancing dimension to recent privacy research, which has tended to focus primarily on negative, defensive consumer reactions (e.g., Lwin, Wirtz, and Williams 2007), as opposed to also examining positive attitudes and cooperative behaviors. As such, integrating RFT and demonstrating its applicability to the information privacy context provide a sound theoretical framework for a broader approach to and better understanding of consumer privacy responses.

Repeat customer interactions, social justice, and trust. Past research focused on information disclosure in a first-time or one-time transaction context where immediate perceptions matter most in reducing privacy concerns (e.g., brand familiarity and third-party privacy seals; Miyazaki and Krishnamurthy 2002). The present study examined information disclosure in an ongoing customer-firm relationship, which would be the most typical situation consumers face with their regular service providers. Over time, customers can observe firm behavior, gain more finely developed fairness perceptions (cf. Culnan and Armstrong 1999), and develop trust in a firm (Gefen and Straub 2004). The latter made the repeated transaction context particularly suitable for testing the applicability of RFT. A one-time context may have resulted in the effects of privacy concern overshadowing the importance of trust.

Social justice theory seems a suitable framework to explain information disclosure behavior over time, with its three dimensions of distributive, procedural, and interactional justice. It has been suggested previously that all three dimensions play a role in driving privacy concern (Culnan and Bies 2003), but the present study is the first to empirically explore the role of all three justice dimensions in driving trust as well as privacy concern. While we did not contrast one-time versus repeat transactions in this study, our findings confirm that two fairness dimensions of distributive and interactive justice are important drivers of trust and privacy concern. Both dimensions of justice can be observed in transactions and information disclosure situation over time in a customer-firm relationship. The findings were less clear for procedural justice, and we discuss our interpretation of the findings in more detail under Further Research and

Limitations. In sum, a recurring or repeated transaction perspective better captures a relationship perspective with its increased importance of trust and is more likely to require the explicit consideration of a wider set of justice dimensions.

Managerial Implications

From a customer perspective, transactions such as rental car reservations are fast and convenient once transaction-relevant data are captured in the service firm's CRM system. In our car rental example, such data include driving license and credit card details, billing address, and car and insurance preferences. Many firms use the Internet as a cost-effective delivery channel of potentially highly customized services and benefit enormously through capturing and analyzing detailed customer and transaction data (e.g., Lovelock and Wirtz 2007, pp. 108-109). However, the current privacy literature has tended to model privacy responses defensively on the key mediator of privacy concern. This approach limits managerial approaches to privacy issues. For example, a service firm would need to concentrate on privacy assurances, statements, and the like to alleviate privacy concerns when collecting customer information, whereas a broader strategy encompassing other types of approaches encourages customers to provide personal information and allows the tracking of transaction data. To our knowledge, this is the first time such a bipolar approach has been applied in the privacy context. Our findings contribute to an improved clarity in thinking when dealing with the acquisition and management of customer information, specifically in separating the drivers and mediators of defensive and promotive consumer response behaviors, as discussed in the next two sections.

Prevention-focused response behaviors. Focusing on privacy concerns and seeking ways to reduce them will lead to lower defensive behaviors. Our study focused on distributive, procedural, and interactional justice perceptions as drivers of privacy concerns and showed that when justice perceptions are violated, consumers are motivated to take the prevention-oriented route of privacy concern and respond with negative actions such as refusal to provide or update information and use privacy-enhancing technology such as cookie busters. In addition to increasing justice perceptions, as shown in the present study, a significant body of research has shown a variety of ways to reduce privacy concerns, ranging from implementing and communicating good practice policies to third-party privacy seals (e.g., Culnan and Milne 2001; Miyazaki and Krishnamurthy 2002).

Promotion-focused response behaviors. An important contribution of this study is the finding that privacy concern–reduction strategies lower defensive consumer responses but will not be effective or will be less effective in encouraging promotive behaviors. Reducing privacy concerns may be sufficient for first-time or one-off transactions but will not be sufficient in relationship marketing, where an ever deeper understanding of customers, their background, motivations, and consumption patterns will enhance service delivery and add value to the relationship. This means that marketers need to take a holistic approach and not just concentrate on privacy assurances, statements, and so forth to alleviate privacy concerns but also involve strategies to enhance trust over the course of relationship development. Therefore, promotive behavior–enhancing strategies via the route of higher trust have to be considered separately.

Fairness perceptions. Although not the main focus of this study, our findings show that an effective way for businesses to develop successful information exchange relationships with their customers is to earn their trust and reduce their privacy concern, and fairness perceptions are key to both. Therefore, marketers need to be careful about how they use the information they collect and whether consumers perceive their treatment and outcomes as fair. In particular, it has been pointed out that fair information practices need to be embedded in the work practices of all employees (Wirtz, Lwin, and Williams 2007) to prevent any situation whereby an employee may allow personal customer information to be misused, hence possibly creating consumer and/or media backlash. In addition, marketers should continually provide the customer with enhanced value such as customization and convenience to enhance fairness perceptions.

Further Research and Limitations

Further research can help to address some of the limitations of our two studies and develop the application of RFT to the information disclosure context further. First, for model parsimony, the current study was focused on common immediate and direct consumer responses. Future work can extend our findings to other less common individual consumer responses such as withholding information, fabricating or making up personal information (cf. Lwin, Wirtz and Williams 2007), and flaming (Sheehan and Hoy 1999). Furthermore, research on group-level

responses such as organized group boycotts and lobbying, as well as disclosure behavior in social networking contexts (e.g., Lanier and Saini 2008), would provide exciting extensions for exploration.

Our focus was the applicability of the RFT framework to the information disclosure context, and therefore we kept the base model parsimonious with common causes of trust and privacy concern and with allowing the two constructs to be negatively correlated in our two models. However, past research that focused on either trust or on privacy concern has shown that the two variables can interact with each other. For example, higher trust can reduce privacy concern (Luo 2002), and lower privacy concern can increase trust (Miyazaki 2008). Therefore, it would be interesting to extend our model and incorporate potential secondary effects.

Furthermore, there are likely to be variables that either drive predominantly trust (i.e., are akin to motivating factors, such as perhaps firm reputation; cf. Smith and Barclay 1997) or drive predominantly privacy concerns (i.e., akin to hygiene factors, such as privacy statements). Additional research is needed to explore differential drivers and roles of our two mediating variables and their distinct response behaviors. Beyond the antecedents in our study, which all had linear relationships with our mediating variables, other contextual factors could be explored that might show interactive effects. For example, at increasing levels of data sensitivity, privacy concern–reduction strategies become less effective (Lwin, Wirtz, and Williams 2007).

Likewise, the role that individual consumer characteristics may play, in both trust and privacy concern perceptions and their respective response behaviors, has yet to be explored. It is possible that individual dispositions can be examined in the context of our model, whereby predisposed customers may predominantly show antecedents to either trust (promotive) or privacy concern (preventive) (Zhao and Pechmann 2007). Other consumer characteristics that may be worthwhile exploring include risk propensity and desire for privacy, which vary widely between consumers (Miyazaki 2008).

The current results provide strong support for the proposed roles of distributive and interactional justice, while support for procedural justice was less conclusive. A reason for the insignificant findings may be that our studies were set in the postpurchase context of relationship marketing. While procedural justice is likely to be more important in the initial contact with a marketer when a lot of data need to be provided, once the relationship develops, it is likely that consumers may pay less attention to procedural fairness than they had in the initial stages of the relationship. In our survey setting in Study 2, it is possible therefore that procedural justice was internalized, meaning that respondents were unable to vividly identify past procedural justice interaction, hence leading to a low procedural justice arousal and nonsignificant findings.

Alternatively, it may be that the distributive and interactional aspects of justice are more prominent in an overall justice perception, perhaps because procedural justice seems less tangible than distributive justice and less vivid than interactional justice. Even though procedural justice was successfully manipulated in Study 1, the manipulation may have not been vivid enough to show significant results. Future work can address these issues and explore the role of procedural justice over the course of a customer-firm relationship in more depth.

Advanced data collection capabilities and technologies may offer opportunities for gaining new insights in information privacy–related consumer behaviors. For example, biometrics offer great promises for customized, convenient, and secure service delivery, and there is no risk of losing, forgetting, or copying your biometrics or having them stolen (Heracleous and Wirtz 2006). Potential applications of biometric technologies include voice recognition at customer contract centers (e.g., used by Charles Schwab and Home Shopping Network), physical access to facilities (e.g., used by Disneyworld to provide access to season pass holders), and providing access to self-service access to safe deposit vaults at banks (e.g., used by the First Tennessee Bank and the Bank of Hawaii). However, unique customer privacy concerns may be present in biometric contexts, as popular films such as *Minority Report* indicate. The large-scale collection and storage of biometric data in order to make such an authentication system cost-effective have given rise to Big Brother concerns where one's anonymity can no longer be safeguarded. Unlike conventional security systems, biometrics cannot be reset and there are concerns of the possibility of misuse and legal nonrepudiation in the event of biometric identity theft (Lanier and Saini 2008). Consumers seem to face privacy concerns even when biometric data are being collected by trusted organization such as homeland security, governmental health services, or major financial institutions. Biometrics is a fascinating research context as it seems to push privacy concern and trust requirements to extreme levels.

Finally, while our studies were set in an online context, we believe that their findings are equally applicable to physical environments; future work is needed to confirm this. Clearly, interesting research opportunities lie ahead to further explore the mechanics of trust and privacy concern and their respective response behaviors in increasingly complex customer privacy situations.

References

Alge, Bradley J. (2001), "Effects of Computer Surveillance on Perceptions of Privacy and Procedural Justice," *Journal of Applied Psychology*, 86 (4), 797–804.

Ashworth, Lawrence and Clinton Free (2006), "Marketing Dataveillance and Data Privacy: Using Theories of Justice to Understand Consumers' Online Privacy Concerns," *Journal of Business Ethnics*, 67 (2): 107–23.

Bhattacherjee, Anol (2002), "Individual Trust in Online Firms: Scale Development and Initial Testing," *Journal of Management Information Systems*, 19 (1), 211–41.

Bies, Robert J. (1993), "Privacy and Procedural Justice in Organizations," *Social Justice Research*, 6 (1), 69–86.

Blodgett, Jeffrey G., Donna J. Hill, and Stephen S. Tax (1997), "The Effects of Distributive, Procedural, and Interactional Justice on Postcomplaint Behavior," *Journal of Retailing*, 73 (2), 185–210.

Caudill, Eve M. and Patrick E. Murphy (2000), "Consumer Online Privacy: Legal and Ethical Issues," *Journal of Public Policy and Marketing*, 19 (Spring), 7–19.

Clemmer, Elizabeth C. and Benjamin Schneider (1996), "Fair Service," in *Advances in Services Marketing and Management Research and Practice*, Teresa A. Swartz, David E. Bowen, and Stephen W. Brown, eds. London: JAI, 109–26.

Colquitt, Jason A. (2001), "On the Dimensionality of Organizational Justice: A Construct Validation of a Measure," *Journal of Applied Psychology*, 86 (3), 386–400.

Cropanzano, Russell, Deborah E. Rupp, Carolyn J. Mohler, and Marshall Schminke (2001), "Three Roads to Organizational Justice," in *Research in Personnel and Human Resource Management*, Vol. 20, Gerald R. Ferris, ed. Amsterdam: JAI, 1–113.

Culnan, Mary J. and Pamela K. Armstrong (1999), "Information Privacy Concern, Procedural Fairness and Impersonal Trust: An Empirical Investigation," *Organization Science*, 10 (1), 104–15.

_____ and Robert J. Bies (2003), "Consumer Privacy: Balancing Economic and Justice Considerations," *Journal of Social Issues*, 59 (2), 323–42.

_____ and George R. Milne (2001), "The Culnan-Milne Survey on Consumers and Online Privacy Notices," (accessed March 4, 2009), [available at http://www.ftc.gov/bcp/workshops/glb/supporting/culnan-milne.pdf].

Dowling, Grahame and Richard Staelin (1994), "A Model of Perceived Risk and Intended Risk-Handling Activity," *Journal of Consumer Research*, 21 (1), 119–34.

Eddy, Erik R., Dianna L. Stone, and Eugene F. Stone-Romero (1999), "The Effects of Information Management Policies on Reactions to Human Resource Information Systems: An Integration of Privacy and Procedural Justice Perspectives," *Personnel Psychology*, 52, 335–58.

Experian, (accessed January 14, 2009), [available at www.experian.co.uk].

Fletcher, Keith (2003), "Privacy: The Achilles Heel of the New Marketing," *Journal of Interactive Marketing*, 3 (2), 141–54.

Gefen, David (2000), "E-Commerce: The Role of Familiarity and Trust," *Omega*, 28, 725–37.

_____ and Detmar W. Straub (2004), "Consumer Trust in B2C E-Commerce and the Importance of Social Presence: Experiment in E-Products and E-Services," *Omega*, 32, 407–24.

Greenberg, Jerald (1987), "A Taxonomy of Organizational Justice Theories," *Academy of Management Review*, 12, 9–22.

_____ and Robert Folger (1983), "Procedural Justice, Participation and the Fair Process Effect in Groups and Organizations," in *Basic Group Processes*, Paul B. Paulus, ed. New York: Springer-Verlag, 235–56.

Heracleous, Loizos T. and Jochen Wirtz (2006), "Biometrics—The Next Frontier in Service Excellence, Productivity and Security in the Service Sector," *Managing Service Quality*, 16 (1), 12–22.

Higgins, E. Tory (1997), "Beyond Pleasure and Pain," *American Psychologist*, 52 (December), 1280–300.

Hosmer, Larue T. (1995), "Trust: The Connecting Link between Organizational Theory and Philosophical Ethics," *Academy of Management Review*, 20 (2), 379–403.

Jöreskog, Karl G. and Dag Sörbom (1993), *LISREL 8: A Guide to the Program and Applications*. Chicago: SPSS.

Lanier, Clinton D. and Amit Saini (2008), "Understanding Consumer Privacy: A Review and Future Directions," *Academy of Marketing Science Review*, 12 (2), pp. 1-45.

Lovelock, Christopher and Jochen Wirtz (2007), *Services Marketing—People, Technology*, Strategy, 6th ed. Upper Saddle River, NJ: Prentice Hall.

Luo, Xueming (2002), "Trust Production and Privacy Concerns on the Internet: A Framework Based on Relationship Marketing and Social Exchange Theory," *Industrial Marketing Management*, 31 (2), 111–18.

Lwin, May O. and Jerome D. Williams (2003), "A Model Interpreting the Multidimensional Developmental Theory of Privacy and Theory of Planned Behavior to Examine Fabrication of Information Online," *Marketing Letters*, 14 (4), 257–72.

_____, Jochen Wirtz and Jerome Williams (2007), "Consumer Responses to Personal Information Privacy Concerns on the Internet: A Power-Responsibility Equilibrium Perspective," *Journal of the Academy of Marketing Science*, 35 (4), 572–85.

Maxham, III, James G. and Richard G. Netemeyer (2003), "Firms Reap What They Sow: The Effects of Shared Values and Perceived Organizational Justice on Customers' Evaluations of Complaint Handling," *Journal of Marketing*, 67 (1), 46–62.

Milne, George R. and Maria-Eugenia Boza (1999), "Trust and Concern in Consumers' Perceptions of Marketing Information Management Practices," *Journal of Interactive Marketing*, 13 (Winter), 5–24.

_____, Shalini Bahl, and Andrew Rohm (2008), "Toward a Framework for Assessing Covert Marketing Practices," *Journal of Public Policy & Marketing*, 27 (1), 57–62.

Miyazaki, Anthony D. (2008), "Online Privacy and Disclosure of Cookie Use: Effects on Consumer Trust and Anticipated Patronage," *Journal of Public Policy & Marketing*, 27 (1), 19–33.

_____ and Sandeep Krishnamurthy (2002), "Internet Seals of Approval: Effects on Online Privacy Policies and Consumer Perceptions," *Journal of Consumer Affairs*, 36 (1), 28–49.

Moorman, Christine, Gerald Zaltman, and Rohit Deshpandé (1992), "Relationships between Providers and Users of Market Research: The Dynamics of Trust within and between Organizations," *Journal of Marketing Research*, 29, 314–28.

Morgan, Robert M. and Shelby D. Hunt (1994), "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing*, 58 (3), 20–38.

Petty, Ross D. and J. Craig Andrews (2008), "Covert Marketing Unmasked: A Legal and Regulatory Guide to Practices That Mask Marketing Messages," *Journal of Public Policy & Marketing*, 27 (1), 7–18.

Phelps, Joseph E., Glen J. Nowak, and Elizabeth Ferrell (2000), "Privacy Concerns and Consumer Willingness to Provide Personal

Information," *Journal of Public Policy & Marketing*, 19 (1), 27–41.

_____, Giles D'Souza, and Glen J. Nowak (2001), "Antecedents and Consequences of Consumer Privacy Concerns: An Empirical Investigation," *Journal of Interactive Marketing*, 15 (4), 2–17.

Sheehan, Kim B. and Maria G. Hoy (1999), "Flaming, Complaining, Abstaining—How Online Consumers Respond to Privacy Concerns," *Journal of Advertising*, 19 (Spring), 62–73.

_____ and _____. "Dimensions of Privacy Concern among Online Consumers," *Journal of Public Policy & Marketing*, 19 (Spring), 62–73.

Smith, J. Brock and Donald W. Barclay (1997), "The Effects of Organizational Differences and Trust on the Effectiveness of Selling Partner Relationship," *Journal of Marketing*, 61 (January), 3–21.

Smith, Jeff H., Sandra J. Milberg and Sandra J. Burke (1996), "Information Privacy: Measuring Individuals' Concerns about Organizational Practices," *MIS Quarterly*, 20 (June), 167–196.

Son, Jai-Yeol and Sung S. Kim (2008), "Internet Users' Information Privacy-Protective Responses: A Taxonomy and a Nomological Model," *MIS Quarterly*, 32 (3), 503–29.

Tax, Stephen S., Stephen W. Brown, and Murali Chandrashekaran (1998), "Customer Evaluations of Service Complaint Experiences: Implications for Relationship Marketing," *Journal of Marketing*, 62 (2), 60–76.

Westin, Alan F. (2003), "Social and Political Dimensions of Privacy," *Journal of Social Issues,* 59 (2), 431–53.

Wirtz, Jochen, May O. Lwin, and Jerome D. Williams (2007), "Causes and Consequences of Consumer Online Privacy Concern," *International Journal of Service Industry Management*, 18 (4), 326–48.

Zhao, Guangzhi and Cornelia Pechmann (2007), "The Impact of Regulatory Focus on Adolescents' Response to Antismoking Advertising Campaigns," *Journal of Marketing Research*, 44 (4) 671–87.

Jochen Wirtz is associate professor of marketing, founding director of the UCLA - NUS Executive MBA at the National University of Singapore, and associate fellow at the Saïd Business School, University of Oxford. His research focuses on services marketing and has been published in over 70 articles in academic journals. His books include *Services Marketing—People, Technology, Strategy* (co-authored with Christopher Lovelock, 2007, 6th edition, Prentice Hall), *Essentials of Services Marketing* (co-authored with Lovelock and Chew, 2009, Prentice Hall), and *Flying High in a Competitive Industry: Secrets of the World's Leading Airline* (co-authored with Heracleous and Pangarkar, 2009, McGraw Hill).

May O. Lwin is an associate professor and head of the Division of Public and Promotional Communication, Wee Kim Wee School of Communication and Information in Nanyang Technological University. Dr Lwin's research interests are mainly in the areas of social and health communications. She has published in many leading international journals and authored a number of books, including the best-selling *Clueless* Series. Her textbook on advertising in Asia Pacific (*Principles and Effective IMC Practice*) was co-authored with Wells, Moriarty, and Burnett and published by Pearson Prentice Hall in 2006.