Customers' Willingness to Disclose Personal Information throughout the Customer Purchase Journey in Retailing: The Role of Perceived Warmth

Customers' willingness to disclose personal information throughout the customer purchase journey in retailing: The role of perceived warmth

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Highlights

- Customer purchase journey phases affect information disclosure via perceived warmth
- Perceived warmth gradually increases over the customer purchase journey
- Perceived warmth mitigates consumers' privacy concerns
- A field study in an online clothing store provides actual disclosure data
- We offer actionable levers on how retailers can leverage warmth perceptions

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Abstract

Consumers show increasing levels of concern regarding disclosing information to companies, as retailers' access to their personal information heightens their feelings of vulnerability. Although customers' personal information is crucial for targeting actual and potential customers, the extant discussion regarding the determinants of customers' willingness to disclose personal information is limited. Drawing upon social judgment theory, this study investigates how consumers experience different levels of perceived warmth, which alleviates privacy concerns and, in turn, affects their willingness to disclose personal information during different stages of the online customer purchase journey.

A mixed-method design combining a focus group (Study 1), an online experiment, a field study and a laboratory experiment (Studies 2, 3 and 4) provide a multifaceted representation of this phenomenon. The results show that compared to the prepurchase phase, asking for personal information at the end of the online customer purchase journey (i.e., purchase and postpurchase phases) leads to a higher perception of warmth and lower privacy concerns, thereby increasing customers' disclosure of personal data. The findings are robust to consumers' brand familiarity and other relevant sociodemographic variables. This research provides insightful theoretical and practical implications for retailers regarding how to enhance perceived warmth and improve customers' willingness to disclose personal information.

Keywords: customer purchase journey; perceived warmth; privacy concerns; willingness to disclose; mixed-method; field experiment

Introduction

The increasing phenomenon of digitalization has allowed retailers to collect more information about their customers than ever before and to use this information in multiple ways, thus resulting in a more customized experience (Kim, Barasz, and John 2018). However, although customers' personal information might help retailers tailor their offerings, thus enhancing satisfaction, consumers may feel discomfort during the corresponding data collection and use (e.g., due to a loss of privacy) (Aguirre et al. 2015; Thomaz et al. 2020). Thus, retailers must understand how to collect their customers' information without raising such concerns.

Consumers' worries about data security have grown stronger in the context of online shopping, and as a result, they tend to avoid disclosing their personal information. Indeed, recent data show that 85% of consumers will be unwilling to share their personal information if they have concerns about the use of such information by retailers and that 71% will even stop purchasing if such information is gathered without their permission (PricewaterhouseCoopers 2017). This general concern seems to be a direct consequence of recent personal data breach scandals (e.g., Cambridge Analytica), which increasingly involve major companies worldwide (e.g., Facebook, Amazon).

Customers' willingness to disclose data is gaining increasing attention among scholars (Li, Lin, and Wang 2015; Markos, Labreque, and Milne 2018; Marzurek and Malagocka 2019). In particular, understanding the factors that might increase or inhibit customers' disclosure of personal information has become of paramount importance in both the online and offline contexts (Martin, Borah, and Palmatier 2017; Acquisti, Brandimarte, and Loewenstein 2015). In this regard, the prior research shows that factors such as the role of information type requests (Phelps, Nowak, and Ferrell 2000; White 2004), the ordering of question sensitivity (Acquisti, John, and Loewenstein 2012), and reciprocity (Schumann, von Wangenheim, and Groene 2014) facilitate personal information sharing. Conversely, privacy concerns have been

identified as a major factor that negatively affects customers' willingness to disclose (Martin and Murphy 2017).

Although the prior work concerning the willingness to disclose reveals valuable insights, customers' willingness to disclose along the phases of the customer purchase journey (i.e., prepurchase, purchase, and postpurchase phases) remains understudied in the retailing literature. This issue is even more relevant in the online retail context, where these stages are less defined (Edelman and Singer 2015; Kannan and Li 2017).

Based on these premises, the present research explores the role of the phase of the customer purchase journey in explaining customers' willingness to disclose personal information (and actual disclosure behavior) and suggests that perceived warmth and privacy concerns are the underlying mechanisms.

After performing an initial explorative qualitative inquiry, drawing upon social judgment theory (Sherif, Sherif, and Nebergall 1965), we propose that the perceived warmth felt at the end of the online customer purchase journey (i.e., postpurchase phase) reduces privacy concerns, thus leading to a higher willingness to disclose personal information.

Methodologically, this paper presents a mixed-method approach, adopting a sequential design (Bell, Bryman, and Harley 2018). Specifically, Study 1, which is based on a focus group method, develops hypotheses and explores the factors that customers recognize as critical in facilitating their information disclosure. Study 2 (i.e., an online experiment) and Study 3 (i.e., a field experiment) test the proposed relationships, including customers' actual information disclosure in the field, i.e., the fashion retail context. Finally, Study 4 (i.e., a lab experiment) measures whether the order of the requested sensitive information affects perceived warmth.

Overall, our findings show that compared to the prepurchase phase and the purchase phase, asking for personal information at the end of the online customer purchase journey (i.e.,

postpurchase phase) leads to a higher perception of warmth, which, in turn, alleviates privacy concerns and, thus, increases customers' willingness to disclose.

This research provides several theoretical contributions. First, by building theory through our exploratory qualitative phase and adopting the lens of social judgment theory (Sherif, Sherif, and Nebergall 1965), this paper offers a novel theoretical explanation of customers' willingness to disclose personal information online and shows the central role of perceived warmth. Second, this paper extends the body of the research concerning customers' willingness to disclose in the online context (Nguyen, Bin and Campbell 2012; Acquisti, Brandimarte, and Loewenstein 2015) by shedding light on when and why customers are more prone to share their personal information. Finally, it advances customer-company relationship theory (Rapp et al. 2013; Fournier 1998; Odekerken-Schröder, De Wulf, and Schumacher 2003) by showing that serving the customer before asking her personal information fosters a warm relationship.

Given the growing customer concerns regarding data protection in the online retail context (The Guardian 2019), our research also offers clear actionable insights for retailers regarding personal information requests during the customer purchase journey, thus increasing consumers' warmth perceptions and disclosure. Retailers that do not acknowledge that consumers are increasingly less willing to share their data because of privacy concerns will experience negative consequences in the customer-retailer relationship. This is even more profound in the online retail context in the aftermath of some of the recent data breach scandals (CNBC 2019).

Our results help guide online retailers regarding the moment of the customer phase during which consumers are more prone to share their data. Specifically, asking for personal information in the last phase of the customer purchase journey (i.e., postpurchase phase) leads to a greater willingness to disclose. Moreover, to lessen consumers' privacy concerns and

increase information disclosure, retailers should create a warm relationship with their consumers. Our findings suggest that such a relationship could be created by asking for personal information only at the end of the purchasing process (i.e., postpurchase phase). In this latter case, consumers perceive that the focus is on the customers instead of the potential benefits retailers can achieve by using their personal data.

Willingness to disclose personal information

Self-disclosure is defined as the voluntary communication of personal information such as one's name, preferences, and demographics to one or more recipients (Moon 2000; Mothersbaugh et al. 2012; Nguyen, Bin, and Campbell 2012; Li, Lin, and Wang 2015). Willingness to disclose has been significantly analyzed in both the online and offline contexts, with no *fil rouge* being found (Nguyen, Bin, and Campbell 2012; Acquisti, Brandimarte, and Loewenstein 2015). Within the online context, willingness to disclose refers to "an individual's willingness to reveal personal information to a firm online" (Mothersbaugh et al. 2012, p. 77).

The advent of the Internet and digital technologies has facilitated retailers' collection of information for consumer profiling. This growing search for personal data, which often violates consumer privacy (Martin and Murphy 2017), makes consumers more reticent to disclose personal information both online and offline (Phelps, Nowak, and Ferrell 2004). This is especially true in the online context, where users are increasingly overwhelmed with personal data requests to complete their purchases (Oliviero and Lunt 2004; Kim, Barasz, and John 2018). Consequently, the close relationship between willingness to disclose personal information, the related privacy concerns, and the consequences for marketing strategies results in a topic that has been investigated in depth (Martin and Murphy 2017; Markos, Milne, and Peltier 2017).

Table 1 presents the prior work exploring the main factors that affect consumers' willingness to disclose. The following four main themes emerge: i) the characteristics of the requested information (Phelps, Nowak, and Ferrell 2000; Mothersbaugh et al. 2012), ii) the individual traits of the customer involved in the disclosure (Belk 2013), iii) the relationship between the company and the customer (Schumann, von Wangenheim, and Groene 2014) and iv) the context of the inquiry (Acquisti, Brandimarte, and Loewenstein 2015; John, Acquisti, and

Loewenstein 2011). Sometimes, the boundaries of the four themes are blurred as studies may consider more than one factor in their analysis.

Among these four themes, especially in the digital context, information is currently perceived as pivotal (Markos, Labrecque, and Milne 2018), and information disclosure dramatically varies by information sensitivity (Phelps, Nowak, and Ferrell 2000). Customers are protective of their financial data, personal identifiers, and privacy-related and embarrassing information, which are perceived as highly sensitive or likely to lead to more marketing offers (White 2004). However, companies can reduce this negative effect on willingness to disclose by decreasing customers' perception of intrusiveness or by managing the order in which questions are presented (Acquisti, John, and Loewenstein 2012).

Second, the personal traits of customers such as disinhibition, gender, and age, also play a critical role in increasing or reducing the willingness to disclose. People who are more self-confident, young and female are more willing to disclose personal information (Li, Lin, and Wang 2015).

Third, factors that negatively affect customers' willingness to disclose, such as privacy concerns (Kim, Barasz, and John 2018) or uncertainty (Acquisti, Brandimarte, and Loewenstein 2015), can be counterbalanced by a positive customer-retailer relationship. Such feelings of transparency (Mazurek and Malagocka 2019) and trust (Martin and Murphy 2017) enhance a positive company-consumer relationship. This customer-retailer bonding is even more relevant in digital realms where consumers do not interact directly with salespeople (Noble and Phillips 2004; Vannucci and Pantano 2019).

Fourth, in some situations, the context influences the willingness to disclose and associated behaviors, even unconsciously. The physical environment in the offline context can nurture the release of personal information (Acquisti, Brandimarte, and Loewenstein 2015). In an online setting, the quality of the website interface might facilitate information sharing (John,

Acquisti, and Loewenstein 2011). Furthermore, social networks have significantly changed the way in which consumers disclose personal information. People who perceive their social media networks as responsive disclose more openly (Walsh, Forest, and Orehek 2020). Disclosure can result from comparative behavior. People's willingness to divulge sensitive information depends on judgments that are intrinsically comparative such as signals regarding others' inclination to divulge (Acquisti et al. 2012; 2015).

As shown in Table 1, many factors can increase or decrease the willingness to disclose. However, to the best of our knowledge, studies investigating how different phases of the customer purchase journey (i.e., prepurchase, purchase, and postpurchase phases) impact customers' willingness to disclose personal information and the mechanism underlying these effects are still lacking in the literature.

[PLEASE INSERT TABLE 1 HERE]

Research Overview

We explored the role of the customer journey phase in explaining customers' willingness to disclose personal information through four studies. We opted for a mixed methodology to offer a more complete picture of the phenomenon under study and produce robust findings (Davis, Golicic, and Boerstler 2011). In Study 1, we explore the main factors that positively or negatively affect customers' disclosure of personal information to online retailers. After generating the research hypotheses, we causally test the role of perceived warmth and privacy concerns as the mechanisms underlying the relationship between customer purchase journey and the disclosure of personal information using an online and a field experiment (i.e., Studies 2 and 3). Finally, Study 4 provides an important boundary condition for the activation of

perceived warmth, i.e., the order request of low versus highly sensitive information. Figure 1 presents the overarching structure of the paper and the connections between the studies.

[PLEASE INSERT FIGURE 1 HERE]

Study 1

The aim of Study 1 is to explore how consumers experience the rising issue of personal information disclosure and the main factors that might inhibit or facilitate their disclosure of personal information to online retailers along the online customer purchase journey. Given the limited insights provided by the literature on willingness to disclose with respect to its dependence on the customer journey phases, we adopted a qualitative approach drawing on the focus group method (Calder 1977; Stewart and Shamdasani 1990; Fern and Fern 2001) as an effective means of exploratory data collection. The focus group enabled us to observe group interaction, which is the hallmark of this method (Belzile and Öberg 2012). This enhanced level of interaction helps participants offer multiple facets compared to one-on-one interviews (Krueger 2014), which was especially beneficial given the complexity of the topic under investigation.

Data collection, design and procedure

Ten participants participated in the focus group held in Italy in May 2019, which followed Fern and Fern's (2001) guidelines, including facilitation by an experienced moderator and a common discussion protocol prepared by the research team (Bell, Bryman, and Harley 2018). First, we formulated general research questions based on the main goal of the research. The moderator followed a topic guide that aimed to elicit a discussion of how willingness to

disclose arises throughout the customer journey and to explore what factors might affect customers' disclosure when purchasing online.

Second, relevant subjects (i.e., online shoppers) were recruited through referrals (Arnold and Reynolds 2003); ten people were asked to provide the name and contact information of an individual who would be willing to participate in a focus group for a small incentive. To ensure a diverse group of participants, strict referral guidelines were given to the recruiters. Ultimately, the participants consisted of referred adults with different backgrounds, educational levels, occupations, and ages.

The focus group lasted 2 hours. We began by developing a portrait of customers' perceptions of willingness to disclose in the online retail context. Then, we explored the main factors affecting customers' disclosure when purchasing online by focusing on the factors that inhibit or facilitate the sharing of personal information with online retailers. Before the focus group began, the moderator explained the procedure and the purpose of the session. The session was audio-recorded and transcribed into a word processing package to allow for NVivo content analysis (Bazeley and Jackson 2013). The transcripts were independently read and analyzed by a coding team consisting of two researchers to ensure the internal validity of the coding process (Weber 1990); subsequently, the results were compared, leading to interrater reliability (Cohen 1960), and they were measured with Cohen's kappa coefficient (0.83). Using a categorization process suggested by Brocato, Voorhees and Baker (2012), recurring themes in the data were identified by listing items that reflected similar characteristics. We first open coded all the data, which provided the basis for the development of the coding framework. As we progressed through the analysis of the data, our codes became more specific, and we clarified these codes as we sought higher levels of abstraction, writing an agreed interpretation.

Results

Overall, the qualitative findings reveal that customers' disclosure is perceived as a sensitive issue, which varies based on factors that positively or negatively trigger consumers' willingness to disclose personal information.

Currently, consumers are entitled to dispose of personal data as they please: *"I would say that willingness to disclose is the right of the person, who has the power to dispose of data on his or her life" (LP).* Therefore, they believe that the decision to share information rests with the individual. Accordingly, the participants convey that their information disclosure is often determined as much by situational factors as by individual characteristics. Indeed, as reported by one of the participants, willingness to disclose is "*a concept that can be modulated depending on who you are dealing with; with people outside your family members and friends, sharing your data is more restricted" (LB).*

However, in regard to the online context, the participants perceive information disclosure as a paradox in that *"if you post a picture on Facebook, you know everyone will see it" (MC)*; additionally, *"talking about information sharing online is a contradiction because when you go online, you already accept that your data can be available to others" (FP)*. Thus, consumers are aware that their data can be spread online; however, at the same time, they are concerned about how other actors (e.g., retailers, online platforms) can use such data.

Interestingly, the findings show that the timing of a data request during the customer purchase journey plays a pivotal role in affecting consumers' disclosure. Lemon and Verohef (2016) define the customer purchase journey as the process involving a customer across all stages from the prepurchase phase to the postpurchase phase. Specifically, prepurchase is the first stage; it includes all aspects of the customer's interaction with the brand before a purchase transaction (e.g., need recognition, search for information). The purchase and postpurchase phases cover all customer interactions with the brand during the purchase event itself (e.g.,

choice, ordering, and payment) and after the actual purchase (e.g., usage and consumption, postpurchase engagement), respectively. In the online retail context, people seem to be more or less prone to disclose their information depending on when the retailer asks for it. The majority of the participants do not appreciate earlier personal data requests because they perceive such requests as too aggressive, thus preferring to share their information after the purchase: *"If you ask me for my personal data before entering, at least let me see the product first" (SB); "I don't like being forced to give my data, especially when they are asked for before making the purchase. When this is the case, I usually leave the website. If I want to make a simple purchase, why do you ask me where I was born, my birthday and whatnot?" (SF); "It would be better to ask for the data later on in the process. In this way, I can assess if I'm satisfied, if I can trust the retailer, and thus establish a relationship with it. If I'm not, why should I bother to give up my data?" (RM).* Moreover, asking for the data before purchasing is considered to be a means of discouraging the actual purchase and a waste of time, as highlighted by one of the participants: *"asking for my data at the beginning disincentivizes my willingness to purchase because I feel bombarded by info requests, so I don't want to share" (SB).*

Another central aspect in the relationship with online retailers is the concern over the use of the customer's data (i.e., a privacy concern): *"I'm okay when retailers use my data for commercial purposes but not for other retailers without my approval" (FM).* The interviewees show that they are particularly worried about the data processing procedures carried out by retailers: *"I always worry about the treatment of my personal data" (LB); "I can't stand not being in control of the situation" (LV).* To mitigate this concern, the participants clearly state what retailers should do to be more transparent: *"I would like to know immediately how they will use my data. They should say this upfront" (LP); "Sometimes, it's really difficult to read all the information about privacy policies. Retailers*

should make them simpler and tell me with whom they are going to share my data so I can decide" (FM). Therefore, the qualitative findings reveal that consumers are willing to disclose personal information when they feel secure about the use of this information by the online retailer. Interestingly, to mitigate the above concerns and increase customers' information disclosure, the participants require retailers to create a perception of warmth during the customer journey: *"They should show sensitivity toward their customers and ask for my data when we have already built a relationship" (LP).* Thus, here, the focus is on the customers themselves instead of the potential benefits that retailers can obtain by using their personal data: *"Make me think that you care about me, even for my present purchase, and that you want me to come back to the website. Tell me that you don't want to cheat me" (SB); "Having attention on me as a customer is the priority" (FM)*.

Asking for personal information once the customer-company relationship is already established fosters a positive warmth judgment. Therefore, by placing customers first, retailers are able to raise kindness perceptions, thus making consumers feel warm toward them. In turn, this feeling of warmth seems to lower customers' concerns about the privacy of their data, leading to an increase in information disclosure.

Finally, the participants highlight that their willingness to disclose might depend on factors such as the level of sensitivity of the personal information requested, trust in and familiarity with the brand and personalized offerings. Overall, the participants agree that information such as their phone number, home address or date of birth is strictly personal and has a high level of sensitivity: *"I consider my mobile number, home address, and even date of birth to be sensitive information" (SF).* Information sensitivity (e.g., Markos, Labrecque, and Milne 2018) thus affects consumers' privacy concerns, which in turn seems to lower their willingness to disclose information. In contrast, trust in and familiarity with the brand (e.g., Martin and Murphy 2017) facilitate willingness to disclose: *"I buy Zara online, and I let Zara*

deliver garments to my home because I know Zara" (LB); "With these platforms, I have no problem with sharing my data" (LP). Similarly, retailers can also increase personal information disclosure by giving consumers something in return (White 2004; Oliviero and Lunt 2004; Mazurek and Malagocka 2019). Indeed, people seem to be more inclined to share their data in exchange for offers, discounts, and other benefits: *"Personally, if they asked me for my details to make me an offer, I would share my data" (FM)*. Such disclosures take place whenever these pieces of information are requested in the customer journey: *"I would register at the beginning or at the payment stage for a discount" (SB).*

Discussion

Study 1 shows that privacy concerns are a key determinant of customers' willingness to disclose personal information and that the disclosure of such information is contingent on the control of consumers over these data. These results seem to be in line with the previous literature (e.g., Norberg and Horne 2014), which suggests that the perceived threat of loss of control increases privacy concerns. Study 1 also shows that this concern is linked to different phases of the customer purchase journey, suggesting that the consumers perceive an online retailer's request for personal information as too aggressive during the prepurchase phase. Consequently, the consumers' privacy concerns increase, and in turn, their willingness to disclose personal data is low. Furthermore, the consumers state that when there is a trustworthy and warm customer-retailer relationship, they are more inclined to disclose their personal information. In particular, the consumers' perceptions of warmth seem to lower the data disclosure concern. This is crucial in building and maintaining a favorable customer-retailer relationship (Odekerken-Schröder, De Wulf, and Schumacher 2003).

We expand on these two main themes, i.e., perceived warmth and privacy concerns, in the sections below.

Hypotheses development

Perceived warmth

The conceptualization of warmth dates back to Asch (1946), who used this term to refer to a situation where people have good intentions toward others. Ceteris paribus, different warmth perceptions affect judgments (Cuddy, Glick, and Beninger 2011).

Social judgment theory (Sherif, Sherif, and Nebergall 1965) explains why warmth plays an important role in consumers' perceptions of companies (Portal, Abratt, and Bendixen 2018). Warmth judgments increase perceived sincerity, kindness and friendliness and make the consumer feel warm or well-intended toward a company (Ang, Liou, and Wei 2018). Moreover, warmth perceptions generate positive emotional reactions and behaviors (e.g., Fiske et al. 2002; Fiske, Cuddy, and Glick 2007; Ivens et al. 2015; Möller and Herm 2013), which positively impact the customer-company relationship (Huang and Ha 2020). It follows that being able to elicit consumers' warmth perceptions is essential for companies.

Warmth judgments determine how we interact with others. Warmth is inferred from actions serving the interests of others (versus self-interest) and predicts the direction of intentions to benefit the perceiver (Scholer and Higgins 2008). Therefore, warmth perceptions reassure consumers regarding the intentions of a company and make consumers feel comfortable in self-disclosure.

Another key point that enhances the role of perceived warmth in explaining consumers' behavior is the primacy of its effect. Because warmth judgments are made more quickly than other judgments – such as competence – they consequently have a greater impact on overall attitudes toward others. According to Cuddy et al. (2011, p. 76), the "warmth primacy effects can be explained by the urgency with which people need to assess an unfamiliar other's warmth. As noted above, warmth assessments (friend or foe?) have primacy, whereas the

exact capabilities of the other represent a secondary consideration, consistent with Peeters' (2002) conceptualization of warmth as other-profitable and competence as self-profitable". In this vein, especially when consumers approach a company with which they are unfamiliar, a warmth judgment can serve to relieve their concerns.

However, as the primary issue is the judgment of others' intentions, due to the difficulty of changing such judgments (Cuddy, Glick, and Beninger 2011) companies should strive to increase warmth perceptions. A positive assessment of the retailer's intentions will therefore benefit the customer-company relationship (Fournier and Alvarez 2012).

We hypothesize that asking for personal information at the beginning of the purchasing experience (i.e., prepurchase and purchase phases) could reveal the retailer's self-interest of collecting data rather than serving the consumer, which, in turn, decreases customers' warmth perceptions. As revealed in Study 1, people might perceive an early request as being too pushy. Consequently, consumers will not believe that the retailer has good intentions toward them (i.e., acting based on self-utility rather than others' interests). As revealed by the qualitative results, when consumers do not perceive that they are a priority, their warmth perception decreases because they to some extent feel cheated. In contrast, asking for personal information at the end of the purchasing experience (i.e., postpurchase phase) does not negatively affect warmth perceptions since the customer's purpose is treated as a priority. In this latter case, the customer perceives that the retailer's intention is to primarily benefit the customer. Therefore, guided by these qualitative findings and according to the theoretical background provided by social judgment theory, we propose the following hypothesis:

H1: The level of perceived warmth toward a company is contingent on the customer purchase phase, during which the retailer requests the customer's personal information. Specifically,

compared to the prepurchase phase, perceived warmth gradually increases during the purchase and postpurchase phases.

Privacy concerns

Consumers' privacy concerns consist of apprehensiveness over safety and control over their personal information (Malhotra, Kim, and Agarwal, 2004). The literature uses the concept as a psychological construct that refers to a "proxy for measuring consumer privacy, operationalized as consumer beliefs, attitudes, and perceptions about their privacy" (Martin and Murphy 2017, p. 136).

In the online context, privacy concerns can be described as consumers' anxiety over the handling of their personal information (Lwin, Wirtz, and Williams, 2007; Mothersbaugh et al., 2012). In this regard, the literature has investigated this topic in depth because of its relevance to both retailers and consumers (Oliviero and Lunt 2004). To date, online retailers can collect, store, and exchange customer data that are particularly useful for implementing marketing strategies such as tailored products and personalized advertising (Glazer 1999; Inman and Nikolova 2017). However, customers might feel discomfort due to this systematic data collection, particularly when retailers misuse their private information, thus increasing their concerns. As a result, customers might be reticent in disclosing their personal information (Phelps, Nowak, and Ferrell, 2000; Inman and Nikolova 2017; Martin and Murphy 2017).

An extensive body of research has investigated the main determinants and consequences of privacy concerns. Factors such as contextual cues (John, Acquisti, and Loewenstein 2011) and the extent of advertising personalization (Schumann, von Wangenheim, and Groene 2014; Kim, Barasz, and John 2018) have been shown to affect privacy concern perceptions. In parallel, privacy concerns are pivotal in determining whether people share their data (i.e.,

willingness to disclose; e.g., Phelps, Nowak, and Ferrell 2000; John, Acquisti, and Loewenstein 2011).

Measuring how privacy concerns are perceived in all phases of the customer purchase journey (i.e., prepurchase, purchase, and postpurchase phases) and whether a higher perception of warmth can diminish overall privacy concerns remain unresolved issues that are even more relevant in the online retailing context in which the boundaries among the channels are blurred and the consumer shopping journey is unpredictable and complex (Beck and Rygl 2015; Lemon and Verhoef 2016).

Warmth perception affects the extent to which people trust the motives of others, establishing whether companies have friendly intentions toward their customers (Antonetti and Maklan 2016). Therefore, a high level of warmth perception decreases customers' privacy concerns, which is particularly relevant given that privacy concerns should reduce customers' willingness to disclose personal information. Building upon this background and the qualitative findings, we expect that when retailers are able to create a warm perception among their customers, their customers will reciprocate by disclosing their personal information through a reduction in privacy concerns. In contrast, when retailers act primarily for selfish reasons, consumers might perceive them as insincere and not well-intended, increasing their privacy concerns and, in turn, reducing their willingness to disclose.

More formally, we propose the following:

H2: Perceived warmth reduces consumers' privacy concerns such that high levels of perceived warmth have a negative impact on the level of concern.

H3: Privacy concerns reduce customers' willingness to disclose personal information.

Study 2

Data collection, design and procedures

Study 2 is a between-subjects experiment with a single factor, i.e., the phase in the customer purchase journey, with the following three levels: the prepurchase phase, purchase phase and postpurchase phase. We collected the data through the Prolific Academic (ProA) online crowdsourcing platform given some recent evidence that – compared to other platforms – its participants produce higher-quality data (Peer et al. 2017).

The study was conducted in June 2019. The respondents were prescreened following two criteria. The first was nationality. Specifically, the experiment was performed only with people of Italian nationality to be consistent with the sample of participants of Study 1. The second was the mother tongue (i.e., the Italian language) to ensure comprehension of the questionnaire and the stimuli.

First, the respondents were asked to think about a brand with which they were familiar. We opted for this solution – excluding the presentation of the same brand for all respondents – to control for the familiarity with the brand, which could have affected consumer reactions (Jeng 2017). Then, the respondents were asked to imagine that they wanted to buy a fashion item online from the brand they indicated. Because the aim of this study is to examine the influence of the three purchase phases on willingness to disclose, we created three different scenarios.

The prepurchase phase scenario was created by asking the consumers to imagine that they had to *"log on to the site to search for your product, which you have not yet purchased, and by doing so, you are immediately asked to provide some personal data"*. In the purchase phase scenario, the consumers read the following: *"log on to the site to choose your product, and while you are buying it, you are asked to provide some personal information"*. The postpurchase scenario read as follows: *"log on to the site to choose your product, select the item you want to buy, and finally, pay for and buy it. Once the purchase process is finished,*

you are then asked to provide some personal data". All scenarios presented the same personal information request as follows: full name, date of birth, e-mail address, home address and mobile number. The script was written in English, translated into Italian and then back-translated into English. The back-translation method was used to ensure that the Italian version of the questionnaire had the same content as the English version (Sekaran 1983). According to the cross-cultural literature (Epstein et al. 2015), the purpose of back-translation is to highlight discrepancies between the source document and the translation. The back-translation step is generally considered to be the best practice for avoiding inaccuracies in the translation phase (Su and Parham 2002). We used two bilingual translators who were familiar with the source and target languages. A bilingual translator produced an initial translation from the source version of the items included in the questionnaire (English) into the target version (Italian). Next, another bilingual translator translated this material back into the source language (English). The back-translated version and the source version were then compared to check for equivalence of meaning. The back-translation process was repeated twice until no mistakes in meaning were found.

The participants were randomly assigned to one of three conditions (prepurchase phase, purchase phase, postpurchase phase). Afterwards, we measured their perceived warmth, privacy concerns and willingness to disclose personal information using a 7-point Likert scale (1=strongly disagree; 7=strongly agree). The participants completed the measures of perceived warmth (α= .92) using a 6-item scale adapted from Wu et al. (2017) ("To what extent does the brand appear friendly, well-intentioned, trustworthy, warm, good-natured, and sincere?").

We measured privacy concerns (α= .92) using a 4-item scale adapted from Lwin et al. (2007): "How concerned are you that your personal data may be used for purposes other than the reason for which you provided the information?", "How concerned are you about your online

personal privacy on this website?", "How concerned are you about the fact that this website might know/track the sites you visited?", and "How concerned are you about this website sharing your personal information with other parties?".

Then, the participants provided ratings on their willingness to disclose (α= .93) using three items on a seven-point semantic scale by Anderson and Agarwal (2011). Finally, we collected demographic data (age and gender).

Results

Four hundred and one participants took part in Study 2 (M_{age} 30.6; male 51%).

We predicted that the customers in the postpurchase phase (versus the prepurchase phase and purchase phase) condition will have higher perceived warmth (H1), which will lead to lower privacy concerns (H2), which in turn should facilitate their willingness to disclose personal information (H3).

We performed a serial mediation test of the multilevel categorical variable indirect effects employing a bias-corrected bootstrap procedure (Hayes's Model 6; n = 10,000 as recommended by Hayes and Preacher [2014]) using Hayes' PROCESS macro, with the customer purchase journey phase (prepurchase, purchase and postpurchase) as a multicategorical independent variable, perceived warmth (mediator 1) and privacy concerns (mediator 2) as the sequential mediators and willingness to disclose personal information as the dependent variable.

We conducted the analysis in two consecutive runs (using the same bootstrap samples) using the prepurchase condition as the reference group and comparing it with the other two conditions. Thus, in the first run, we used dummy coding and compared the prepurchase condition with the purchase condition (independent factor) (purchase phase: 1 = yes, 0 = no) and the prepurchase condition versus postpurchase condition as the covariate (prepurchase

phase: 1 = yes, 0 = no); in the second run, the codes were swapped (see Hayes and Preacher 2013; Madzharov, Block, and Morrin 2015).

The results for the prepurchase condition versus purchase condition comparison showed no significant serial indirect effects of phase on willingness to disclose through perceived warmth and privacy concerns (indirect effect b = .01; Confidence Interval (CI) 95% [- 0.01, 0.04]).

Conversely, the results for the prepurchase condition versus postpurchase condition comparison showed significant serial indirect effects of phase on willingness to disclose through perceived warmth and privacy concerns (indirect effect b = .03; CI 95% [0.006, 0.07]).

Consistent with H1, the participants in the prepurchase and purchase conditions (versus postpurchase condition) estimated a lower perception of warmth (mediator 1; M_{pre}=4.25, $M_{purchase}$=4.4, M_{post}=4.6). Specifically, the postpurchase phase has a positive and significant effect on perceived warmth (mediator 1) (b = .34, $p < .05$). Furthermore, the analysis revealed that perceived warmth reduced privacy concerns (b = -.31, $p < .01$), which are the second mediator, supporting H2. In turn, privacy concerns reduced the customers' willingness to disclose (b = -.29, $p < .01$). Thus, H3 is also supported. Those in the postpurchase condition (versus prepurchase and purchase conditions) who felt a higher level of warmth also felt fewer privacy concerns (M_{post}=4.4, M_{pre}=4.9, $M_{purchase}$=4.6), and, ultimately, they were more willing to disclose personal information (M_{post}=3.9, M_{pre}=3.6, $M_{purchase}$=4). Figure 2 summarizes the results.

[PLEASE INSERT FIGURE 2 HERE]

Discussion

This study supports our theorizing (H1, H2, and H3) and shows that perceived warmth is contingent on when personal information is requested during the online customer purchase journey and that perceived warmth increases customers' willingness to disclose personal data by reducing privacy concerns. As expected, compared to the prepurchase phase, perceived warmth increases gradually in the purchase and postpurchase phases. In turn, perceived warmth reduces customers' privacy concerns, thus leading to a higher willingness to disclose personal information.

Study 3

In Study 1, we explored the factors inhibiting customers' disclosure of personal data and found that the consumers were concerned about their privacy and that perceived warmth toward the brand was able to mitigate these concerns. This qualitative approach developed hypotheses; however, it did not make it possible to draw causal conclusions. In Study 2, we provided laboratory evidence suggesting that the level of perceived warmth toward a company is contingent on the customer purchase phase during which the company asks the customer for personal information, and the level of perceived warmth is the highest during the postpurchase phase. We also found that perceived warmth reduces consumers' privacy concerns and, in turn, increases customers' willingness to disclose personal information. However, we still have not established whether these effects translate into actual behavior, nor have we controlled for other factors such as familiarity with the brand. Therefore, in Study 3, we compare customers' actual disclosure of personal information across the customer purchase journey phases (pre- and postpurchase) in the field while actively controlling for familiarity with the brand and other sociodemographic variables (age and gender).

Data collection, design, and procedures

The field study in Study 3 features an online clothing store and was conducted during November 2019. For this experiment, we manipulated the moment at which the customers were asked to provide their personal data (prepurchase versus postpurchase). Specifically, under the prepurchase condition, the customers had the option to provide their personal information (i.e., full name, date of birth, e-mail address, home address and mobile number) when entering the shopping section of the store. Otherwise, they could skip this task. If they decided to provide their personal information, they were required to fill in all four fields. In the postpurchase condition, these pieces of information were required – once again, as an optional field—immediately after the customers completed the transaction. As in Study 2, we measured perceived warmth (α= .82) and privacy concerns (α= .85) using previously validated scales adapted from Wu et al. (2017) and Lwin et al. (2007), respectively.

Finally, along with collecting the age and gender of the customers, we collected information on the familiarity with the online store, measuring the number of past completed transactions.

The customers were randomly assigned to the two conditions when entering the website for a one-week period. Our focus was the proportion of customers who revealed their personal information across conditions, measured individually as a yes/no binary variable. We also collected data about purchase spending and conversion rates (i.e., the percentage of visitors who completed the transaction out of the total number of visitors) across conditions to control for possible spillover effects.

Results

During the one-week study period, two hundred and fifty-eight customers completed a transaction with the company (M_{age} 38.19; male 49%).

Coherent with Study 2, we predicted that the customers in the postpurchase phase (versus prepurchase phase) condition will show higher perceived warmth (H1), which will reduce privacy concerns (H2). In turn, privacy concerns should lower customers' actual disclosure of personal information (H3). To test our hypotheses, we conducted a serial mediation analysis using the PROCESS macro (Model 6) by Hayes (2017) with the customer purchase journey phase (prepurchase versus postpurchase) as the independent variable, perceived warmth (mediator 1) and privacy concerns (mediator 2) as mediators, and the actual disclosure of personal information as the dependent variable. As established in the prior experimental research, we used a dummy variable coding approach to include the experimental treatments as the independent variables in the model (Bagozzi 1977). Specifically, the prepurchase phase was coded as 0 while the postpurchase phase was coded as 1. Regarding the potential spillover effects that we measured, we observed no significant differences in purchase spending and conversion rates across conditions.

As shown in Table 2, the results suggest that the postpurchase phase (versus prepurchase phase) affects the customers' actual disclosure via perceived warmth and privacy concerns (b = .01; CI 95% [0.002, 0.04]). Specifically, the postpurchase phase has a positive and significant effect on perceived warmth (mediator 1) (b = .33, $p < .05$; M_{pre}=4.4, M_{post}=4.8), thus supporting H1. Consistent with H2, the findings reveal that perceived warmth has a significant and negative effect on the second mediator, which is privacy concerns (b = -.20, $p = 0.01$; M_{pre}=4.5, M_{post}=4.2). Finally, privacy concerns reduce the customers' actual disclosure of personal information (b = -.22, $p < 0.01$; M_{pre}=3.6, M_{post}=4.5), providing evidence for the relationship hypothesized in H3. We also checked the effect of familiarity, age and gender on perceived warmth, privacy concerns and actual disclosure. The results show that in the case of perceived warmth, familiarity with the brand is barely significant (b = .09, $p = 0.09$) while age and gender do not show a significant effect. Moreover, age

significantly impacts privacy concerns and actual disclosure (b = .02, $p < .05$; b = .02, $p = .09$) while familiarity and gender do not have a significant effect in both cases.

[PLEASE INSERT TABLE 2 HERE]

Discussion

Measuring actual customers' disclosure of personal information, Study 3 confirms the previous findings in the field. Compared to when the request for personal information is made before the purchase, customers disclose their data more easily after the purchase. In line with Study 2, this effect is explained by higher feelings of perceived warmth, which in turn mitigate privacy concerns. The results, which provide evidence for the mediating role of perceived warmth and privacy concerns in the customers' information disclosure, also hold when controlling for familiarity with the brand and gender. However, privacy concerns and disclosure of personal information vary depending on the consumers' age. The higher the consumers' age is, the higher their concerns about privacy will be. Importantly, the moment at which personal information is requested did not influence the conversion rates of the online fashion retailer.

Study 4

Study 2 and Study 3 suggest that customers disclose their data more easily after a purchase because of higher perceived warmth. Study 4 investigates the role of an important boundary condition in the relationship between the customer purchase phase and perceived warmth during the postpurchase phase. Specifically, we assess whether requiring low sensitive information first versus highly sensitive information first has an impact on the willingness to

disclose through perceived warmth. The previous literature (e.g., Markos, Labrecque, and Milne 2018; Mothersbaugh et al. 2012; see Table 1) differentiates between low sensitive information (i.e., demographic information such as one's name) and highly sensitive information (i.e., contact information such as one's home address). Therefore, we test whether asking for highly sensitive information first (i.e., contact information) reduces perceived warmth and, in turn, decreases customers' disclosure.

Data collection, design, and procedures

Study 4 is a laboratory study conducted in Italy in February 2020. A one-way experimental design (order request: low sensitive information first versus highly sensitive information first) was adopted. The sample included people registered to the lab and was preceded by a preselection phase to include participants with prior online shopping experience. This final stratified sample included both students and workers.

The respondents were randomly assigned to one of the two conditions (low sensitive information first versus highly sensitive information first), and they were asked to think about a brand with which they were familiar. Consistent with Study 2, the respondents were asked to imagine that they wanted to buy a fashion item online from the brand they indicated. Because the aim of this study is to examine the boundary condition of perceived warmth during the postpurchase phase, we focused on the following postpurchase scenario: *"You log on to the website and select the product. Soon after the purchase, you are immediately asked to provide some personal data"*. Then, the participants were presented with a different order of sensitive information as follows: demographics (e.g., name and date of birth) were presented first under the low sensitive information condition while under the highly sensitive condition, contact information (i.e., home address and telephone number) was presented first (see Appendix A).

Subsequently, we measured the participants' perceived warmth and willingness to disclose personal information using a 7-point Likert scale (1=strongly disagree; 7=strongly agree). As described in Study 2, the participants completed the measures of perceived warmth (α= .81) using a 6-item scale adapted from Wu et al. (2017) and willingness to disclose (α= .78) using three items on the seven-point semantic scale by Anderson and Agarwal (2011). Finally, we collected the demographic data (age and gender).

Results

Two hundred and nineteen participants participated in Study 4 (M_{age} 27; 56% male).

We tested whether the order of the request for personal information moderates perceived warmth. Specifically, we expect that when highly sensitive information (i.e., contact information) is requested first, consumers tend to perceive the retailer as less warm, which should lower their willingness to disclose personal data.

Therefore, we tested a mediation model using a PROCESS macro (Model 4) by Hayes (2017) with the order request as the independent variable and perceived warmth as the mediator. The low sensitive information condition was coded as 0 while the highly sensitive information condition was coded as 1.

As shown in Table 3, the highly sensitive information order request has a significant and negative effect on perceived warmth (b = -.41, $p < 0.01$), indicating that asking for highly personal information first reduces the warm perception toward the online retailer ($M_{lowinfo}$=3.8, $M_{highinfo}$=3.4). In turn, perceived warmth positively affects the willingness to disclose personal information (b = .43, $p < 0.01$; $M_{lowinfo}$=3.5, $M_{highinfo}$=2.9). Finally, after controlling for the mediator, the order request remains a significant predictor of customers' willingness to disclose personal data (b = -.45, $p < 0.05$). This finding indicates a partially

mediated model. We also checked the effect of age and gender on perceived warmth and willingness to disclose without finding a significant effect.

[PLEASE INSERT TABLE 3 HERE]

Discussion

Study 4 tests and finds evidence supporting the moderating role of the order request of sensitive information on perceived warmth, thus finding an important boundary condition. This study also focuses on a specific phase of the customer purchase journey (i.e., the postpurchase phase). As expected, the results show that the order request affects perceived warmth such that requesting highly sensitive information (i.e., contact information) first reduces perceived warmth, which, in turn, hampers customers' willingness to disclose. The results of this study help explain the conditions under which perceived warmth cannot be activated after a purchase, thus reconciling the evidence from the focus group and the previous literature (e.g., Markos, Labrecque, and Milne 2018; Mothersbaugh et al. 2012). In particular, although online retailers need both high and low sensitive information to complete a transaction, the order of such requests is salient for retaining customers' perceived warmth.

General discussion

Although collecting personal information is crucial for retailers to satisfy their actual and potential customers' needs, to date, the discussion regarding the determinants of customers' willingness to disclose personal information throughout the online customer purchase journey is limited. Since consumers seem to be increasingly reluctant to share their information, retailers must maximize their chances of obtaining such information by asking them at the right moment.

The prior research concerning customers' information disclosure (e.g., Marzurek and Malagocka 2019; Walsh, Forest, and Orehek 2020; Schumann, von Wangenheim, and Groene 2014; Kim, Barasz, and John 2018) has mainly investigated this phenomenon with regard to social media platforms and personalized advertising. However, the events occurring during the online customer purchase journey have not been specifically considered.

Against this background, we explore the role of perceived warmth as a novel mechanism that might explain customers' information disclosure throughout the online customer journey. Drawing from our qualitative evidence and social judgment theory, we shed light on when and why customers are more prone to share their information when purchasing online by showing how perceived warmth mitigates privacy concerns during the postpurchase phase, thus leading to a higher willingness to disclose. Specifically, Study 1 and Study 2 show that when consumers are at the beginning of their online shopping experience (i.e., prepurchase and purchase phases), they are less likely to share their information. Study 3 measures customers' actual disclosure data and also ruled out the impact of the customer purchase journey phases on conversion rates. This result is especially important in the fashion retail sector, where many customers might abandon their online cart before completing a transaction. Hence, retail managers should allow consumers to begin their online journey and request their personal information at the end of the purchase process, conveying that the customer's purpose is treated as a priority. Finally, Study 4 finds a boundary condition (i.e., the order request of personal information) for the activation of perceived warmth, revealing that asking for highly sensitive information first reduces the benefits of perceived warmth, even during the postpurchase phase.

Conclusion

Theoretical and managerial implications

This research provides three main theoretical contributions. First, this paper shows the central role of perceived warmth in increasing the willingness to disclose. After an initial exploratory phase and adopting the lens of social judgment theory (Sherif, Sherif, and Nebergall 1965), we propose a new factor (i.e., perceived warmth) affecting the willingness to disclose. In particular, we show that when retailers are perceived as warm by their customers, those customers will be less concerned about privacy and company intentions, and they will feel more comfortable in self-disclosing. To the best of our knowledge, this study is the first to empirically test the mediating effect of perceived warmth on the willingness to disclose, thus offering a novel theoretical explanation of this issue. These findings enrich the debate regarding social judgments in retail.

Second, this paper enriches the prior literature concerning the willingness to disclose in the online context (Nguyen, Bin, and Campbell 2012; Acquisti, Brandimarte, and Loewenstein 2015) by explaining the role of the customer purchase journey. While the previous research has mainly focused on self-disclosure in social media contexts (e.g., Marzurek and Malagocka 2019; Walsh, Forest, and Orehek 2020), we investigate customers' information disclosure by considering all three phases of the customer purchase journey (i.e., prepurchase, purchase and postpurchase phases). The growing interest in the customer decision journey suggests that retailers are carefully considering how to design and manage the entire customer process (Lemon and Verhoef 2016). The present research identifies that when the company asks for personal information is a main determinant of customers' disclosure of personal information.

Third, our findings offer new insight for customer-company relationship theory (Rapp et al. 2013; Fournier 1998; Odekerken-Schröder, De Wulf, and Schumacher 2003). Asking for personal information at the end of the purchasing process favors the disclosure of such information, especially when the company asks for low sensitive information first.

From the retailer perspective, collecting consumers' personal information is of paramount importance. Companies regularly capture, store and analyze large amounts of data on their consumers every day, and they use such data to inform many activities, from product development and strategic planning to targeted marketing campaigns. The growth of the Internet and new technological platforms has facilitated the collection of customer data, enabling companies to track the customer journey online and reach customers more easily. Nonetheless, easy access to customer information increases customers' privacy concerns. On the one hand, the growing concerns regarding the use of personal data are justified by recent breach scandals, which increased by 33% in the past year according to research by Risk Based Security (2019). On the other hand, consumers are increasingly facing the negative effects of unauthorized or authorized (in very fine print) "terms and conditions" regarding the diffusion of personal data to third parties. Consequently, customers are less willing to share their personal information.

We offer managerial directives regarding *when* it is best to ask customers for their personal information (i.e., postpurchase) and explain *why* customers' self-disclosure varies depending on when the company asks for such information. Retail managers should ask consumers to provide personal information during the last phase of the customer purchase journey (i.e., postpurchase phase). Specifically, during this purchasing journey phase, customers are less concerned about their privacy since they perceive the company as being well-intentioned. In particular, our findings clearly show that consumers consider early information requests to be too aggressive, which worsens both the consumption experience and retailers' sales.

Retailers should strengthen their good intentions toward consumers and strive to increase their warmth perceptions. It is essential for retailers to understand that asking for personal information once the relationship is already established (i.e., postpurchase phase) is perceived more favorably by consumers because the focus is on the customer. The customer's direct

benefit should be emphasized. For instance, personal disclosure enables companies to offer tailored promotions and innovative trial products. Such efforts to enhance warmth perceptions are even more important with new consumers as they have little belief in an unfamiliar company's positive intentions. Indeed, the evidence that our results are robust to brand familiarity suggests that activating perceived warmth works with different types of customers, both loyal and occasional.

Limitations and further research

The present research is not without limitations. Specifically, our findings open up a rich research agenda.

First, consumers are often asked to share their personal information at physical stores and online stores, and both online and offline data collection occur during the pre- or postpurchase stage. Therefore, while we focus on the online context, a systematic in-depth analysis of this offline-online interplay could be valuable. Offline, people may be more willing to give their personal information, and because of social pressure, we expect that online, the acceptability of personal disclosure requests is more challenging (for companies).

Second, consumers might disclose some types of personal information more willingly than others. While we preliminarily checked this issue in Studies 3 and 4, understanding what is fair to ask (e.g., e-mail address, zip code, name, date of birth, domicile, or payment information) is an important issue to understand to avoid alienating customers. For instance, some specific information might be considered risky or highly sensitive to divulge compared to others (e.g., contact or financial information compared to demographics; Mothersbaugh et al. 2012), thus leading to lower customer disclosure (Markos, Milne, and Peltier 2017).

Third, consumers want to clearly know companies' plans for their personal data. The initial findings from Hess et al. (*in press*) suggest that the acceptability of online personalization is

contingent on consumer self-congruity. Additionally, given the explorative nature of this work, it is important to apply a fine-grained approach to the importance weight of all possible mechanisms that can increase the willingness to disclose. One effect that is more likely to appear postpurchase is a sense of reciprocity toward the company.

Fourth, offline retailers are significantly increasing the implementation of interactive technologies (e.g., facial recognition, real-time locating systems) in physical stores (Williems et al. 2017). These technologies enable brands to convert inputs (e.g., information about consumers' preferences) into outputs (e.g., information about product offerings) (Varadarajan et al. 2010; Inman and Nikolova 2017; Willems et al. 2017; Huddleston et al. 2018; Ferracuti et al. 2019). Thus, it is relevant to analyze the impact of these interactive technologies on consumers' willingness to disclose. As mentioned above, future research could examine online/offline interplay including changes in value perception (Inman and Nikolova 2017).

Finally, future research could replicate our studies in other countries to determine whether cultural differences may lead to differential effects on personal information disclosure.

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Figure 1. Overview of the studies

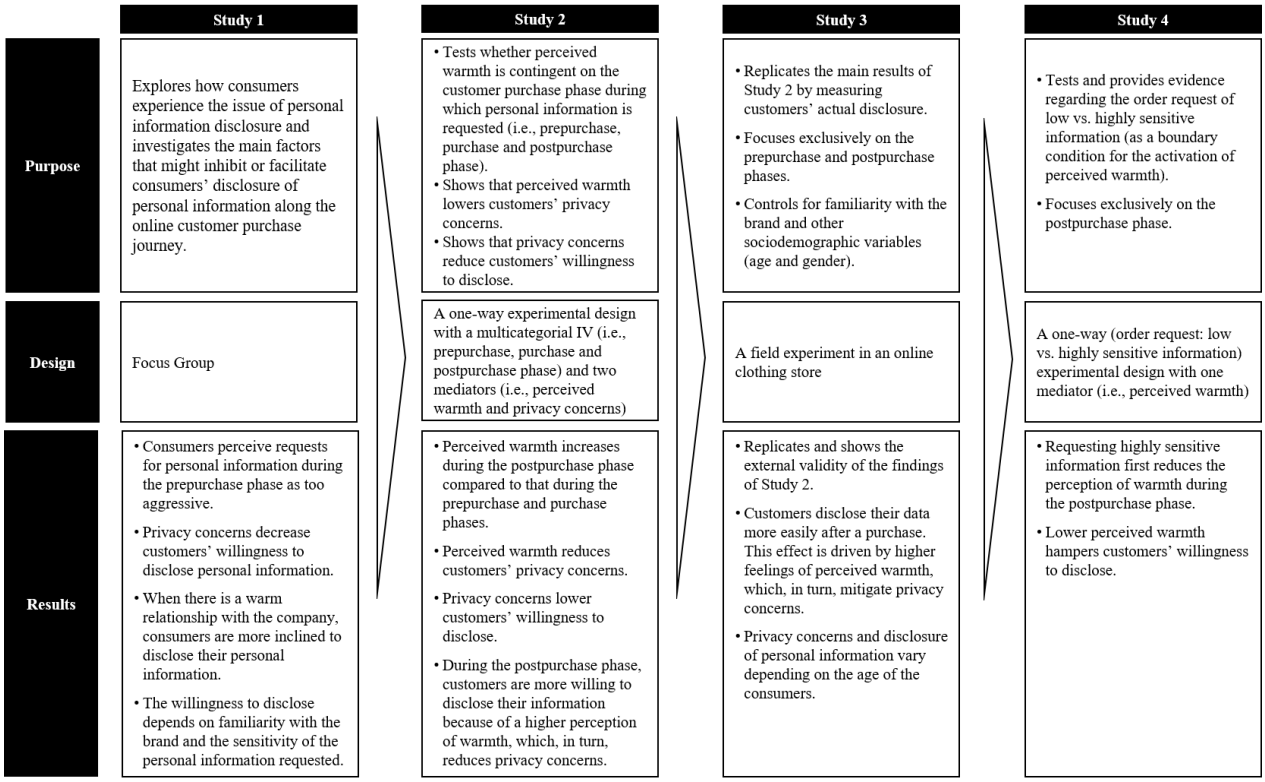

Figure 2. Results of Study 2

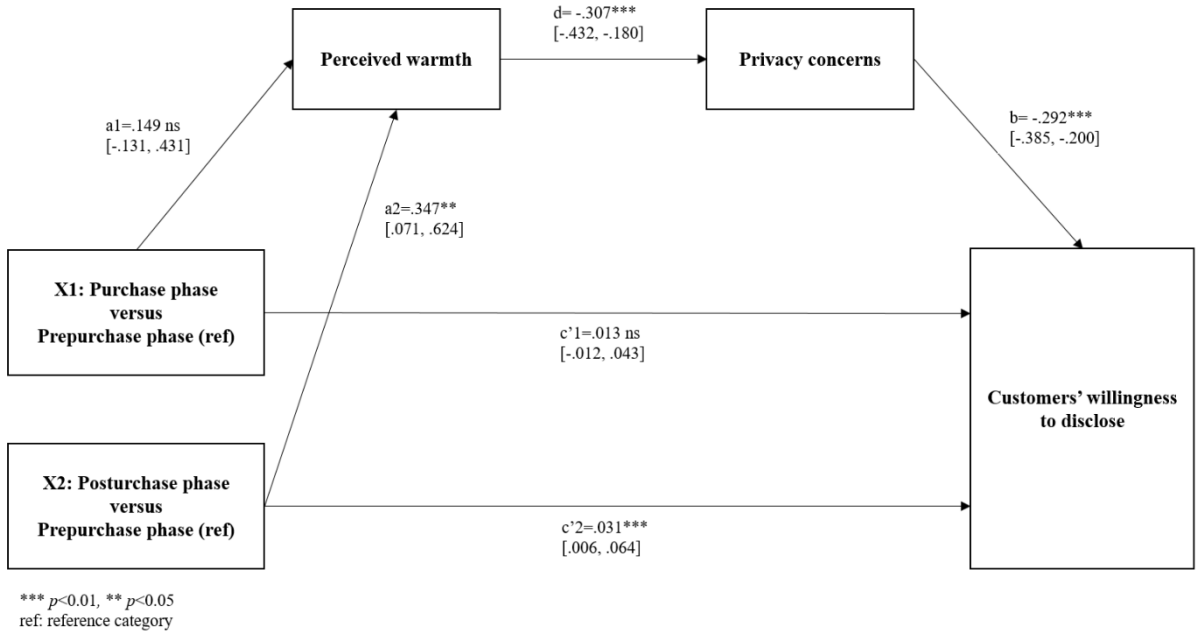

Table 1. Main contributions on willingness to disclose

Themes	Authors	Setting	Theoretical basis & key variables	Key findings
Information	Markos, Milne & Peltier, 2017	Privacy in cross-cultural contexts	Self-disclosure theory Cross-culture theory Country Perceived privacy control Consumer data relationship Information sensitivity	- Compared to private-self, public-self information shared in a friend context reduces the perception of information sensitivity, which in turn increases willingness to disclose.
	Markos, Labrecque & Milne, 2018	Public/private self-perspective in the offline and online context	Self-concept theory Self-disclosure theory Information type Exchange partner Self Perceived sensitivity	- The most sensitive information is the type of information that is on the high-privacy segment and is shared with unknown marketers. Although individual cultural factors exist, the pattern is the same in both countries considered.
	Mothersbaugh, Foxx II, Beatty & Wang, 2012	Online service context	Prospect theory Sensitivity of information Privacy concerns Firm−Specific Information control Perceived customization benefits	- Information sensitivity increases information control and privacy concerns and decreases the perceived customization benefits. - Information control and the perceived customization benefits increase willingness to disclose, while privacy concerns decrease willingness to disclose in case of highly sensitive information.
	Phelps, Nowak & Ferrell, 2000	Direct marketing and retailing	Privacy concerns Social contract theory Type of personal information Information control	- Consumer privacy concerns and willingness to disclose vary dramatically by information type and the perceived control over information.
Individual differences	Belk, 2013	Digital world	Extended self	- The disinhibition effect and impetuses for confession facilitate self-disclosure.

	Li, Lin & Wang, 2015	Social network sites	Communication privacy management Demographics Blogging productivity Information sensitivity	- Female, older and more productive users are more likely to disclose personal information. - Sensitive disclosure negatively impacts the breadth and depth of disclosure.
	Oliviero & Lunt, 2004	Online retailing	Perceived risk Privacy concerns Control Reward Trust	- The perceived benefits and the perceived control over information increase willingness to disclose, whereas privacy concerns reduce it. - Risk awareness reduces the level of trust and increases the demand for control and rewards.
Customer-company relationship	Kim, Barasz & John, 2018	Targeted online advertising on Facebook and other websites	Norms of information sharing Advertising transparency Advertising effectiveness Privacy concerns Trust	- Transparency about how consumers' personal information is used to generate ads by companies impacts ad effectiveness. - Consumers' privacy concerns over their interest in personalization mediate the impact of ad transparency on ad effectiveness.
	Martin & Murphy, 2017	Privacy in marketing and related disciplines	Privacy Privacy concerns Social contract theory Justice theory Social exchange theory Reactance theory Control Theory Behavioral decision theory Trust Personalization	- Consumer perceptions that a firm's privacy practices are fair promote trust and enhance willingness to disclose. - Consumers' heightened privacy concerns diminish willingness to disclose. - Consumers are more prone to reveal personal information when the perceived benefits outweigh the perceived costs, when they believe others have done so and when they perceive their ability to control the information. - Trust both promotes consumer information disclosure and encourages consumer–firm relationship formation in privacy-relevant contexts.
	Mazurek & Malagocka, 2019	Online privacy	Privacy concerns Self-disclosure theory Rewards Transparency Type of data	- Companies' transparency, consumers trust in the brand and the use of rewards increase willingness to share information, whereas information sensitivity decreases it.

			Trust	
	Moon, 2000	Interpersonal interactions via a computer	Self-disclosure theory Theory of social response Reciprocity Information sequence	- Reciprocity and the information sequence affect the likelihood that people will reveal intimate information about themselves, which in turn affects how consumers behave in subsequent interactions.
	Schumann, von Wangenheim & Groene, 2014	Online advertising on free web services	Social exchange theory Reciprocity theory Advertising relevance Relevance Reciprocity Control Need for distributive justice Privacy concern	- Reciprocity (vs. relevance) increases the likelihood both to opt in for behavioral targeting and to disclose personal information. - Relevance negatively affects perceived procedural justice, which fully mediates the subsequent negative effect on users' acceptance of behavioral targeting. - Reciprocity leads to a higher predicted need for distributive justice, which partially mediates users' acceptance of behavioral targeting.
	White, 2004	Grocery retailing	Social exchange theory Consumers' relationship perceptions Potential disclosure-related loss Information type Benefit offerings	- Consumers with deep relationship perceptions are more likely to reveal privacy-related personal information, and they are more reluctant to reveal embarrassing information. - The perceived consequences of disclosure mediate consumers' disclosure willingness.
Contextual differences	Acquisti, John & Loewenstein, 2012	Embarrassing and incriminating self-disclosure online	Social approvals Reciprocity Perceived intrusiveness Others' disclosure Ordering of question sensitivity	- Disclosure of personal information depends on the order in which questions of different levels of sensitivity are presented and improves when others make sensitive disclosures.
	Acquisti, Brandimarte & Loewenstein, 2015	Privacy and human behavior	Uncertainty Context dependence Malleability	- Various factors (i.e., the presence of government regulations, the website interface, the physical environment, other people's behavior) mitigate privacy concerns, which in turn affects willingness to disclose.

	John, Acquisti & Loewenstein, 2011	Online privacy	Privacy Self-disclosure theory Contextual cues Method of inquiry Survey's interface Privacy concerns Truthfulness of responses Question intrusiveness Admission rate of sensitive behaviors	- Disclosure of private information is responsive to environmental cues that bear little connection, or are even inversely related, to objective hazards.
	Nguyen, Bin & Campbell, 2012	Offline and online contexts	Social identity model of deindividuation Hyperpersonal computer-mediated theory Reduced cues theory Social information processing theory Media richness theory	- Self-disclosure is not greater in online contexts (compared to the offline context). - Factors such as the relationship between the communicators, the specific mode of communication, and the context of the interaction moderate the degree of disclosure.
	Walsh, Forest & Orehek, 2020	Social media (Facebook)	Self-disclosure theory Intimacy Perceived network responsiveness	- The perceived responsiveness of social media networks improves self-disclosure.
	Own study	Online fashion retailing	Social judgment theory Customer purchase journey phases Perceived Warmth Privacy concerns	- The level of perceived warmth toward a company is contingent on the customer purchase journey phase. Compared to the prepurchase phase, perceived warmth increases gradually in the purchase and postpurchase phases. - Perceived warmth reduces consumers' privacy concerns. - Privacy concerns decrease customers' willingness to disclose personal information.

Table 2. Model summary for the effect of the postpurchase phase (compared to prepurchase) on actual disclosure through perceived warmth and privacy concerns, controlling for brand familiarity.

Antecedent	Perceived warmth	Privacy concerns	Actual disclosure
Postpurchase phase	0.33 **	-0.30	0.64**
Perceived warmth	-	-0.20**	0.48 ***
Privacy concerns	-	-	-0.22 ***
Familiarity	0.90*	0.05	0.01
Gender	0.14	-0.21	0.24
Age	0.00	0.02**	0.02*

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$

Table 3. Model summary for the effect of the highly sensitive information first (compared to low sensitive information first) on willingness to disclose through perceived warmth.

Antecedent	Perceived warmth	Willingness to disclose
Highly sensitive information first	-0.41***	-0.45**
Perceived warmth	-	0.43 ***
Gender	-0.10	-0.27
Age	0.01	0.01

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$