An Exploration of Consumer Experiences in the Age of Artificial Intelligence: Perception of Being Observed

by

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This is to certify that I have examined this copy of a doctoral dissertation by

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and have found that it is complete and satisfactory in all respects, and that any and all revisions required by the final examining committee have been made.

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Dedicated to my loving family

ABSTRACT

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Doctor of Philosophy in Business Administration
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This dissertation explores consumers' experiences in the age of artificial intelligence and identifies a phenomenon, the perception of being observed, which evolved with the rapid transformation of the social environment with the technological revolution. I use the term "being observed" to refer to the instances where consumers think that they are being recorded, watched, or tracked by other parties that can be people or companies. Consisting of three essays, this dissertation aims to provide an understanding of what it means "to be observed" in the digital age, identify antecedents and consequences that are important for consumers' wellbeing and companies' success.

Essay 1 provides an understanding of the perception of being observed. Identifying the technology anxiety, self-consciousness and privacy concerns as antecedents, this research develops a scale to measure the extent to which individuals think that they are being observed. Further, it demonstrates that people who think that they are being observed are more sensitive to the data collection practices and protective of their data through limiting their information disclosure. Essay 2 explores an important outcome of being observed by companies for building successful relationships with consumers. The findings of this research show that being observed by companies decrease consumers' willingness to engage with the company, and use their resources such as time, money, and data in their interactions. Being observed by companies implicates that one's data, which is a resource, is being utilized by companies without reciprocity.

This, in turn, makes consumers be more protective of their available resources. Making the interaction more reciprocal can mitigate the effect. Essay 3 focuses on the consequences of the use of privacy notices, which are integrated into consumers' lives with the General Data Protection Regulations in 2018. This research shows that privacy notices decrease consumers' willingness to use websites and applications, and purchase products. The underlying mechanism is that privacy notices make it salient to the consumers that they are being observed by companies, which prompts people to calculate the benefits and costs of these observations for both parties. This calculus results in the idea that companies benefit more than consumers, which, in turn, decreases perceived customer orientation of the company, reducing usage intentions.

Overall, this dissertation contributes to the consumer behavior literature through enhancing our understanding of consumers' experiences evolving with the advancements in technology and providing important managerial and public policy implications.

ÖZETÇE

Yapay Zekâ Çağında Tüketici Deneyimlerinin İncelenmesi: İzlenme Hissi

Deniz Lefkeli
İşletme, Doktora
2 Ağustos 2022

Bu tez tüketicilerin yapay zekâ çağındaki deneyimlerini inceleyerek izlenme hissini tanımlamaktadır. Teknolojik devrimle hızla değişen sosyal çevrenin bir sonucu olan izlenme hissi, tüketicilerin diğer insanlar ya da şirketler tarafından kaydedildiğini, izlendiğini, takip edildiğini düşündüğü durumları kapsar. Üç bölümden oluşan bu tezin amacı dijital çağda izlenme hissinin ne olduğunu tanımlamak, bu hissin nedenlerini bulmak, tüketicilerin iyiliği ve şirketlerin başarısı için önemli olabilecek sonuçları ortaya çıkarmaktır.

Birinci bölüm izlenme hissiyle ilgili genel bir bilgi verir. Teknoloji kullanım endişesi, öz bilinç ve gizlilik endişesinin izlenme hissini arttırdığını gösterir. Bireylerin izlenme hissini ölçmek için bir ölçek geliştirir. Ayrıca, bu bölümün sonuçları izlenme hissi yüksek olan tüketicilerin şirketlerin veri toplamasına karşı daha duyarlı olduğunu ve bilgi paylaşımını sınırladığını gösterir. İkinci bölüm izlenme hissinin şirketlerin tüketicilerle başarılı ilişkiler kurabilmesine dair önemli sonuçları olduğunu gösterir. Bu araştırmanın sonuçları şirketler tarafından izlenince tüketicilerin etkileşimlerini azalttığını, daha az zaman, para ve veri kullandığını gösterir. Tüketicilere göre şirketler tarafından izlenmek, herhangi bir karşılık almadan veri kaynaklarının kullanılması demektir. Bu da tüketicileri kendi kaynaklarını korumaya iter. Etkileşimi karşılıklı hâle getirmek olumsuz etkileri azaltabilir. Üçüncü bölüm 2018'de Genel Veri Koruma Tüzüğü ile tüketicilerin hayatına dahil olan gizlilik bildirimlerini incelemektedir. Araştırmanın sonuçlarına göre gizlilik bildirimleri tüketicilerin internet sayfalarını ve uygulamaları kullanma isteğini ve bu sayfalardan ürün alma niyetini azaltmaktadır. Bunun nedeni de gizlilik bildirimlerinin tüketicilere şirketler tarafından izlendiğini fark ettirmesidir. Bu farkındalık tüketicilerin hem kendiler hem de şirketler için kâr-zarar analizi yapmasına neden olur.

Bu analizin sonuncunda da şirketlerin kendilerinden daha çok kâr ettiğini düşünür. Bu da şirketin ne kadar tüketici odaklı algılandığını ve tüketicilerin kullanma isteğini azaltır.

Genel olarak bu tez teknolojinin gelişimiyle değişen tüketici davranışlarını anlamamızı sağlayarak tüketici davranışları literatürüne katkıda bulunur. Şirketler ve kamu politikaları için önemli çıkarımlar sağlar.

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Chapter 1

INTRODUCTION

Imagine a consumer Jane who is roughly around your age and lives in the same area as you. In the morning, she wakes up at 8.00 a.m. thanks to her Apple Watch that tracks her sleeping routine. Google Maps informs her about the traffic while she is going to her office. After work, she comes back to home while listening to the songs that Spotify suggests based on the albums that she liked. Right after sunset, the lamps in her living room automatically turn on and she adjusts the brightness and color of the light bulbs to match her mood with the smart lighting system while watching a movie that Netflix suggests. She occasionally uses incognito browsers, covers the webcam of her computer, and does not give consent to cookies if she does not trust the website provider. She tries not to provide personal information on the phone, and she even feels uneasy about talking on intimate topics when her phone is by her side. She does not share many posts on social media regarding the details of her personal life. At the time of writing this dissertation, many consumers have similar routines to Jane. In every aspect of their lives, they use various forms of technology embedded with big data tools that capture information directly or indirectly, with or without consent and awareness of the consumers, providing an opportunity for companies to identify and predict behavioral patterns, and target each consumer individually (Ghosh and Moorthy 2015). For companies, big data can bring big profits (Walker 2015); however, the consumer-related outcomes of the data collection practices have remained unexplored. In this dissertation, I propose that the extensive use of big data brings along the need to explore consumers' side of the story and points towards a concept that evolved with the advances in technology: the perception of being observed. The motivation behind the topic of interest of this dissertation stems from the technological transformation that happened in the social lives of consumers in the last decade, recent events that increased consumers' awareness of data collection and use, and the academic approach towards being observed.

Data has become the most powerful resource in the ever-growing world of technology; however, consumers do not seem to understand the value of their personal data (Beresford, Kübler, and Preibusch 2012; Carrascal et al. 2013; Winegar and Sunstein 2019) or exert control over the release of personal information (Brandimarte, Acquisti,

and Loewenstein 2012; John, Acquisti, and Loewenstein 2011). Despite their recklessness in sharing data, consumers have seen how their data could be used for monitoring or manipulation purposes. Last decade has witnessed major data scandals showing that even the data that people willingly share online, not to mention the information that people release without awareness, can be transformed into a tool that manipulates people's ideas, attitudes, and behaviors. In 2010s, the confidential documents leaked by Wikileaks, a non-profit media organization that broadcasts censored materials which have political, ethical, or historical importance, revealed that CIA hacked computers and smartphones, and developed programs to attack televisions for monitoring purposes (MacAskill, Thielman, and Oltermann 2017). In 2018, Cambridge Analytica, a political data firm working with Donald Trump's election team, used data collected from the Facebook pages of millions of American voters to predict and influence their votes (Graham-Harrison and Cadwalladr 2018), which made an overwhelming impression in media. Even documentaries were made about this incident such as *The Great Hack*. In 2020, WhatsApp, one of the major mobile messaging applications, announced that it would share user data with Facebook. This change in the privacy policies caused a protest, leading a great number of people to delete the application and search for alternatives that were allegedly more protected such as Telegram and Signal (Murphy 2021). In fact, Facebook was the owner of WhatsApp, so the party that collected, stored, or used the data was the same. This incident changed the perception of consumers rather than their actual experience, and made them think that they were being recorded, tracked, watched, in other words, observed all the time. Finally, in 2021, Pandora Papers revealed the offshore accounts of politicians, celebrities, and executives in a global scale, which still has repercussions. These incidents suggest that personal data have been collected extensively by various parties and used for numerous purposes; however, individuals do not know the extent to which they are being recorded by companies and governments and whether the collected data may be uncovered at some point in future. More critically, these incidents have increased the awareness of consumers' regarding the data collection practices of companies and made them think about the possibility that their actions might be observed by other parties.

Several research streams, especially in psychology and marketing fields, have explored how people behave when they are being observed by other people (e.g., Argo, Dahl, and Manchanda 2005; Froming, Walker, and Lopyan 1982; Gangestad and Snyder 2000; Steinmetz, Xu, Fishbach, and Zhang 2016; Triplett 1898; Zajonc 1965).

Building on the findings of the research on social influence, this dissertation explores how people behave when they think that they are being observed by companies. I propose and provide evidence that the change of observer from people to companies creates a non-interactive, non-social form of social influence that can have important consequences for both consumers and companies. The reason why the new observer, which is the company, has an impact on consumer behavior is that how people act when they disclose information aligns with the idea that the other party is human (Jagadish 2020). This dissertation conceptualizes "being observed" as a form of passive information disclosure through which companies collect data from consumers and shows that consumers react negatively when they are observed by companies in the marketplace.

Substitution of humans with corporations implies several changes in the nature of observation. First, the memory capacity of a company is not bounded by limits similar to humans, as companies heavily invest in data collection and storage technologies (Gusher 2022). Second, the collected data can be used or misused by the company or third parties now or in future. Third, both the company can have access to previous data related to consumers, and consumers can also be reminded of what they have done in the past. These characteristics; namely, the pervasiveness of data collection, uncertainties in the collection, storage, and subsequent usage processes, and perpetual existence of the records of one's actions, influence what consumers think and how they act when it is salient to them. More specifically, they make consumers attribute power to companies in the sense that they have a belief about companies' ability to utilize their resources without providing something in return or benefit from collecting their data more than they do, as suggested by our findings. In fact, consumers have already adapted to being observed in certain settings with specific goals, such as being recorded by CCTV cameras in a store for security purposes. Further, they may expect to be observed in their interactions with some companies such as Amazon or Facebook which are notoriously known for the extensive use of data collection technologies. In a way, being observed has become the default in various contexts, and "not being observed" can cause suspicion, raise questions, and be considered unexpected. However, the findings of this dissertation show that even when consumers expect to be recorded and being observed can make them better off, the perception of being observed still leads to an aversive state which decreases consumers' intention to

use a service or purchase a product, negatively impacts their inferences about the company, and evokes a protective mindset.

Focusing on the age of artificial intelligence and its marketplace transformations and providing insights into the outcomes of extensive data collection of companies, this dissertation brings up a new perspective on the exploration of consumer behavior in the digital age and contributes to the emerging research stream exploring consumer technology interaction. Using multiple methods including surveys, experimental designs, scale development techniques, and big data tools, and incorporating related research in consumer behavior and psychology, I explore the consumer-related outcomes of data collection practices and their marketing implications. My main proposition is that consumers think that they are being observed (i.e., seen, watched, recorded, tracked) by other parties (i.e., companies, governments, people) without knowing it for sure, which shapes their behavior. More specifically, Essay 1 provides a conceptual understanding of the perception of being observed, develops a scale to measure the phenomenon at the individual level, proposes its potential antecedents, and demonstrates some of its consequences in an experimental setting. Essay 2 explores how being observed influences customer engagement and provides insights regarding the potential mechanism through which it decreases customers' willingness to spend their resources in their interactions with the companies. Essay 3 focuses on privacy notices, which make it salient to the consumers that they are being observed, and documents important consequences that can be critical for the success of the companies and the wellbeing of the consumers. Table 1.1 provides an overview of these essays and Table 1.2. provides a conceptual framework of the dissertation.

Table 1.1: Overview of Essays

An Exploration of the Consumer Experiences in the Age of Artificial Intelligence: Perception of Being Observed

Being Observed in the Digital Era: Conceptualization and Scale Development of the Perception of Being Observed

- Providing a conceptualization of the perception of being observed
- Identifying antecedents
- Developing a scale for measurement
- Demonstrating an important consequence that extends our understanding of privacy concerns and privacy protective behaviors

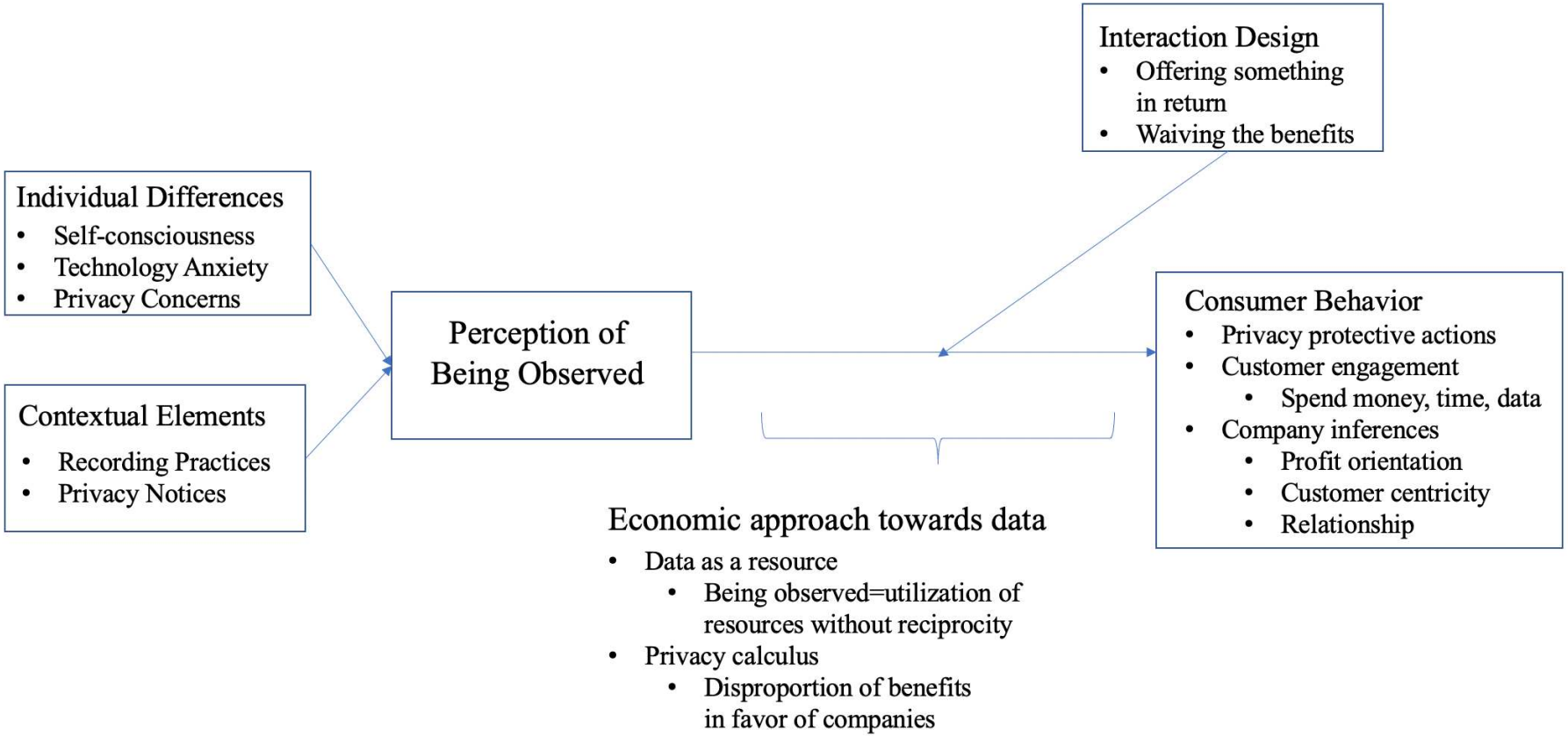
Quid Pro Quo: Being Observed By Companies Decreases Customer Engagement

- Exploring consequences of being observed by companies building on the literature on social influence and consumer brand relationships
- Discussing a potential difference between being observed by companies and consumers
- Demonstrating outcomes that can be detrimental for companies
- Identifying a process triggered by being observed by the companies
- Using data from both controlled experiments and secondary data
- Providing implications for designing interactions during which companies collect data on consumers

Cui Bono?: Exploring Consumers' Responses towards Privacy Notices

- Focusing on privacy notices
- Positioning being observed as a mechanism through which privacy notices influence consumer behavior
- Identifying a process triggered by the salience of being observed building on the privacy literature
- Using data from both controlled experiments and field studies
- Providing implications for marketers and public policy makers

Table 1.2: Conceptual Framework of the Dissertation



Synopsis of Chapter 2: Being Observed in the Digital Era: Conceptualization and Scale Development of the Perception of Being Observed details the development of the perception of being observed scale. We define the perception of being observed consumers think that their actions are being observed (i.e., seen, watched, recorded, tracked) by other parties (i.e., companies, governments, people) regardless of the actual knowledge about the existence of it. We develop a 10-item, uni-dimensional perception of being observed scale. Following the assessments of the scale, we conduct a series of studies to test the scale's convergent, discriminant, nomological, and predictive validity. We show that technology anxiety, self-consciousness and privacy concerns predict the perception of being observed. Further, people who experience the perception of being observed are more conservative in information disclosure.

Synopsis of Chapter 3: Quid Pro Quo: Being Observed by Companies Decreases Customer Engagement aims to provide insights regarding the outcomes of the ubiquitous use of recording practices in the marketplace. Across six studies, this chapter shows that being observed decreases customer engagement. Consumers become reluctant to engage with a company, share information, spend time or money on the products or services, and support the causes initiated by the company when they are being observed by the company. This effect is driven by a desire to protect one's resources. As being observed implies a utilization of one's data resources without reciprocity, consumers become more protective of their available resources when they are being observed by companies. The effect can be attenuated with interventions that can change the perceived reciprocity during the transaction.

Synopsis of Chapter 4: Cui Bono? Exploring Consumers' Responses towards Privacy Notices aims to provide insights into the consequences of the mandatory use of privacy notices. Across two field studies, three surveys one of which was conducted with executives, and four experiments, this chapter shows that consumers react negatively towards privacy notices; their intention to use an application and a browser or to purchase a product decreases. The reason behind this effect is that privacy notices make it salient to the consumers that they are being observed by companies. This, in turn, makes them calculate the benefits and costs each party receives. This calculus results in the belief that companies benefit from tracking practices more than consumers. The disproportion of benefits in favor of companies decreases the perceived customer-centricity of a company,

which reduces usage intentions. As the perceived profitability of a company increases, consumers consider them to be engaging in tracking more. Furthermore, non-profit companies are perceived as more profit oriented and less customer centric when they send privacy notices. The effect can be mitigated when companies give cues that can change the privacy calculus.

Chapter 2

BEING OBSERVED IN THE DIGITAL ERA: CONCEPTUALIZATION AND SCALE DEVELOPMENT OF THE PERCEPTION OF BEING OBSERVED

2.1 Introduction

At the time of writing, WhatsApp, one of the major mobile messaging applications, announced that it would share user data with Facebook, which evoked a consumer outcry, decreased the number of application downloads, and led to brand switching (Murphy 2021). In fact, WhatsApp had been sharing data with Facebook to a certain extent, and consumers did not actually know the scope of data being acquired by companies. The major element that changed with the recent events was the consumers' perception, rather than their actual experience of being observed.

Research exploring the consequences of being actually observed by others in an organizational setting showed that being observed can have a negative impact on individuals' wellbeing, increasing stress levels, decreasing employees' performances and productivity, and even changing the perceived trust and justice (e.g., Aiello and Kolb 1995; Alge 2001; Irving et al. 1986; Smith et al. 1992; Stanton and Barnes-Farrell 1996). In a household setting, being observed through video cameras, microphones, and wireless systems induces negative feelings such as anger and anxiety and makes people concerned and annoyed (Aalto University 2012). At a societal level, being observed increases one's tendency to conform to others, limits their autonomy, and leads to a loss of privacy and trust among the members of a society (Abrams et al. 1990; Maras 2011). Here, we focus on how individuals think that they are being observed by others rather than actually being observed.

Exemplified with this recent event of WhatsApp that had negative outcomes for both consumers and companies, the perception of being observed is a concept born out of the consumer-technology interaction. Despite the prevalence of technology and the

urgency to explore consumers' side of the story, academic research regarding the identification and measurement of the consumer-related outcomes of these interactions, such as the perception of being observed, has fallen behind. Addressing this gap in the literature, this research has two main objectives. First, we identify a novel phenomenon, the perception of being observed, which has grown out of the the-state-of-art recording technologies and their use in the marketplace. Second, we develop a psychometric scale to measure the perception of being observed which can be considered as the first step that incorporates the consumers' perspective towards the data collection practices. Following the suggested scale development steps (DeVellis 2017; Boateng et al. 2018; Nunnally and Bernstein 1967), we conduct 7 studies with more than 1800 responses, showing the reliability and validity of our scale. In Studies 1A and 1B, we generate items and conduct preliminary analysis. In Studies 2A and 2B, we purify the scale items. In Studies 3A and 3B, we test convergent and divergent validities. Finally, in Study 4, we show the predictive validity of our scale.

The remainder of this article is structured as follows. First, we develop a conceptualization of our construct through reviewing the literature on the perception of being observed. Then, we report 7 studies conducted for developing the perception of being observed scale. Finally, we discuss the results, the implications of which can open new research in the field.

2.2 Conceptualization of the Perception of Being Observed

Dating back to the 18th century, being observed, or even the feeling of being observed, has been explored in various disciplines and evolved in accordance with the changes in the society and technology. A close inspection of today's marketplace reveals that companies have started extensively collecting data on consumers that is potentially relevant as a consequence of the technological advancements in recording and storage (Diebold 2012). For instance, using big data for targeting consumers, orbitz.com displayed more expensive hotel options for the consumers who used Mac computers as opposed to PC counterparts, as the company discovered through tracking their customers that the Mac users tended to spend 30% more for a night at a hotel (Mattioli 2012). Similarly, Target developed an algorithm that calculated the consumers' pregnancy scores by analyzing their purchase patterns and used customized promotion strategies for them (Duhigg 2012). Trackers used for learning and predicting consumers' browsing habits

(Federal Trade Commission 2016), surveillance cameras (Satariano 2019) and technologies used for face-recognition (Feng 2019) track consumers' online and offline actions. These incidents and practices suggest that companies can observe even the simplest actions that consumers take regardless of their awareness.

Living in an age characterized by technological advancements and experiencing a rapid transformation of social life due to the extensive use of recording, tracking, and targeting practices, consumers are trying to find a way to adapt to the changing dynamics (Hoyer et al. 2020; Plangger and Montecchi 2020). They send messages in encrypted platforms that are untraceable (i.e., Telegram, Signal), purchase specially designed products that cover built-in cameras (i.e., CamPatch, Panzer Glass), and use services to clear their online presence (i.e., DeleteMe, Deseat. me, Vanish). Even when their health is at stake, people do not desire to be tracked as research has shown that Covid-19 concerns increase privacy concerns and decrease people's willingness to download contact tracing apps (Chan and Saqib 2021). So, consumers' demand for untraceable products and services, and their reluctance to be tracked for any reason suggest an awareness of being observed and indicate the need for further investigation.

Academic research has explored how people behave when they are observed by others (e.g., Froming, Walker, and Lopyan 1982; Gangestad and Snyder 2000; Steinmetz, Xu, Fishbach, and Zhang 2016; Triplett 1898; Zajonc 1965) through examining the actual presence or virtual indicators of other people. However, in the modern marketplace, people may feel observed due to the pervasiveness of the tracking technologies (Zwebner and Schrift, 2020) without the presence of other actors. Therefore, the perception of being observed scale could be a useful tool to measure the extent to which people think that they are being observed especially in technology-induced settings. We define the perception of being observed as the phenomenon in which consumers think that their actions are being observed (i.e., seen, watched, recorded, tracked) by other parties (i.e., companies, governments, people) even when they are not sure about the existence of the other parties. The perception of being observed captures the anticipation of being observed instead of others' actual observations and incorporates a non-social aspect introduced by the extensive use of technology in society.

2.3 Antecedents and Consequences of the Perception of Being Observed

The perception of being observed emerges out of consumer-technology interaction. It captures the extent to which an individual anticipates that they are the focus of the attention of other parties. Based on these critical notions, we propose technology anxiety, self-consciousness, and privacy concerns as potential antecedents of the perception of being observed. Further, we predict that higher levels of the perception of being observed can elicit privacy protective behavior.

2.3.1 Technology Anxiety

Technology anxiety is about the user's state of mind related to technology, capturing people's ability and willingness to engage with technological devices (Meuter et al. 2003). Nowadays, consumers are exposed to various manifestations of big data technologies and recording practices (i.e., recommendations based on prior use, customized campaigns, product suggestions), which can increase their anxiety about technology. There is no escape from using technology regularly in everyday life (i.e., smart tickets for public transportation, ATM or POS devices, loyalty cards, and applications). Even when people do not actively use it, they are exposed to it in one way or another (i.e., security cameras, passwords for ID verification). Despite the prevalent use of technology and recording practices, people do not know how these systems operate. The lack of knowledge can influence one’s ability and willingness to use technology, evoking technology anxiety.

Research showed that technology anxiety can negatively influence user experience (Hsu et al. 2019; Lin et al. 2016). It can decrease the acceptance and the use of various forms of technology in the marketplace (Demoulin and Djelassi 2016; Gelbrich and Sattler 2014) such as automated shopping assistants (Chen and Chang 2013) or self-service technologies (Meuter et al. 2003). However, social influence has an impact on individuals’ attitudes towards technology and their consequent behavior (Cooper and Zmud 1990). For instance, it can increase the adoption of mobile payments (Slade et al. 2015; Thakur 2013). However, this impact of social influence on technology is not unidirectional. In fact, technology anxiety and its related consequences can also shape the social life of individuals. Burkhardt and Brass (1990) showed that technology adoption can change the social structure as early adopters of technology become more central and powerful in the organization. More critical for our research, Yang and Forney (2013)

showed that people who experience a high level of technology anxiety are more likely to be susceptible to social influence. Taking a step back from being influenced by the others, we predict that technology anxiety can increase the anticipation of the presence of others. As individuals experiencing technology anxiety are more likely to rely on social influence which requires the actual or imagined presence of others, they will think that that their actions are being observed by other parties. Thus, we expect to see a positive correlation between technology anxiety and the perception of being observed.

2.3.2 Self-consciousness

Self-consciousness is defined as "the consistent tendency of persons to direct attention inward or outward" (Fenigstein, Scheier and Buss 1975, p.522), and several research streams imply an association between self-consciousness which refers to the extent to which an individual attends to their inner processes and the perception of being observed that captures the anticipation of other parties' attention.

Self-consciousness is considered as a trait as some people tend to attend to their selves more than others; however, certain situations can make people more self-conscious such as seeing one's reflection on a mirror, being in front of an audience or being recorded by a camera (Carver and Scheier 1978; Duval and Lalwani 1999). These situations can be frequently encountered in the marketplace; Pham et al. (2010) suggested that service providers influence customers' self-consciousness through using certain elements in the store such as mirrors or cameras or engaging in certain activities such as asking personal questions, addressing by their names, or even watching them like an audience. Considering the manipulation practices of self-consciousness, we can predict that the conditions in which consumers direct their attention to the self can also make people think that they are being observed by others.

Through self-consciousness, social cues have an influence on one's self-perception (Hull et al. 1988). Research showed that self-consciousness increases one's tendency to make internal attributions and consider themselves as the cause of events (Buss and Scheier 1976; Duval and Wicklund 1973). It leads customers to claim a greater share of credit when they have a positive or a negative experience with a service provider, which influences their ultimate satisfaction (Pham et al. 2010). These findings suggest

that consumers who have higher level of self-consciousness are not only at the center of their attentions, but also consider themselves as capable of influencing the outer world.

Another research stream showed that "people tend to believe that the social spotlight shines more brightly on them than it really does", which is referred to as *the spotlight effect* (Gilovich, Medvec and Savitsky 2000, p. 211). Individuals overestimate how much their appearances, actions, or even performances are discerned, evaluated, and remembered. Further, as self-consciousness increases, people tend to overperceive their selves as the target of an event (Fenigstein 1984). These findings provide additional evidence for our prediction that people have a tendency to think that they are being observed by other parties, and if an individual has a greater tendency to attend to their inner processes, they will be more likely to think that other people observe them and pay attention to their thoughts or feelings. Thus, we expect to see a positive correlation between self-consciousness and the perception of being observed.

2.3.3 Privacy, Privacy Concerns and Privacy Paradox

Privacy is a multidisciplinary construct. From psychology to information systems, many disciplines have aimed to conceptualize privacy and related notions from their own perspective. Historically, privacy was considered to be the right to be alone (Brandeis and Warren 1890). Later, it was defined as a commodity bound by economic principles that can be of value (Bennett 1995). Altman (1975, p. 24) described privacy allowance as "the selective control of access to self", while Margulis (1977) noted that one's actions with others can be controlled with the goal of enhancing autonomy in addition to minimizing vulnerability. Other views include that a privacy is a continuum from complete openness to secrecy (Petronio 2002), and one's right to control the flow of personal information (Nissenbaum 2009). Anticipation of the potential risk of information disclosure and its negative consequences create privacy concerns (Cho, Lee and Chung 2010; for a review; Smith, Dinev and Xu 2011). Recently scholars have demonstrated that privacy concerns can be a predictor or an outcome of a variety of constructs. It can influence the virality of a Tweet (Visentin, Tuan and Di Domenico 2021), effectiveness of personalization (Song, Lim and Oh 2021), perceived creepiness of a chatbot (Rajaobelina et al. 2021), and social media engagement (Bright, Lim and Logan 2021). Table 1 demonstrates a sample of research exploring predictors or consequences of privacy concerns in diverse settings.

Table 2.1: A Sample of Recent Research Exploring Privacy Concerns

Author(s) and Year	**Major Findings**
Bright, Lim and Logan, 2021	Privacy concerns decrease social media engagement, especially for people who have low levels of trust in the social media and who have low social media fatigue, and the effect is more pronounced when users do not commit to privacy protection behaviors.
Cloarec, Meyer-Waarden and Munzel, 2022	Among established privacy-related concepts including trust and risk, happiness with the internet is the strongest predictor of users' willingness to disclose information for personalization.
Cowan, Javornik and Jiang, 2020	In social media, privacy concerns decrease one's intention to use an augmented reality face filter and word of mouth.
Ioannou, Tussyadiah and Marshan, 2021	Mindfulness, as a personality trait, influences privacy concerns. Mindful consumers are likely to display lower privacy concerns.
Maseeh et al., 2021	Perceived risk increases privacy concerns while perceived benefits, trust, privacy policy, reputation and familiarity can mitigate them.
Massara, Raggiotto and Voss, 2020	Alongside the perceived privacy risks, mental accounting of the risks and benefits of data disclosure, and familiarity of the party that collects data influence consumer consent.
Rajaobelina, Tep, Arcand and Ricard, 2021	In an interaction with a chatbot, privacy concerns increase the sense of creepiness, which decreases loyalty.

Schmidt, Bornschein and Maier, 2020	Accepting a cookie notice which highlights that one's behavior can be tracked increases the perceived fairness of a price change as consumers attributes the cause of change to themselves rather than the company. This, in turn, increases one's willingness to purchase.
Song, Lim and Oh, 2021	Consumers who are highly concerned about privacy can decrease the enhancing effect of personalization on the intention to use.
Visentin, Tuan and Di Domenico, 2021	On Twitter, expressing privacy concerns on a Tweet prevents it from becoming viral.
This research	Privacy concerns increase one's perception of being observed. This can translate the privacy concerns into privacy protective behavior.

We predict that individuals who have high privacy concerns will be more likely to experience the perception of being observed. Being worried about losing control of their information or potential violations of privateness of one's data implies that other parties may observe them and even have access to their personal information. Thus, we expect to see a positive correlation between privacy concerns and the perception of being observed.

Although privacy concerns have important outcomes for both consumers and marketers, they may not always correspond to privacy protective behavior. On the one hand, people report that they are extremely worried about companies knowing the details of their lives (Hoffman and Novak 1997; Taylor 2003); however, they keep disclosing personal data (Acquisti and Grossklags 2005). This incongruity between people's attitudes and behavior in privacy issues is referred to as the privacy paradox (Norberg et al. 2007). For instance, research showed that contextual cues can increase information disclosure. Simply the way a question is asked influences individuals' concerns about privacy issues; people become more willing to disclose private information when they are asked indirectly (vs. directly) (John, Acquisti and Loewenstein 2011). Unless privacy concerns are made salient, consumers are comfortable sharing private information in unprofessional (vs. professional) websites even when the content of the information is

socially undesirable (John, Acquisti, and Loewenstein 2011). People's ability to control the release of or access to private information does not protect them from being vulnerable as enhancing individuals' control over privacy increases their willingness to divulge sensitive information through creating an illusory sense of security (Brandimarte, Acquisti, and Loewenstein 2013). These findings clearly demonstrate that contextual factors can influence the extent to which people are concerned about their privacy (Harborth and Pape 2021), and even inversely related cues can lead people to voluntarily disclose more information.

Individuals are not good at judging how protective they should be about personal information, and they are oblivious to the extent to which their personal data is collected, used, or shared with other parties (Acquisti, Brandimarte, and Loewenstein 2020), disregarding the possibility of privacy violation. Consumers are naive not only about the data collection process, but also about the other parties. Jagadish (2020) argues that individuals' thoughts, feelings, and actions in the domain of privacy have been aligned with the idea that privacy includes disclosing information to other humans. However, this is not the case anymore as the other party has been replaced with corporations. The former case can be considered a symmetrical, reciprocal, and even normative process. If an individual misuses the other party's private information, they can do it, too. The amount of information that people can store is also bounded by the limited capacities of humans. Nevertheless, the latter case is asymmetrical and limitless as consumers do not know the extent to which they are being recorded by companies. Further, companies investing in data collection and analysis technologies, can acquire and process more data which increases the asymmetry of information (Jagadish 2020). The reason why individuals are comfortable with disclosing information and their actions do not match their concerns can be driven by this information asymmetry.

In addition to being comfortable with disclosing sensitive personal information either to other people or corporations, people seem to underestimate the value of their data. Interestingly, they do not prefer paying for privacy (Beresford, Kübler and Preibusch 2012). For a price discount, they are willing to share personal information and, even without it, they are equally likely to choose between a retailer that requires sharing sensitive information and a privacy-friendly retailer. Further, individuals estimate that the monetary value of one's online browsing history is only 7 Euros, which is equivalent to

a Big-Mac Meal (Carrascal et al. 2013). For data privacy, they are willing to pay $5 per month, but they demand $80 for others' access (Winegar and Sunstein 2019). This disparity between the amount people are willing to pay and accept demonstrates that they seem to fail in understanding the importance of disclosing information despite their concerns, resulting from the advancements in the technologies of data collection and usage (Rainie and Duggan 2016). These advancements have also blurred the line between private and public spaces (Tene and Polonetsky 2013), suggesting that every decision an individual makes or every action that they take has a potential to be made public, known, and observed by other parties.

Particularly related to our topic of interest, Zwebner and Schrift (2020) have shown that this publicization of individuals' decision-making processes, in other words, being observed, threatens individuals' autonomy and leads to an aversion. Similarly, predicting consumers' preferences, a prevalent practice known as microtargeting, threatens their sense of free will, and makes them deviate from their own preferences (Schrift, Wertenbroch and Zwebner 2019). These findings have three main suggestions for our research. First, autonomy, which is considered to be one of the main functions of privacy (Westin, 1967), is violated when individuals' think that they are being observed by other parties. Second, certain practices existing in the marketplace can evoke this perception of being observed without the actual existence of other people. Third, this perception can elicit behavioral consequences aiming to terminate or counteract this state. Based on these suggestions, we propose that the perception of being observed may help explain the privacy paradox as it can convert one's concerns regarding privacy into actual behavior. As abovementioned studies and public surveys suggest, people's actions do not match their concerns about privacy. In order to take precautions or be protective against potential privacy violations, people should anticipate other parties' attention. Only when they think that they are being observed by other parties will they act in line with their concerns. Therefore, we predict that the perception of being observed can be an antecedent of privacy-protective behavior as people need to think about other parties potentially recording their behavior to take action against it.

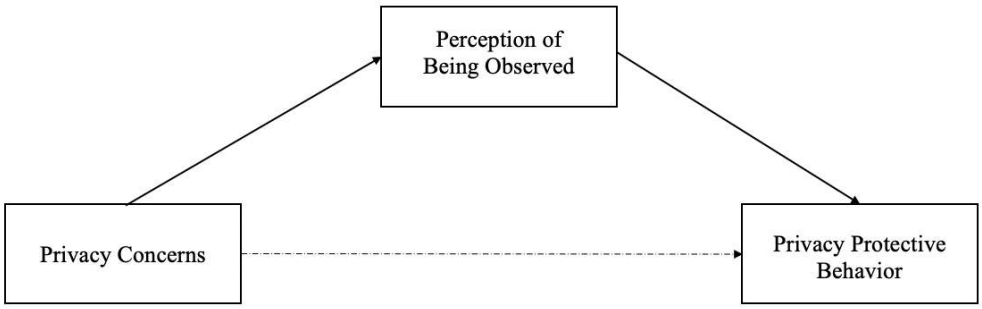


Figure 2.1: Conceptual Model

2.4 Method

We propose that consumers think about the possibility that their actions could be observed by other parties even when there is no one around and they are not being recorded. Incorporating individuals' perception of the practices existing in the marketplace, we conducted a series of studies to develop and validate a scale that measures the perception of being observed (Table 1). In Studies 1, 2, and 3, we aimed to identify the potential antecedents of the perception of being observed that we proposed in the conceptual development. The sample sizes for our studies have been determined based on the number of items. As suggested by the literature, we assigned 10 participants for every item in the scale and collected data accordingly (DeVellis 2017; Boateng et al. 2018; Nunnally and Bernstein 1967). In Study 4 (and Study 5 reported in the Appendix A), we tested our scale's predictive validity in an experimental setting, demonstrating one of the numerous consequences of this perception.

Table 2.2: Data samples used for scale development

Study	Sample	Sample size	Age mean	Age SD	Perception of Being Observed Mean	Perception of Being Observed SD
Item generation and content validity						
Study 1a: Item generation and content validity	Undergraduate and graduate students, university faculty	54	-	-	-	-
Study 1b: Preliminary scale assessment	Undergraduate students	295	21.9	2.03	4.62	.99
Item reduction and scale purification						
Study 2a: Exploratory Factor analysis	General US population	450	43.5	13.7	4.34	1.31
Study 2b: Confirmatory Factor Analysis	General US Population	143	43.2	12.1	3.97	1.49
Nomological and discriminant validity						
Study 3a: Nomological validity	General US population	545	43.6	12.2	3.65	1.13
Study 3b: Discriminant Validity	General US population	354	41.5	13.2	4.02	1.39
Predictive validity						
Study 4: The Perception of Being Observed and Information Disclosure	General US population	192	44.1	12.6	4.48	1.5

2.4.1 Study 1A: Item Generation and Content Validity

The main objective of Study 1A was to generate an initial pool of items for measuring the perception of being observed. With this goal, 40 undergraduate students from a European university were asked to fill an open-ended questionnaire in exchange for a course credit. Respondents were asked to report the extent to which they feel being observed. The survey included questions such as "Do you think that your actions are being recorded or

observed by other parties?", "Are there any specific occasions in which you experience it?", "Do you take precautions against it?". To explore whether the answers vary across different ages, we asked 8 middle aged professionals to complete our survey. We analyzed the responses of the participants to identify the common themes and diverse occasions which evoke this perception. By integrating the results of the conceptualization of the construct and the qualitative study, we generated a scale with 42 items.

In item generation, we aimed to be as inclusive as possible in terms of representing various contexts and capturing the temporal aspects. With this goal, we represented the settings in the items we generated that were mentioned by the respondents such as making purchases, receiving advertisements, and doing something different than usual as these contexts reflected the actual experience of consumers. Further, we presented similar activities in a way that pertained to past experiences, current events, and expectations about the future in two ways. First, we explicitly mentioned the time period using the phrases “in the future”, “right now”, “at that time”, and “any time”. Second, we used different verbs to denote the temporal aspect of the perception of being observed such as being seen, watched, and recorded. We assumed that “being watched” captured the present moment as it entailed simultaneity, “being seen” implied an event that happened in the past, and “being recorded” points towards the future as the records could be accessed by other parties in future. Further, we predict that the perception of being observed emerges out of consumers’ increasing interactions with technology. Therefore, any evident technological cue in an environment can trigger the perception of being observed. However, it is also possible that consumers have learned about the recording, tracking, observing, and manipulation practices that are done in the marketplace. In order to capture this aspect of the perception of being observed, we generated items that refer to the existing practices such as customized advertisements. However, even when consumers do not encounter a form of technology, they may experience the perception of being observed. Technology has provided the means to learn and control people’s both digital and physical experiences (Banerjee 2019) as consumers can be tracked by companies and other people even when they are not online. Therefore, we included items that does not include a specific cue but explore individuals’ general beliefs about the extent to which they are being observed.

To ensure the content validity of the scale, we delegated six judges who are competent in both scale development and the topic itself. These judges consisted of graduate students in the marketing or psychology departments and two professors of marketing. They were provided with the operational definition of the construct, asked to read the scale items and identify the problems related to the items such as ambiguity, similarity, and mismatch with the conceptual definition of the construct. Based on their feedback, one item was removed due to being semantically identical to another item, leaving 41 remaining items.

2.4.2 Study 1B: Preliminary Scale Assessment

The first sample consisted of 295 undergraduate students from a European university (61% female, M_{age} = 21.88). As it is recommended to use additional data to eliminate concerns that the results found are due to chance (Churchill Jr. 1979), we made our preliminary assessments with the student sample. 41 items were presented to the respondents on a 7-point Likert scale ("1" = *Strongly Disagree*, "7" = *Strongly Agree*). Cronbach's alpha for the overall scale was high, suggesting a high internal consistency (α = .94). We identified the items to be eliminated; however, we did not make any changes before collecting data from a larger, more representative sample.

2.4.3 Study 2A: Factor Analysis

Sample and reliability

We recruited participants from Cloud Research for scale assessment (Litman, Robinson and Abberbock 2017). All participants were asked to indicate the extent to which they agreed with the 41 items on a 7-point Likert Scale ("1" = *Strongly Disagree*, "7" = *Strongly Agree*). Seven participants failed to pass the attention check questions, and the test was terminated for them. After this exclusion, the validity and reliability analyses of the scale were made using the data obtained from the responses of 450 participants (58.44% female, M_{age} = 43.46). First, we ran Kaiser-Meyer-Olkin (KMO) and Bartlett tests. We found that the Kaiser-Meyer-Olkin value was 0.958, and Bartlett's test was significant ($p < .001$), suggesting that our sample was appropriate for factor analysis. Second, we checked the reliability results to explore the correlations among the items.

The initial version of the scale had an alpha of .96, suggesting a high internal consistency.

Principal Component Analysis

We performed a principal component analysis (PCA) to reduce the number of items as suggested for item reduction (Preacher and MacCallum 2003). Acknowledging that high internal consistency may also imply redundancy, the following analysis aimed to create the most reliable and valid scale with the fewest number of items.

In this analysis, the Eigenvalue was used to decide the number of dimensions or sub-scales; factors with an Eigenvalue that was greater than 1 were treated as a sub-dimension (Kaiser 1960, 1970). This initial analysis, supported by the Scree test (Cattell 1966), yielded 2 factors, and further analyses were conducted to reduce the redundant items. We eliminated the items based on psychometric rules. First, we removed items, the communalities of which were below 0.4 as these items did not have a substantial load on their factor (Osborne, Costello and Kellow 2008). Then, we examined the inter-item correlations. If an item was loading on multiple factors, and the difference between loading values were smaller than 0.20, we removed the item (Stamper and Masterson 2002). After this analysis, to make sure that there was no redundancy, we eliminated one of the versions of the items that were differentiated based on their temporal features as mentioned above. To illustrate, if an activity, such as “doing something different than usual” had two versions, one of them was eliminated based its factor loading. The one with the highest factor loading was retained, while the other item was removed from the scale. In addition to this reduction, we also eliminated the reverse coded item to minimize the risk of redundancy. Finally, we checked the inter-item correlation and deleted one more item due to its high correlation with two other items ($r > .07$) (Streiner, Norman, and Cairney 2015). As a result, 24 items were removed from the scale. After the extractions of the items, the new scale consisted of 17 items with two factors. By running a principal component analysis, we ensured that the scale was improved through removing the items which did not contribute significantly to any factor.

As we conceptualize the perception of being observed as a phenomenon that emerges upon engaging in various activities especially in technology- induced settings, we decided to remove four items that represent general beliefs about the recording

practices (i.e. “In general, I think that everyone is being recorded”, “Institutions (companies, governments etc.) are regularly recording my online activities”).

Exploratory Factor Analysis

After the item reduction, we conducted an Exploratory Factor Analysis (EFA) with the Maximum Likelihood approach (Fabrigar et al. 1999) with Direct Oblimin Rotation as suggested (Preacher and Maccallum 2003) to be able to determine the exact number of factors. EFA resulted in two factors in which all of the items’ factor loadings were higher for the first factor. Exploring inter-item correlations, we identified two groups of similar items with high correlations. The first group consisted of the items that were about doing something unusual or inappropriate and diverging from society, while the second group was about certain practices existing in the marketplace such as receiving advertisements and suggestions and accepting cookies. We decided to retain the items in the group that have the highest loading on a factor and the highest difference between their loadings on two factors which would explain a greater variance, and we opted to remove the remaining four items.

After these reductions, EFA yielded in one factor with 10 items, the Eigenvalue of which was greater than 1. The total explained variance percentage of the scale was 48.14% and the current version of the scale (Table 2) had an alpha of (.90), which suggested a high internal consistency. To confirm these results, we performed a confirmatory factor analysis (CFA) on the retained items. The model fit was satisfactory (χ^2 (35)= 172, root mean square error of approximation [RMSEA] = .09, Tucker-Lewis index [TLI]=.92, and confirmatory fit index [CFI] = .93). The details are provided in the Appendix A.

2.4.4 Study 2B: Confirmatory Factor Analysis

We administered our 10-item perception of being observed scale to an independent sample consisting of 143 participants for examining its robustness. The EFA (principal component with oblimin rotation) on the perception of being observed items yielded one

factor with an eigenvalue greater than 1 that explained 59.06% of the variance. As confirmation, we ran a CFA on the retained items, which also yielded a satisfactory model fit (χ^2 (35)= 104, root mean square error of approximation [RMSEA] = .1, Tucker-Lewis index [TLI]=.91, and confirmatory fit index [CFI] = .93) (Appendix A). The Cronbach's alpha for the items was .93.

Table 2.3: The Perception of Being Observed Scale Items

Items	**Item Loadings**
I have concerns that when I am using technological devices, I am being watched.	.80
I believe that I am being recorded even when I do not give consent.	.77
Even our simplest actions are being watched.	.77
I think my current online activities will be the focus of the other parties' attention in the future.	.72
In general, I think that everyone is being watched while they are making purchases.	.70
Whenever I do something different than usual, I feel like I am being watched.	.68
Coming across advertisements after I talk about a product makes me think that I am being recorded.	.63
What I share privately in my online networks can be seen by anyone.	.63
When I take a selfie, I can't help thinking about whether someone can connect to my phone and see my photos at that time.	.62
I think that I cannot control the extent to which I am being watched.	.58

2.4.5 Study 3A: Nomological Validity

We expected that technology anxiety and self-consciousness will increase one's perception of being observed. Study 3A aimed to test these proposed antecedents, establish nomological validity, test the reliability of the perception of being observed scale, and replicate the factor structure.

Sample and Results

Five hundred forty-five participants from the Cloud Research online panel completed this study in exchange for small payment. Participants were asked to complete the perception of being observed, technology anxiety, and self-consciousness scales, the order of which was randomized. After eliminating 11 participants who either failed to pass the attention check or did not complete the survey, we ran our analysis with the data collected from 534 participants (58.8% female, M_{age} = 43.60). To assess the association between technology anxiety and the perception of being observed, we used Meuter et al. 's technology anxiety scale (2003) (α = .769). The results showed that technology anxiety significantly predicted the perception of being observed (b=.26, t (532) =4.97, p < .001). To measure self-consciousness, we used the Self-Consciousness scale developed by Fenigstein, Scheier, and Busch (1975), which had a strong reliability (α = .874). The results showed that self-consciousness predicted the perception of being observed (b= .29, t (532) =5.40, p < .001). These findings suggest that one's level of self-consciousness and technology anxiety increased one's perception of being observed, and they are different but conceptually related constructs.

2.4.6 Study 3B: Discriminant Validity

We hypothesized that individuals' privacy concerns would increase their perception of being observed. Study 3B tested this hypothesis and aimed to differentiate these related constructs.

Sample and Results

Three hundred sixty-one participants from the Cloud Research online panel completed this study in exchange for minimal payment. As 7 participants were removed from the analysis for failing to pass the attention check questions, our sample consisted of 354 participants (55.9% female, M_{age} = 41.46). Privacy concerns were measured using a widely used scale measuring individuals' concerns about organizational information privacy practices (Smith, Milberg & Burke, 1996). The reliability index of the perception of being observed scale was .92, and it was .91 for the privacy concern scale. We asked participants to complete the scales. In order to prevent potential spillover effects, we asked them to complete self-esteem (Rosenberg 1979) and narcissism (Konrath, Meier and Bushmen 2014) scales in between. The order of the privacy concern and the

perception of being observed scales was counterbalanced. Controlling for the order of the scales, privacy concern significantly predicted the perception of being observed (F (2,351) = 12.79, $p < .001$., $R^2 = .068$). The more concerned consumers became, the more they experienced the perception of being observed *(*$b = .41$, t (351) = 4.962, $p < .001$). As we expected, self-esteem did not explain a significant amount of variance in the perception of being observed (p=.15) while narcissism had a small significant effect on it *(*$b = .13$, t (351) = 3.156, $p < .05$).

These findings suggest that privacy concern is a related construct as it increased the perception of being observed. However, as the correlation among them is low, they are different from each other.

Table 2.4: Descriptive statistics and Pearson correlation coefficients of the variables

Scale	n	# items	Mean	SD	α	The Perception of Being Observed
Technology Anxiety (Meuter et al., 2003)	534	9	3.07	0.93	0.77	.211*
Self-Consciousness (Fenigstein, Scheier and Buss, 1975)	534	23	4.46	0.88	0.87	.228*
Privacy Concern Scale (Smith, Milberg and Burke, 1996)	354	15	5.81	0.89	0.91	.261**
Self-Esteem (Rosenberg, 1979)	354	10	5.24	1.47	.95	Not significant
Narcissism (Konrath, Meier and Bushmen, 2014)	354	1	2.24	1.79	-	.166**

** = Correlation is significant at the 0.01 level (2-tailed).

2.4.7 Study 4: Predictive Validity

Our main objective in Study 4 was to test the predictive ability of the perception of being observed scale. We predicted that individuals experiencing the perception of being observed at a higher level would be more protective of their data. To test our prediction, we randomly assigned participants to one of the two conditions (Recording: Salient vs Not Salient). Participants were asked to imagine that they went to grocery shopping and the ones in the salient condition learned that the store tracked consumers using geolocation services. While they were checking out, they learned that, as a part of the loyalty program, the more they disclosed information, the more campaigns they would receive. Thus, they were asked to click on the types of information they were willing to provide (e.g., address, phone number, income favorite brands.) Our dependent measure was the total number of information type they would be willing to provide.

Sample and Results

192 respondents participated in our study (60% female, $M_{age=}$ 44.14). We ran a one-way ANOVA to explore the influence of the salience of recording practices on the willingness to disclose information. In line with the privacy paradox, the results were not significant (p >.05). As we predicted, we found a significant interaction between the recording salience and the perception of being observed controlling for age and gender (F (1, 186) = 3.992, p =.047). Pairwise comparisons showed that when the recording practices were salient, individuals who had higher levels of the perception of being observed were more reluctant to provide various types of information than those who had lower perception of being observed scores ($M_{high\ perception\ of\ being\ observed\_salient\ recording}$ = 4.59, $SD_{high\ perception\ of\ being\ observed\_salient\ recording}$ = 4.44 ; $M_{low\ perception\ of\ being\ observed\_salient\ recording}$ = *6.83*, $SD_{low\ perception\ of\ being\ observed\_salient\ recording}$ = 4.86; (F (1, 186) = 7.227, p =.008). This finding suggests that consumers who experience the perception of being observed are more sensitive to the recording practices of companies, which influences their sharing behavior.

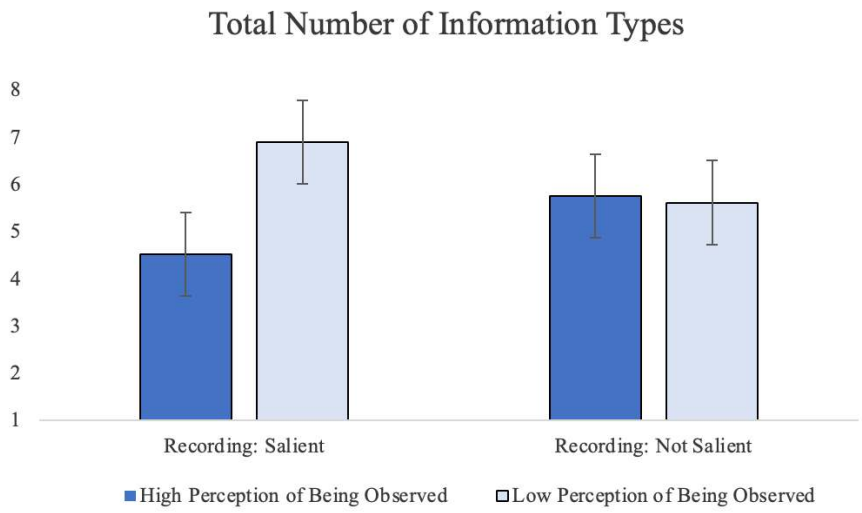


Figure 2.2: Interaction of the Perception of Being Observed and Recording Salience on Willingness to Disclose Information

2.5 General Discussion

Exploring consumers' experiences living in the age of artificial intelligence, this paper has aimed to identify a novel phenomenon, the perception of being observed, and it has developed and validated a scale, and demonstrated its predictive ability. Our results contribute to existing literature and establish grounds for future research.

First and foremost, the perception of being observed is an important and timely phenomenon. Consumers are living in the age of artificial intelligence in a post-Covid world. In the last couple of years, technological corporations have been able to advance their ability to track, record and monitor people around the world, and governments have collaborated with them, especially during the times of pandemic for reducing the spread of virus (Scott et al. 2020). Brough and Martin (2020) suggested that this extensive and even intrusive surveillance activities done by firms and governments may have reduced the extent to which consumers be careful about whether their data are collected or how and for which reasons they are used. In a way, being observed has become the default, and not being observed has become a privilege that only a few people have (DeParle 2020). Extending these findings, we demonstrated that individuals think that they are being observed by other parties which influences their attitudes and behaviors and developed a scale to measure it. As the perception of being observed can increase

consumers vulnerability, the norms of surveillance should be changed, and individuals should be given the opportunity to not to be observed.

Our findings have major implications for privacy literature. We hypothesized and showed the association between privacy concerns and the perception of being observed. In Study 3B, our findings demonstrate that as the privacy concerns increase, individuals are more likely to think that they are being observed by other parties. Further, with an experimental design in Study 4, we showed that consumers who experience the perception of being observed at greater levels are more sensitive to the recording practices and more protective of their privacy through limiting their information disclosure. These results suggest that many consumers who think that they are being observed by the companies are not willing to provide information to them, and they can even be more defensive of their data against them. As consumer data are an invaluable resource, companies should find ways to address the concerns of consumers who experience the perception of being observed and identify methods that can improve consumer wellbeing. Further, intrusive data collection practices can negatively affect consumers' relationship with companies. For instance, consumers who experience the perception of being observed are more likely to decrease their trust in brands that use recording practices (please see Appendix A). Companies should consider the downstream consequences of the perception of being observed while designing and implementing marketing practices.

In addition to the privacy concerns, we show that self-consciousness and technology anxiety can increase the perception of being observed. These findings suggest that individuals who experience higher levels of the perception of being observed may have a limited understanding of the world. Either because of their tendency to attend their own experiences more than the outside world, or the anxiety they experience while using different forms of advanced technologies, they have a lack of knowledge about the data collecting practices. Therefore, the information asymmetry between companies and consumers regarding how they collect data can trigger the perception of being observed. In the marketplace, consumers are not aware of the extent to which their personal data are collected, and companies have extensive knowledge about processing consumers' information, which puts consumers in a vulnerable position (van de Waerdt 2020). In such an environment with a lack of transparency, even adults who are expected to engage in a calculation of costs and benefits they would receive while sharing personal data

(Laufer and Wolfe 1977) are susceptible to the potential harms. Therefore, policy makers should implement interventions that aim to inform individuals with a special focus on elderly and children that may not have a deeper understanding of the costs and benefits they would receive when they are being observed.

2.6 Limitations and Future Research

Despite providing important insights, this paper has some limitations that suggests areas for future research. Data for our studies were collected from samples living in countries with high mobile penetration rates and social media usage (Statista 2022; Unsal 2020), which suggests that our sample has already been used to interacting with technology. Future research can explore this topic with a sample that has different characteristics in terms of age, education, and technology literacy. For consumers who are novices in technology use can experience the perception of being observed more as it may be triggered by the lack of knowledge regarding the underlying mechanics of technology and anxiety, which can lead to more severe outcomes. Another possibility is that they may experience the perception of being observed at a lower level as it may be driven by a learning process in which consumers associate technological cues with marketing, selling or manipulation techniques.

Apart from the individual differences that may have an impact, decision-making setting can also influence the perception of being observed. For instance, recent research suggests that asking for personal data at the end of consumer purchase journey or observing them after they construct their preferences could lead to favorable results (Aiello et al. 2020; Zwebner and Schrift 2020). Relatedly, consumers may have higher levels of the perception of being observed at the first steps of the consumer purchase journey as they may think about the possibility that their actions might be recorded and shape their behavior accordingly. However, people who experience the perception of being observed at the end of the journey may be more reactive to the companies because of the sense of vulnerability triggered from not having a chance to change their behavior. Future research can identify when consumers experience higher levels of the perception of being observed and interventions that can improve consumer wellbeing.

Research showed that cultural factors can influence individuals' attitudes towards privacy (e.g., Cao and Everard 2008; Krasnova and Veltri 2010; Lowry, Cao, and Everard 2011). For instance, individualistic cultures tend to have a higher levels of privacy concerns than people in collectivistic cultures (Krasnova and Veltri 2010; Marshall et al. 2008; Wang, Norcie, and Cranor 2011). Various cultural factors can also influence the perception of being observed. In line with the research suggesting that people in collective cultures are more self-conscious (Gudykunst, Yang, and Nishida 1987), we would expect that consumers in collective cultures experience higher levels of the perception of being observed which can be tested in future studies.

Our main goal in this study was to identify the perception of being observed, develop a scale to measure it and demonstrate some of its consequences. Although we speculate on potential mechanisms through which the perception of being observed operates, future research can demonstrate the psychological processes it activates and its behavioral outcomes.

The perception of being observed can trigger affective processes by evoking positive or negative feelings. Consumers may be content thinking that they are being observed by other parties as they may experience potential benefits from the recording of their purchases such as customized advertisements and coupons or they may feel secure. However, they may experience negative feelings such as anxiety, uneasiness, or hesitation as they may be uncertain about whether they are being observed or not and whether and how the data will be used in the future. Further, there may be other cases in which the perception of being observed triggers ambivalent feelings in consumers. They may be happy that they are being recorded for certain purposes such as security of their personal belongings, quality control of the employees working in the store, or failure of the POS machines. At the same time, they may worry about the potential use of their personal information by third parties, the judgment of unknown audiences regarding their purchases, or even the impression that such an audience might have. As people attend to their feelings and consider them as sources of information (Schwarz 2011), different emotions triggered by the perception of being observed can have various outcomes. Thus, future research can explore the affective consequences.

The perception of being observed also entails a lack of knowledge regarding how long the data will be stored. Consumers may wonder how long they are going to be targeted by companies based on a product they purchased several years ago. Exploring the impact of duration knowledge, research has shown it can intensify affective reactions; knowing the duration of an experience improves pleasant experiences and worsens the negative experiences regardless of the duration length and people's expectations about the duration (Zhao and Tsai 2011). However, a feeling of uncertainty reverses the effect of duration knowledge and reduces enjoyment (Bar-Anan et al. 2009; Wilson et al. 2005). Similarly, uncertainty regarding the duration of the records may negatively influence consumers and lead to discomfort. Disclosing duration knowledge can eliminate negative consequences potentially triggered by the perception of being observed. This issue can be a subject of future investigation which would inform policy makers. If knowing the deadline of the existence of one's records improves one's wellbeing, privacy notices implemented by General Data Protection Regulations can be designed in a way that includes the duration information.

Although the perception of being observed can have negative outcomes both for consumers' and brands, it can increase one's self-worth and sense of control in certain contexts. Rather than being an insignificant part of a group, it can make individuals feel that they are "somebody" who is important for companies. Identifying the contexts in which the perception of being observed can improve consumers wellbeing is important as it will enhance the current state of consumers and companies.

Chapter 3

QUID PRO QUO: BEING OBSERVED BY COMPANIES DECREASES CUSTOMER ENGAGEMENT

3.1 Introduction

Every day, more than 5 million consumers interact with data (Reinsel, Gantz, and Rydning 2018). In 2020, 306 billion emails were sent, and 500 million Tweets were shared (Bulao 2022), and it is forecasted that the accumulated data will reach to 175 trillion gigabytes by 2025 (Reinsel, Gantz, and Rydning 2018). Accumulation of data facilitates customization of products and offers, and forms the basis of customer relationship management, customer intelligence, and one-to-one marketing (Rust and Huang 2014). Big data provides the necessary means for companies to identify and predict behavioral patterns and individually target each consumer (Ghosh and Moorthy 2015). Becoming an essential part of modern marketing practices (Quach et al. 2020), the use of digital technologies for data collection makes it salient to the consumers that they are being observed by companies (Zwebner and Schrift 2020). So far, however, very little attention has been paid to the ways in which consumers react to being observed by companies. In this research, we use the term "being observed" to refer to the occasions in which consumers think that they are being tracked, recorded, targeted, or seen by other parties. We explore how being observed by companies influence customer engagement. Considering the technological revolution happening in the marketplace, the results of this research are important and timely as we provide insights for one of the key elements that increases profitability of the company and loyalty of consumers, which is customer engagement, through exploring consumer-technology interaction.

In the last decade, researchers in the field provided various definitions for customer engagement. Van Doorn et al. (2010) defined it as "the customer's behavioral manifestations toward a brand or firm, beyond purchase, resulting from motivational drivers" (p. 253). Having a more inclusive perspective, Pansari and Kumar (2017) defined

customer engagement as "the mechanics of a customer's value addition to the firm, either through direct or/and indirect contribution" (p. 295). Looking from a more customer-oriented perspective, we derive from the literature that customer engagement is individuals' desire to spend their own resources (e.g., money, time, data) in their interactions with a company. Based on this definition, making a purchase, supporting the charitable causes initiated by a company, waiting at the cashier lines, spending time while using a platform, sharing data with the company, or using the services provided by the company can be considered as different forms of customer engagement. Van Doorn et al. (2010) suggested that customer engagement behavior can be influenced by the context; and technology can be one of these contextual factors. For instance, free internet access offered in various locations has enhanced customer engagement. However, not all forms of technology facilitate customer engagement. We predict that recording technologies that are extensively used in the marketplace for collecting data on consumers, which creates a sense of being observed, have negative outcomes for customer engagement.

Our prediction has its origins in the social influence literature. Research suggests that being observed by others, either induced with the actual presence or virtual indicators, have an impact on one's actions (e.g., Baillon, Selim, and van Dolder 2013; Calder and Burnkrant 1977; Triplett 1898; Zajonc, 1965). People donate more in the presence of other people (Alpizar and Martinsson 2013) or even in the presence of eyes (Bateson, Nettle and Roberts 2006), act in a more prosocial way (Baillon, Selim, and van Dolder 2013; Basil, Ridgway and Basil 2006), and endorse moral norms (Bourrat, Baumard, and McKay 2011). Research focusing on consumer behavior have also demonstrated that the presence of other people such as acquaintances (Kurt, Inman, and Argo 2011), salespeople (Baker, Levy, and Grewal 1992), or other shoppers (Argo, Dahl and Manchanda 2005; Dahl, Manchanda and Argo 2001) can influence how people act in consumption settings. When a behavior is open to public, people's concerns about others' judgments increase (Ratner and Kahn 2002). For instance, in the context of sharing pictures, the goal of sharing increases self-presentational concerns especially when the observers involve distant others (Barasch, Zauberman, and Diehl 2018). In other words, people shape what they share (Clark and Murphy 1982; Krauss and Fussell 1991) or what they consume based on the parties that observe them (Ratner and Kahn 2002). One common finding of this research stream is that people act in a socially desirable way when they are being observed as they think of how other parties will evaluate them (Ariely and

Levav 2000; Asch 1956; Calder and Burnkrant 1977; Deutsch and Gerard 1955; Ratner and Kahn 2002). More critically, one common element inherent to this finding is that the observer has always been a human. However, in the marketplace, people may feel observed without the actual presence of other people, due to the pervasiveness of the tracking technologies used by corporations (Zwebner and Schrift 2020). The substitution of humans with companies has consequences which result from the nature of the interaction formed between the consumer and the observer. Being observed by other people mostly implies a communal interaction. Information exchange between two people is symmetrical; when a person shares a personal issue with their friend, they do not think about the potential misuse of this information as they also have private information that could be used to retaliate (Jagadish 2020). Similarly, when a consumer is being observed by another person while shopping, they can observe the other party, too. However, when the observer is a company, exchange of information between a consumer and the company is asymmetrical (Jagadish 2020). Company knows about a consumer more than a consumer knows about the company. Further, consumers are oblivious to the extent to which companies collect and use information about them. As companies become the new observers in the marketplace (Zwebner and Schrift 2020), and all consumer-company relationships involve exchange relationship elements (Johnson and Grimm 2010), we propose that being observed by companies implies an exchange relationship rather than a communal one.

Different types of relationships convey their own behavioral norms which influence people's evaluations of the other party and their responses (Clark and Mills 1992). In an exchange relationship, the norm is "quid pro quo"; the main reason behind giving something to the relationship partner is to receive something back in return (Clark and Mills 1992; Aggarwal 2004). In other words, exchange relationships are characterized by their reciprocal nature. Gouldner (1960) proposes that for something to be perceived reciprocal, there are two critical components: what is exchanged and when it is exchanged. The former component relates to whether the exchanged resources are identical or not (i.e., equivalence reciprocity). The latter component pertains to the duration between the initial action and its return (i.e., immediacy reciprocity). When individuals' inputs are not reciprocated by the other party, their willingness to provide benefits to the relationship decreases (Falk and Fishbacher 2006). Research suggests that reciprocity is one of the predictors of customer engagement (i.e., Kumar 2013;

Matchwick, Wirtz and Ruyter 2008; Vivek, Beatty and Morgan 2012). For building sustainable consumer-company relationships, the resources exchanged between companies and consumers should be fair (Verhoef 2003).

While engaging with the businesses in which exchange relationship norms apply, consumers typically assess the value of their resources that they would use in return for products or services (Fiske 1992). Resources are defined as the assets that have inherent or instrumental value for people (Dorsch, Törnblom, and Kazami 2017, Hobfoll 2002). These assets can be material such as products or money, abstract such as time or information, and even personality characteristics such as traits and values. Consumer behavior research has focused on studying the differences in mostly temporal and monetary resources such as time and money (e.g., DeVoe and Pfeffer 2007; Mogilner and Aaker 2009; Okada and Hoch 2004). However, technological advancements in the collection and use of big data have increased the value of data. In the past couple of decades, data have been considered as "a business resource" (Levitin and Redman 1998), and the amount of data generated by companies surpassed their ability to utilize them (Fayyad, Piatetsky-Shapiro, and Smyth1996). As a consequence of the prevalence of data collection practices, we propose that consumers consider their data as a resource. In the interactions they have with the companies, consumers expect to receive comparable advantages in exchange for the benefit they provide to the other party (Clark and Mills 1993); however, in a data collection setting where people are being observed without receiving something in return immediately, they feel like their resources are being utilized without reciprocity. To test our predictions about whether people consider their data as a resource and being observed as a utilization of their resource without reciprocity, we conducted a pilot study with 104 participants recruited from Amazon Mechanical Turk online panel (58 females; M_{age} =45.98 years). First, we provided the definition of resources and asked whether they considered data as a resource (1=*Yes*, 2=*No*). Second, to measure reciprocity, we asked them to report whether they thought that the data collected from them were as valuable as what they received in return from companies through distributing 100 points. A chi-square analysis revealed that the number of participants who considered their data as a resource was more than the ones who did not perceive it as a resource (80%; $\chi^2 = 132.69$, $p < .001$). Further, a paired sample t-test showed that consumers considered their data collected from them as more valuable than what they received in return ($M_{\textit{value of one's data}} = 74.66$, $SD_{\textit{value of one's data}} = 22.11$; $M_{\textit{value of}}$

$_{reciprocation}$= 25.34, $SD_{value\ of\ reciprocation}$= 22.11; t (103) = 11.38, p< .001). These findings provide empirical support for our predictions that data are considered as resources and being observed by companies is a form of utilization of one's resources without reciprocity, as consumers do not think that what they receive in exchange for their data is comparable.

When consumers' resources are used, they tend to balance them. Conservation of resources theory suggests that people have a motivation to protect their available resources and acquire new ones with the goal of minimizing their net loss of resources (Hobfoll 1989; for a review, Halbesleben et al. 2014). When there is a loss, people become more protective of their remaining resources (e.g., Benight et al. 1999; Halbesleben and Bowler 2007). Synthesizing key findings of the prior research with our preliminary findings, we propose that consumers will be more protective of their available resources when they are being observed by companies, which would decrease their engagement. The reason behind this detrimental effect is that consumers consider being observed by companies as a utilization of their resources without reciprocity when they have reciprocity expectations from this interaction. Thus, they feel like their resources are being taken from them when they are observed, and they become reluctant to spend their time, money, or data in their relationships with the companies. However, consumers have an inability to quantify the amount of data or accurately judge the value of data that have been collected (for a review, Acquisti, Brandimarte, and Loewenstein 2020), providing something in return immediately can be considered as a reciprocation, which will decrease the need for protecting one's resources and increase their engagement.

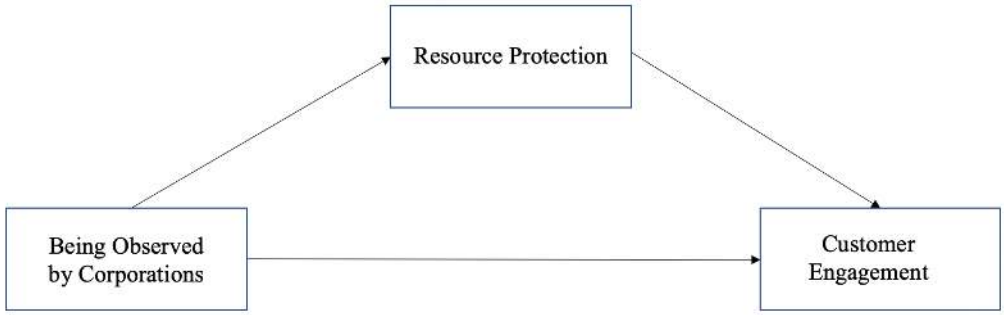


Figure 3.1: Conceptual Model

3.2 Overview of Studies

In the remainder of this article, we present results from six studies that test our prediction in different settings. As being observed in online and offline settings may have different implications for consumers and companies, we operationalize customer engagement in multiple ways. In Study 1, we show that being observed by companies decrease consumers' willingness to engage with the company cognitively, actively, and affectively. In Study 1B, we operationalize engagement as the likelihood of donating money to a fund that is initiated by a store and show that being observed decreases consumers' willingness to donate. In Study 2A, with a controlled experiment, we show that when people think that what they share will be observed by other parties, they use less characters and words in the content they generate. In Study 2B, using data collected from Twitter, we replicate our finding that being observed influences sharing behavior through limiting the content and decreasing the number of characters used. In Study 3, we operationalize engagement as spending time on a platform, and demonstrate that being observed reduced consumers' desire to spend time in using products offered by the company. Further, we provide empirical evidence for the underlying mechanism that being observed increases one's desire to protect their resources, which decreases their engagement with the company. Finally, in Study 4, we show further evidence for our theorization by testing whether providing additional resources that can change the perceived reciprocity mitigates the effect. We explore consumers' willingness to engage with the company, spend money for a product and an additional service, and show that consumers become more willing to engage with the company while being observed if the interaction becomes reciprocal.

Table 3.1: Overview of Studies

Studies	**Objective**	**Design**	**Key Findings**
Pilot Study	To explore whether consumers perceive data as a resource, and being observed as a utilization of resources without reciprocity	N=104 Data as a resource (Yes/No) Allocate 100% between the value of their data and what they receive in return	Data are considered as resources and what consumers receive in exchange for their data is comparable.
Study 1A	To explore whether being observed decreases customer engagement	N=261 Single factor (Context: Observed, Control) DV: Customer engagement scale	Being observed decreases customer engagement.
Study 1B	To increase generalizability by changing the manipulation and the outcome.	N=201 Single factor (Context: Observed, Control) DV: Donation likelihood	Being observed decreases consumers' willingness to donate to the causes initiated by the company.
Study 2A	To explore being observed decreases the extent to which people share content	N=154 Single factor (Context: Observed, Control) DV: Total number of characters used in the Tweet	Being observed decreases the number of characters used in the content.
Study 2B	To increase ecological validity	Identifying the Twitter users who think that they are being observed and exploring their descriptions and Tweets.	Users who have a perception of being observed use less characters in their descriptions and Tweets.
Study 3	To explore the underlying mechanism and increase generalizability.	N=198 Single factor (Context: Observed vs. Control) DV: Willingness to spend time Mediator: Resource protection	Being observed decreases consumers' willingness to spend time in their interaction with the company and the effect is driven by the desire to protect one's resources.
Study 4	To provide stronger evidence for the proposed mechanism and extend the implications of our findings	N=385 2 (Context: Observed, Not Observed) x 2 (Reciprocity: Reciprocal, Not Reciprocal) between-subjects design DV: Customer engagement scale, willingness to pay for a product and additional service Mediator: Resource protection Measure: Scarcity	Being observed decreases customer engagement, willingness to pay and increases consumers' desire to protect their resources. Making the interaction reciprocal attenuates the effect.

3.2.1 Study 1: Exploring the Influence of Being Observed on Customer Engagement

The goal of Study 1 is to explore our main prediction that being observed by the companies decreases customer engagement. To test it, we conducted an experiment where we used an online shopping scenario and measured customer engagement with a scale adapted from Hollebeek, Glynn and Brodie (2014).

Method

We recruited two hundred and sixty-nine US residents on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment, 8 of whom failed to pass the attention check question; which resulted in a final sample size of two hundred and sixty-one (148 females; M_{age} = 42.96 years). The study employed one-factor (Context: Observed vs Control) between-subjects design. Participants were asked to imagine that they opened the website of a retailer as they would purchase a book for their vacation. Participants in the observed condition were informed that these retailers could track and record their activities on the website. Participants in the control condition were informed that the retailer could not track their activities as they opened the website from an incognito browser. Afterwards, all participants completed the adapted version of customer brand engagement scale (1=*Strongly disagree*, 7=*Strongly agree*; Hollebeek, Glynn and Brodie 2014). Hollebeek, Glynn and Brodie (2014) identified cognitive processing, affection, and activation as the three factors of customer engagement. We used one item from each factor and adapted them into our setting to measure consumers' willingness to engage with the company cognitively, affectively, and actively (Appendix B). Participants also rated the extent to which they thought that the platform tracked their activities, which served as a manipulation check (1=*Not at all,* 11=*To great extent*), and responded to an attention check item. Finally, they provided demographics.

Results

Manipulation Check. A one-way ANOVA revealed a significant effect of the context on the perception of being observed (F (1, 259) = 275.16, $p < .001$). Participants in the observed condition thought that the company would track them ($M_{recorded}$ = 9.66, $SD_{recorded}$

= 1.77) more than the ones in the control condition ($M_{control}$ = 4.11, $SD_{control}$ = 3.38), which suggested that our manipulation worked as intended.

Customer Engagement. We computed a composite customer engagement score by averaging participants' responses to the three scale items (Cronbach's alpha = .91).
A one-way ANOVA revealed a significant effect of the context on customer engagement (F (1, 259) = 56.54, $p < .001$). Participants in the observed condition were less willing to engage with the company ($M_{observed}$ = 3.75, $SD_{observed}$ = 1.45) than the ones in the control condition ($M_{control}$ = 5.09, $SD_{control}$ = 1.42). Controlling for the age, gender and education of the participants did not change the results ($p < .001$).

The results of Study 1 provided evidence for our prediction that being observed would decrease customer engagement. When consumers are being tracked by a company, their willingness to engage cognitively, affectively, and actively with the company decreases.

3.2.2 Study 1B: Exploring the Influence of Being Observed on Willingness to Donate

The main objective of Study 1B is to extend the generalizability of our findings by changing the manipulation and the outcome of interest that would extend our understanding of the underlying mechanism. In Study 1A, we show that being observed in an online setting decreases customer engagement. In Study 1B, we test this finding in an offline setting and explore whether being observed in a store environment through security cameras also influences customer engagement. With this goal, we used a scenario as well as visuals to manipulate being observed (for details, please see Appendix B). Further, we operationalize customer engagement as the willingness to support the cause initiated by a store and measure consumers' willingness to make a donation. One may argue that being observed through security cameras in a supermarket is the default; not being observed is something unexpected, and even suspicious. This would decrease the donation likelihood of our participants. However, we predict that consumers who are being observed will be less likely to donate to the fund as they will be protective of their money when their data are being collected.

Method

We recruited two hundred and one US residents on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment (119 females; M_{age} = 42.17 years). The study employed one-factor (Context: Observed vs Control) between-subjects design. All participants were asked to imagine that they went grocery shopping. Participants in the observed [control] condition were informed about a banner that was displayed at the entrance of the store. On the banner, it was stated that the store is [not] monitored by security cameras. As soon as they passed the door, the security cameras [bag of chips] caught their eyes. They walked through the aisles and picked up the items they needed. Then, they headed to the cashier lines. While waiting at the checkout line, they saw a flyer of the store's Hurricane Ida Relief Fund. After reading this scenario, participants rated how likely they would be to donate money to the store's fund (11-point bipolar scale) and responded to a manipulation check question.

Results

Manipulation Check. A one-way ANOVA revealed a significant effect of the context on the perception of being observed (F (1, 199) = 133.91, $p < .001$). Participants in the observed condition thought that the platform would record their activities ($M_{observed}$ = 8.37, $SD_{observed}$ = 3.07) more than the ones in the control condition ($M_{control}$ = 3.42, $SD_{control}$ = 2.99).

Donation Likelihood. A one-way ANOVA revealed a significant effect of the context on the likelihood of donating money to the charity (F (1, 199) = 4.29, p = .04). Participants in the observed condition were less willing to donate money to the charity ($M_{observed}$ = 5.22, $SD_{observed}$ = 3.22) than the ones in the control condition ($M_{control}$ = 6.24, $SD_{control}$ = 3.69).

Study 1B increased the robustness of our findings through employing a setting where customers imagined being observed in an in-person store atmosphere and measuring customer engagement with donation likelihood. The results show that being observed decreases customers' donation likelihood to the store's relief fund. This finding implies that the aversion to being observed is so strong that even in a setting where consumers expect to be observed by the company, their engagement decreases. More specifically, when consumers' data are being collected, they become more conservative in the use of their monetary resources. Therefore, our effect does not require the

compatibility between the resource that is acquired by other parties and the resource to be used by the consumers.

3.2.3 Study 2A: Exploring the Influence of Being Observed on Sharing Content

The goal of Study 2A is to increase the generalizability of our findings through operationalizing customer engagement in a different way, which will also provide support for the underlying mechanism. We predict that when consumers are being observed, they will decrease their engagement because being observed by other parties is considered as an acquisition of one's resources without reciprocity, and they are motivated to preserve their remaining data. With the goal of testing whether the collection of data by companies leads to a conservation of data, we ask our participants to generate a Tweet as a measure of customer engagement and examine the difference in the number of characters used in the text which can be considered as a proxy for the users' willingness to disclose.

Method

One hundred fifty-four US residents (64 females, M_{age} = 41.3 years) participated in our study on Amazon Mechanical Turk in exchange for a small monetary payment. The study employed a single factor (Context: Default Mode vs. Vanish Mode), between-subjects design. Participants were randomly assigned to one of the two conditions. In the default mode condition, we informed participants that "On Twitter, the tweets written by users appear for a while and they are recorded or accessed by other parties" which is the default version of Twitter. Then, we asked them to imagine that they were on Twitter. In the vanish mode condition, we informed participants that "Twitter is planning to implement a vanish mode. In this mode, the tweets written by users will disappear after a while and they will not be recorded or accessed by any parties." Then, we asked them to imagine that they were using this vanish mode. All participants were asked to type a Tweet. Afterwards, they reported the extent to which they thought that their Tweet would be observed (i.e., seen, recorded) by other parties (i.e., companies, governments, people) on a 7-point Likert scale (1=*Not at all*, 7=*To great extent*).

Results

Manipulation Check. A one-way ANOVA revealed a significant effect of context on the perception of being observed (F (1, 152) = 11.856, p < .001). As expected, participants in the default mode condition thought that their Tweet would be observed more than the ones in the vanish mode condition ($M_{default}$=4.99, $SD_{default}$=1.85, M_{vanish}=3.95, SD_{vanish}=1.89). Our manipulation of (not) being observed worked as intended.

Number of Characters Used in the Content. A one-way ANOVA revealed a significant effect of the context on the number of characters used in a Tweet (F (1, 152) = 9.497, p = .002). In line with our prediction, participants in the vanish mode condition used more characters in their Tweet than those in the default mode condition ($M_{default}$=45.71, $SD_{default}$=39.03; M_{vanish}=73.45, SD_{vanish}=68.67). In this analysis, we did not put a limit to the maximum number of characters that can be used. However, when Twitter was first launched, it had a 150-characters limit. One might argue that some participants thought about this anchor while typing their Tweet. To control for it, we eliminated the participants who used more than 150 characters and re-run the analysis. Results did not change; the number of characters used in the content was higher for the participants in the vanish mode condition than the ones in the default mode ($M_{default}$=39.99, $SD_{default}$=26.62; M_{vanish}=53.44, SD_{vanish}=35.89; F (1, 140) = 6.505, p = .012).

The findings of this study provided causal evidence for our prediction that being observed decreases the extent to which individuals share. When people think that the content they share will be observed by other parties, they use less characters. In other words, when their data resources are utilized without reciprocity, they behave in a way that would protect the same resource.

3.2.4 Study 2B: Exploring the Influence of Being Observed on Sharing Content with Secondary Data Analysis

The primary objective of Study 2B is to test the findings of Study 2A in the field for increasing ecological validity. With this goal, we identified the users who thought that they were being observed on Twitter and compared their sharing behavior with a sample for whom the perception of being observed was not salient. Thus, we operationalized engagement as the sharing behavior on Twitter. Using data collected from Twitter to

explore our main prediction would be a more stringent test. On the one hand, the main goal of using Twitter is to share information (Liang, Shen, and Fu 2017). The flow of information among users makes this platform social and dynamic (Papacharissi and Gibson 2011). On the other hand, what essentially makes it a social platform also evokes concerns about the privacy of data (Liang, Shen, and Fu 2017). People who are highly concerned about their data do not share content or use Twitter at all. Thus, detecting this phenomenon in a social media platform would provide critical support for our prediction.

Method

Using the keyword-based method, we collected Twitter posts with Twitter Search API. We used keywords that directly and indirectly captured whether people thought that they were being observed. "Being recorded" and "being observed" were the terms that directly corresponded to the perception that we aimed to explore. We also collected tweets with the keywords of "The Great Hack" and "The Social Dilemma", as these documentaries, providing information about the recording and manipulation practices used by companies, gained traction among Netflix users and on social media. Finally, we explored the tweets about "Cambridge Analytica", and considered it as a recent event in which the company collected and used user data to manipulate the US elections (Berghel 2018).

We collected the Tweets in three batches. The first batch was collected in November 2020, consisting of 7,500 Tweets in total. The second batch was collected in December 2020, consisting of 3,244 Tweets in total. Finally, the third batch was collected in May 2021, consisting of 3,869 Tweets in total. In the cleaning process, we removed the incomplete Tweets from the data set. Excluding them resolved the potential problems arising from the uncertainty regarding the missing parts of the Tweets (Please see Appendix B for the details about the data classification and annotation processes).

To explore our prediction, we merged the data sets. We assumed that users who shared content that included these keywords thought that they were being observed by other parties. So, we considered those users as our experimental group. In the final data set, we had 553 unique users who shared content about being observed by other parties, and 1,104 users who shared irrelevant content. In our comparisons, we use both the total number of irrelevant tweets, and a randomly selected sample of 553 users from the pool of irrelevant Tweets to assure that the two groups were comparable. As the results did not change, we

reported the analysis using the whole sample consisting of 1657 Twitter users. Our dependent measures were the number of characters used in the Tweet as well as the number of characters used in the description section.

Results

Number of Characters Used in the Description. We calculated the total number of characters that were used in the description section where users gave information about themselves. As expected, results showed that users who thought that they were being observed ($M_{observed}$ = 90.8, $SD_{observed}$ = 50.2) used significantly less characters than the users in the control group ($M_{control}$ = 101.1, $SD_{control}$ = 48.2; t (1655) = -4.03, p =.000).

Number of Characters Used in the Tweet. In line with the results of Study 2A, we predicted that being observed would decrease the number of characters used in a Tweet. To test our prediction, we calculated and compared the total number of characters that were used in the Tweets that the users shared. Results showed that users who thought that they were being observed ($M_{observed}$ = 152.7, $SD_{observed}$ = 89.1) used significantly less characters in their Tweet than the users in the control group ($M_{control}$ = 222.6, $SD_{control}$ = 92.5) (t (1655) = -14.68, p =.000).

Using data from the field and the lab, Study 2A and 2B demonstrate that being observed decreases users' engagement. More specifically, the results of Study 2A show that people generate longer content when their tweets are not recorded and accessed by other parties. In Study 2B, using real data collected from Twitter, users that we identified as having a perception of being observed share shorter Tweets, and use less characters in the description section where they disclose information about themselves. These findings showed that when users' data are being collected, they become more protective of their data and decrease their engagement through sharing less information. Together with the findings of Study 1B, Studies 2A and 2B show that regardless of the compatibility between resources, being observed by companies make consumers protect their available resources.

3.2.5 Study 3: Exploring the Influence of Being Observed on Willingness to Spend Time

The primary objective of Study 3 is to test the proposed mechanism. We propose that being observed by other parties will activate a motivation to protect one's resources, which will reduce one's tendency to use their resources. In this study, we directly measure participants' motivation to protect their resources. The secondary objective is to increase the generalizability of our findings through using another resource. With this goal, we operationalized customer engagement as the willingness to spend time on the platform.

Method

We recruited two hundred and four US residents on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment, six of whom failed to pass the attention check question, leaving us with a sample of one hundred ninety-eight participants (113 females; M_{age} = 44.41 years). The study employed a single factor (Context: Recorded vs. Control), between-subjects design. Participants were informed about a new streaming platform that offered its members an extensive music, film, and television series library. The platform tracked its members' activities and tailored its recommendations. Participants in the observed condition were asked to imagine that they wanted to test the platform, downloaded its application, and became a member. Additionally, they read that "As the platform tracks its members, you know that your actions are being recorded and tracked. Your data can be used for various purposes." Participants in the control condition also imagined downloading the application, however, they would not become a member. As only members are tracked, they were informed that their actions would not be recorded or tracked, and their data would not be used for any purposes. After the being observed manipulation, all participants were asked to report their willingness to engage with the content available at the platform (1=*Not much*, 11=*Very much*), how much time they would spend while testing the platform (1=*Not much*, 11=*Very much*), and how many hours they would spend on the platform on a regular day (0-10 slider scale). Then, participants completed resource protection scale adapted from Winterich, Mittal and Morales (2014; Appendix B). Finally, participants responded to a manipulation check question, an attention check question, and provided demographics.

Results

Manipulation Check. A one-way ANOVA revealed a significant effect of the context on the expectations regarding tracking (F (1, 196) = 180.69, p < .001). Participants in the

observed condition thought that the platform would record their activities ($M_{observed}$ = 9.69, $SD_{observed}$ = 1.91) more than the ones in the control condition ($M_{control}$ = 4.46, $SD_{control}$ = 3.39)

Customer Engagement. We computed a composite customer engagement score by averaging participants' responses to the three scale items measuring participants' willingness to spend time on the platform (Cronbach's alpha = .84). A one-way ANOVA revealed a significant effect of the context on participants' engagement with the platform (F (1, 196) = 37.16, $p < .001$). Participants in the observed condition were less willing to spend time ($M_{observed}$ = 3.91, $SD_{observed}$= 2.43) than the ones in the control condition ($M_{control}$ = 5.74, $SD_{control}$ = 1.70). When we controlled for the age, gender and education of the participants, the results did not change ($p < .001$).

Underlying Mechanism. We computed a composite resource protection score by averaging participants' responses to the three scale items (Cronbach's alpha = .95). Then we tested the proposed mediation model using PROCESS (Hayes 2018) Model 4 with 10,000 bootstrapped samples. In the model, we included context (0: control, 1: observed) as the independent variable, customer engagement as the dependent variable, and resource protection as the mediator. Mediation analysis showed that resource protection mediated the relationship between the context and customer engagement. More specifically, being observed by the company increased consumers motivation to protect their resources (b = 1.37; t = 6.09, p = .000), which decreased their willingness to engage with the platform (b = -.30; t = -3.22, p = .0015). The index of mediation was significant (Effect = -.40, %95 CI: [-.78, -.12]), and the direct effect was reduced but still significant (Effect = -1.42, %95 CI: [-2.04, -.79]), suggesting a partial mediation (please see Figure 1 for path coefficients).

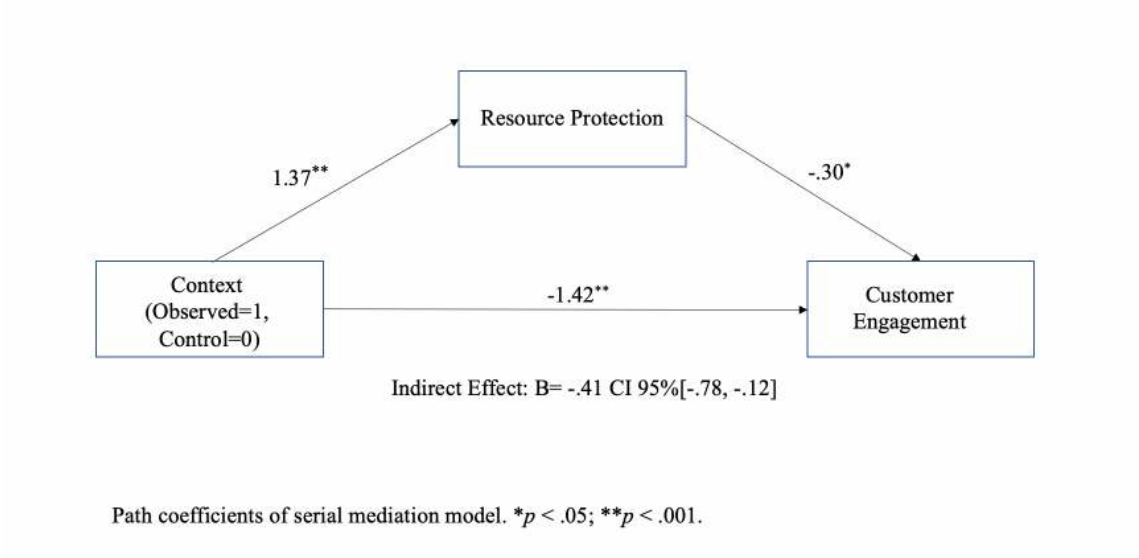


Figure 3.2: Mediation Model in Study 4

The findings of Study 3 provided direct evidence for the underlying mechanism that being observed by companies increased people's motivation to protect their available resources, which decreased consumers' engagement with the company. Further, we increased the generalizability of our findings through using another resource and showed that participants were reluctant to spend time when their data were being collected.

3.2.6 Study 4: Attenuating the Effect Through Making the Interaction Reciprocal

The primary objective of Study 5 is to provide stronger evidence for our theorization. We predict that when consumers are being observed, they think that their resources are being utilized without reciprocity and become more protective of their remaining resources either in the same or other categories. This theorization would suggest that making the interaction reciprocal can enhance customer engagement as it would decrease one's need for protecting their resources. For reciprocity, what is exchanged and when is exchanged are critical (Gouldner 1960), which guided our manipulation.

As the first component of reciprocity suggests, our intervention should include something offered by the company. When companies observe consumers, they collect their data. However, consumers do not know the extent to which their data are collected

(Acquisti, Brandimarte, and Loewenstein 2020). Further, they are not good at judging the value of their data (Winegar and Sunstein 2019). These findings suggest that consumers may not have a clear sense of what would be the equivalence reciprocity. In order to control for the unintended consequences of giving high incentives, we used a manipulation where the company provides a special discount for the World Book Day in our scenario. We did not specify the discount rate or give cues about an ongoing relationship with the retailer, which would provide a more stringent test for our prediction.

Related to the second component of reciprocity, research suggests that a delay in the return benefit has an influence on one's accounting of the spent and received resources; thus, reciprocity of resources should be carried through immediately (Aggarwal 2004). In line with this finding, we predict that providing additional resources while collecting data on consumers could attenuate the negative influence of being observed on customer engagement, as people would consider it as a form of reciprocity.

The secondary objective of Study 5 is to rule out an alternative explanation. Our conceptualization suggests that consumers balance their resources; if they think that one of their resources are used by other parties without reciprocity, their tendency to use their remaining resources decreases. However, one might argue that the utilization of one's resources can increase the perceived scarcity. If the effect is driven by the perceived scarcity of resources that increases one's motivation to protect their remaining resources, then providing additional resources can also increase engagement when consumers are not being observed, as the total level of resources would increase. On the other hand, if the effect is driven by the lack of reciprocity, then additional resources will only increase the engagement in the being observed condition. To rule out the changes in the perceived scarcity as an alternative explanation, we tailored the additional manipulation resources in a way that would not decrease the perceived scarcity and measured it in this study.

Method

We recruited three hundred ninety-one US residents on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment, six of whom failed to pass the attention check question, leaving us with a sample of three hundred eighty-five participants (211 females; M_{age} = 43.18 years). The study employed a 2 (Context: Observed vs. Not Observed) x 2 (Reciprocity: Reciprocal vs Not Reciprocal) between-

subjects design. We used the scenario in Study 1 for manipulating being observed and asked participants to imagine that they found a book they wanted to purchase at an online retailer. Then, participants in the reciprocal conditions read that at the checkout page they received a discount as a part of World Book Day campaigns and they would pay less than they expected. Afterwards, all participants completed the adapted version of the customer engagement scale used in Study 1 (1=*Strongly disagree*, 7=*Strongly agree*), reported their willingness to pay for the product on a 0-$100 slider scale and their willingness to pay for an additional service of shipment on 0-$30 slider scale. Then they completed resource protection scale (1=*Strongly disagree*, 7=*Strongly agree*), reported the extent to which they felt like they had scarce resources on an 11-point bipolar scale (1=*Not at all*, 11=*To great extent*) and the extent to which they thought that the retailer would record their activities on an 11-point bipolar scale (1=*Not at all*, 11=*To great extent*).

Results

Being Observed. A two-way ANOVA revealed a significant main effect of the context (F (1, 381) =286.46, $p < .001$), and a significant interaction effect of the context and reciprocity (F (1, 381) =66.44, $p = .004$) on the expectations regarding tracking. Participants in the observed conditions thought that the platform would record their activities more than the ones in the not observed conditions for both reciprocity conditions ($M_{observed\_additional\ resource} = 8.66$, $SD_{observed\_additional\ resource} = 2.34$; $M_{control\_additional\ resource} = 4.68$, $SD_{control\_additional\ resource} = 3.37$; $M_{observed} = 9.48$, $SD_{observed} = 2.16$; $M_{control} = 3.84$, $SD_{control} = 3.03$).

Unfolding the interaction, pairwise comparisons showed that making the interaction reciprocal decreased the extent to which people felt observed when they were being recorded ($M_{observed\_reciprocal} = 8.66$, $SD_{observed\_reciprocal} = 2.34$; $M_{observed\_not\ reciprocal} = 9.48$, $SD_{observed\_not\ reciprocal} = 2.16$; F (1, 381)= 4.07, p =.044). Further, for participants in the not observed condition, the ones in the reciprocal condition had a higher perception of being observed than the ones in the not reciprocal condition ($M_{not\ observed\_reciprocal} = 4.68$, $SD_{not\ observed\_reciprocal} = 3.37$; $M_{not\ observed\_not\ reciprocal} = 3.84$, $SD_{not\ observed\_not\ reciprocal} = 3.03$; F (1, 381)= 4.56, p =.033).

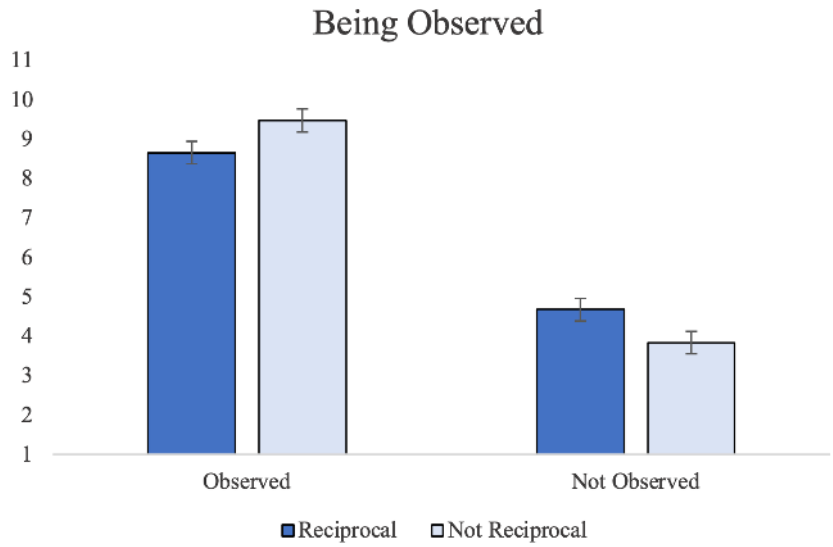


Figure 3.3: Interaction Effect of Context and Reciprocity on the Perception of Being Observed

Customer Engagement. As in Study 1, we computed a composite customer engagement score by averaging participants' responses to the three scale items (Cronbach's alpha = .85). A two-way ANOVA revealed a significant interaction effect of the context and reciprocity on customer engagement (F (1, 381) = 5.40, p = .021). In both reciprocity conditions, participants who were in the being observed conditions were less likely to engage with the company compared to the not observed condition ($M_{not\ observed\_reciprocal}$ = 5.42, $SD_{not\ observed\_reciprocal}$ = 1.09; $M_{observed\_reciprocal}$ = 4.89, $SD_{observed\_reciprocal}$ = 1.30; F (1, 381) = 8.75, p=.003; $M_{not\ observed\_not\ reciprocal}$ = 5.20, $SD_{not\ observed\_not\ reciprocal}$ = 1.30; $M_{observed\_not\ reciprocal}$ = 4.09, $SD_{observed\_not\ reciprocal}$ = 1.20; F (1, 381) = 39.22, p< .001). Among participants who were in the being observed conditions, the ones in the reciprocal condition were more likely to engage with the company compared to the ones in the not reciprocal condition ($M_{observed\_reciprocal}$ = 4.89, $SD_{observed\_reciprocal}$ = 1.30; $M_{observed\_not\ reciprocal}$ = 4.09, $SD_{observed\_not\ reciprocal}$ = 1.20; F (1, 381) = 19.68, p< .001). The difference between not observed conditions was not significant (p=.22)

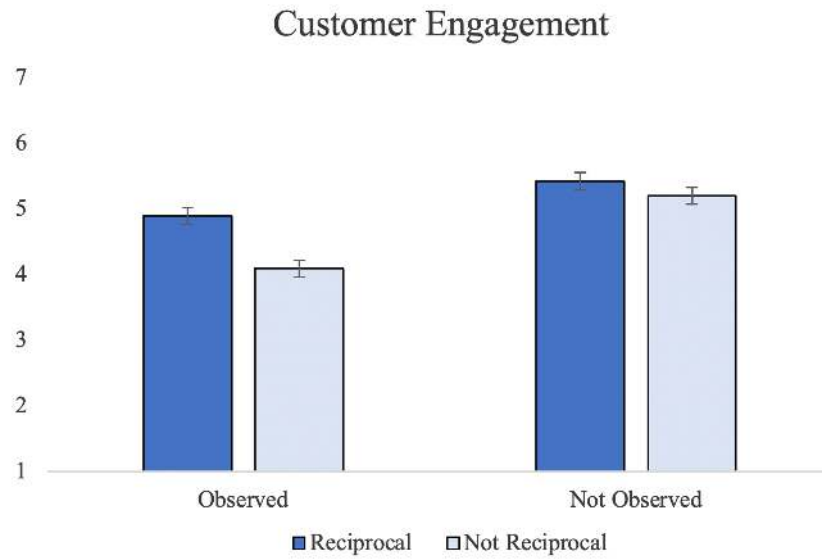


Figure 3.4: Interaction Effect of Context and Reciprocity on Customer Engagement

Willingness to Pay for the Product. A two-way ANOVA revealed a significant interaction effect of the context and reciprocity on willingness to pay for the product (F (1, 381) = 10.01, p = .002). Pairwise comparisons showed that among the participants who were in the reciprocal conditions, the ones in the being observed condition were willing to pay for the product more than the ones in the not observed condition ($M_{not\ observed\_reciprocal}$ = 15.86, $SD_{not\ observed\_reciprocal}$ = 8.20; $M_{observed\_reciprocal}$ = 19.26, $SD_{observed\_reciprocal}$ = 14.18; (F (1, 381) = 3.92, p = .048). However, among the participants who were in the not reciprocal conditions, those in the not observed condition were willing to pay more than the ones in the observed condition ($M_{not\ observed\_not\ reciprocal}$ = 19.40 , $SD_{not\ observed\_not\ reciprocal}$= 13.81; $M_{observed\_not\ reciprocal}$ = 15.13, $SD_{observed\_not\ reciprocal}$ = 9.52; (F (1, 381) = 6.22, p = .013).

Further, among the participants who were in the being observed conditions, those who were in the reciprocal condition were willing to pay more than the ones in the nor reciprocal condition (F(1, 381) = 5.66, p = .018). However, among the participants who were in the not observed conditions, participants in the not reciprocal condition were willing to pay more than the ones in the reciprocal condition (F(1, 381) = 4.37, p = .037).

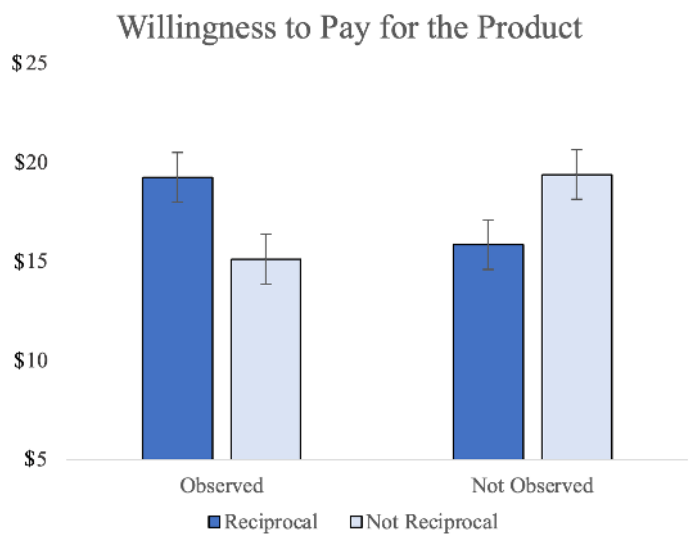


Figure 3.5: Interaction Effect of Context and Reciprocity on Willingness to Pay for the Product

Willingness to Pay an Additional Service. A two-way ANOVA revealed a significant interaction effect of the context and reciprocity on willingness to pay for an additional service (F (1, 381) = 4.82, p = .029). Pairwise comparisons showed that among the participants in the observed conditions, the ones in the reciprocal condition were willing to pay for the shipment more than the ones in the not reciprocal condition ($M_{observed\_reciprocal}$ = 4.17, $SD_{observed\_reciprocal}$ = 4.72; $M_{observed\_not\ reciprocal}$= 2.78, $SD_{observed\_not\ reciprocal}$ = 1.91; F (1, 381) = 7.46, p = .007). Among the participants who were in the not reciprocal conditions, the ones in the not observed condition were willing to pay more for the shipment than the ones in the observed condition ($M_{not\ observed\_not\ reciprocal}$ = 3.82, $SD_{not\ observed\_not\ reciprocal}$ = 3.32; $M_{observed\_not\ reciprocal}$ = 2.78, $SD_{observed\_not\ reciprocal}$ = 1.91; F(1, 381) = 4.30, p = .039). The difference between the not observed conditions (p= .73) and the additional resource conditions (p=.30) were not significant.

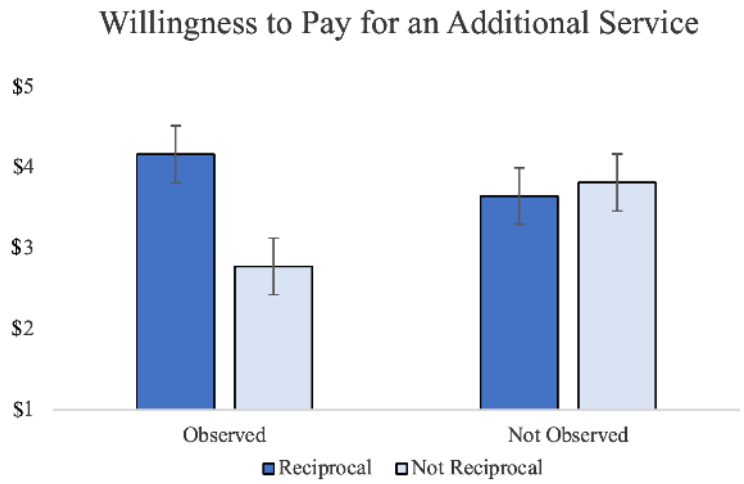


Figure 3.6: Interaction Effect of Context and Reciprocity on Willingness to Pay for an Additional Service

Resource Protection. As in Study 4, we computed a composite resource protection score by averaging participants' responses to the three scale items (Cronbach's alpha = .95). A two-way ANOVA revealed a significant main effect of the context *(F* (1, 381) = 19.74, *p* = .001), and a significant main effect of resources (*F* (1, 381) = 9.92, *p* = .002). The interaction was not significant (*p*= .45). Contrasts showed that in both of the reciprocity conditions, participants in the being observed conditions were more motivated to protect their resources than the ones in the not observed conditions ($M_{observed\_reciprocal}$ = 4.60, $SD_{observed\_reciprocal}$ = 1.69; $M_{not\ observed\_reciprocal}$ = 3.96 , $SD_{not\ observed\_reciprocal}$ = 1.72; *F*(1, 381) = 6.73, *p* = .010; $M_{observed\_not\ reciprocal}$ = 5.28, $SD_{observed\_not\ reciprocal}$= 1.49; $M_{not\ observed\_not\ reciprocal}$= 4.37 , $SD_{not\ observed\_not\ reciprocal}$= 1.86; *F* (1, 381) = 13.62, *p* < .001). However, among the participants in the being observed conditions, the ones in the reciprocal condition were less motivated to protect their resources than the ones in the control condition ($M_{observed\_reciprocal}$ = 4.60, $SD_{observed\_reciprocal}$ = 1.69; $M_{observed\_not\ reciprocal}$ = 5.28, $SD_{observed\_not\ reciprocal}$ = 1.49; *F* (1, 381) = 7.45, *p* = .007). The difference between not observed conditions was not significant (p=.09).

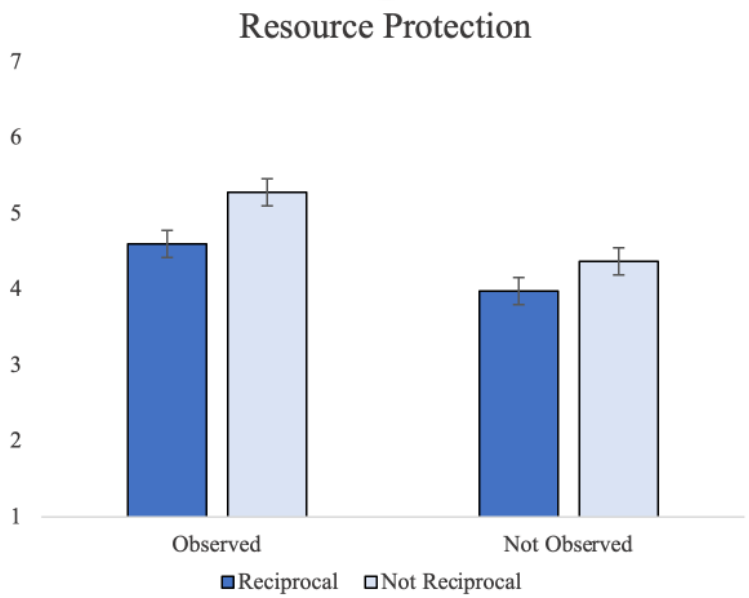


Figure 3.7: Interaction Effect of Context and Reciprocity on Resource Protection

Perceived Scarcity. We ran a two-way ANOVA with context as the first independent variable, reciprocity as the second independent variable, and the perceived scarcity as the dependent variable. In line with our predictions, neither the main effects, nor the interaction of these variables was significant ($p > .2$).

The results of Study 5 show that being observed decreases consumers' desire to engage with the company, and their willingness to spend money on the product and additional services provided by the company. Further, making the interaction reciprocal through providing additional resources can attenuate the negative effect of being observed on customer engagement. Offering a discount decreased the extent to which participants' felt observed, and increased participants' willingness to engage with the company and spend money for the products and services when participants were being observed. In line with our theorization suggesting that being observed is considered as a utilization of one's resources without reciprocity, making this interaction reciprocal attenuated the effect. On the other hand, offering a discount significantly increased the extent to which people felt observed, and decreased the amount people were willing to pay for the product. These findings may suggest that offering a discount imposes a reciprocity expectation on consumers. As they are offered a promotion, they should respond to it, which should be tracked by the party that made the offer, increasing the perception of being observed.

However, the offer might have been considered trivial as the details of the benefit was not clear, it could be considered as a sales tactic and increased consumers' skepticism.

Our findings also suggest that the effect is not driven by the perceived scarcity of resources. It is the perceived lack of reciprocation that drives the effect, as the additional resources provided by the company did not decrease the perceived scarcity; however, they reduced consumers' need to protect their resources.

3.3 General Discussion

Digital technologies have been incorporated into consumers' life; however, very little attention has been paid to its side-effects for both consumers and companies. In this research, across seven studies, with experiments supported by a secondary data collected from a social media platform, we show that companies' data collection practices distort consumer behavior. Being observed by companies decreases customer engagement in various forms including willingness to share content and self-related information on social media, tendency to spend money and donate to charitable funds initiated by the company, and desire to spend time in their interaction with the company. This effect is driven by a desire to protect one's resources. As being observed implies the utilization of one's data resources without reciprocity, consumers become more conservative of their available resources, either in the same or different categories, when they are being observed by companies. Making this interaction reciprocal can attenuate the negative influence of being observed on customer engagement. Our findings contribute to the research streams in psychology and marketing and provide important managerial and consumer well-being implications.

Our first and foremost contribution is to the social influence literature. Research has clearly demonstrated that individuals have a tendency to act in a socially desirable way in the presence of others (Ariely and Levav 2000; Asch 1956; Calder and Burnkrant 1977; Deutsch and Gerard 1955; Ratner and Kahn 2002). However, our findings suggest that when people are being observed by companies, they can act in a non-normative way. In Study 1B, people's willingness to make a donation decreased when they were being observed by companies, which is the opposite of the findings in social influence literature

suggesting that being watched by others increases prosocial behavior. This finding implies that the side-effects of being observed by companies can be detrimental for consumer and societal wellbeing. Further, in Study 2A, our participants generated shorter content when the fact that they were being observed was made salient to them. Similarly, in Study 2B, we tried to identify the existing users of Twitter who thought that they were being observed by other parties and showed that their description of themselves and their Tweets were shorter. Social media platforms, especially Twitter, provide valuable information about what individuals think and how they feel regarding the social and political events such as 2016 US Presidential election (Berman et al. 2019) and MeToo movements (Gautam et al. 2020), and global crisis such as Covid-19 outbreak (Singh et al. 2020). Contributing to this research stream, we show that even on a platform that people sign up to be observed and heard by other parties, individuals tend to share less when the fact that their data are collected and recorded is salient to them. In other words, even when consumers have an expectation to be observed, as on Twitter or in a supermarket, experiencing it can still influence their subsequent behavior. Although we did not directly measure the amount of time spent on writing content, we can infer from the shorter length of Tweets that they spent less time while actively engaging with the platform where the norm is to spend time and generate content. A decrease in users' engagement and willingness to share content in various domains such as public health or politics in which user-generated content is a valuable and informative resource is critical for both social media platforms and consumers. These counter normative and potentially unfavorable behaviors triggered by companies' data collection practices require further research for identifying the interventions that can improve the psychological and societal wellbeing of consumers.

Second, we contributed to the customer engagement literature in multiple ways. Customer engagement has been conceptualized from different perspectives. Here, we operationalized it as the allocation of consumers' resources to the various forms of company interactions. In line with this operationalization, we extended the boundaries of customer engagement through using different measurements in line with its definition. Research on social media engagement has mostly used liking or sharing behavior as an engagement measure (Pancer et al. 2019, 2021; Zor, Kim and Monga 2021). Aiming to provide a standardized measurement, multiple scales have been developed (i.e., Holleebeek, Glynn and Brodie 2014; So, King and Sparks 2014; Vivek et al. 2014). In

our research, we considered various behaviors as the manifestations of customer engagement, and we consistently showed that being observed by companies has negative consequences for it.

Prior research has proposed that customer engagement can create emotional bonding, trust and commitment (Beckers, Risselada, and Verhoef 2014; Brodie et al. 2013), suggesting a formation of a communal relationship between consumers and companies. However, our findings highlight the transactional nature of customer engagement. On a recent article, Hollebeek et al. (2018) has identified a critical managerial question: "How can companies motivate customers to invest their scarce resources in interacting with their brands?" (p.2). Our results suggest that a prevalent activity of companies prevent customers from engaging with the company, and the reason behind the decreased engagement is the motivation to protect one's resources. Although long term benefits of customer engagement for consumers and companies can involve communal bonds, transactional elements should be taken into consideration in the facilitation of engagement as being a consumer, by definition, implies an exchange relationship (Bagozzi 1975).

In the research exploring exchange relationships and the norm of reciprocity, the individual or the company typically gives something to the relationship partner, and they receive something in return. For instance, a consumer frequently buys something from a store, and expects to receive a discount in return, or this happens in the reverse order. So, one of the parties voluntarily do something that provides benefits to the other party (e.g., Gouldner 1960; Dahl, Honea, and Manchanda 2005; Giesler 2006). However, when people are being observed, they think that their data are being collected from them, and they do not receive something in return. The nature of this exchange in which the consumer has a passive role may influence the perceived equivalence of the reciprocation. Our findings in Study 4 showed that even making a negligible discount that was offered during the interaction could attenuate the effect, suggesting that short-term benefits can improve customer experiences. Future research could explore whether the long-term benefits of data collection are considered as a form of reciprocation and identify the factors that can decrease consumers' need to protect their resources.

Our findings also contribute to the literature on resource and scarcity. Decrease in a resource has been primarily explored as an inadequate resource relative to a desired level. Here we explore the decrease in one's resources as a result of other parties' potential acquisition; however, consumers do not think of it as a substantive lack in a given resource. Even when consumers do not feel the scarcity of a resource, the acquisition of it by corporations without reciprocating can induce a resource protection motivation. Further, the motivation to protect one's resources applies to different categories. When the data collection of companies was made salient, people protected their data and released less information in Studies 2A and 2B, kept their money and became less willing to spend it in Studies 1B and 4, and preserved their time and decreased their intention to use it in Study 3. To the best of our knowledge, we for the first time showed that consumers consider data as a resource and react to the collection of it in a negative way through safeguarding their remaining resources and decreasing their engagement. In our studies, we did not specify which types of data are collected by the companies. The collection of company-relevant and irrelevant data can differentially influence the perception of being observed and consequences of it, which should be further explored.

Finally, our findings have implications for the consumer behavior in public and private spaces. Although research has clearly demonstrated the discrepancy between how people act in public and private spaces (e.g., Fazli-Salehi et al. 2001; Graeff 1996; Ratner and Kahn 2002; Swaminathan, Stilley, and Ahluwalia 2009; Wang, Zhu and Shiv 2012), the nature of "private-ness" has changed with the ubiquitous use of recording practices. Feeling of being observed resulting from the marketplace practices can change the way people construe public and private spaces. As being observed by other parties, either companies or consumers, has become the new normal in today's world, social or cognitive processes triggered by being watched by others such as self-awareness (Baltazar et al., 2014), impression management concerns (Ratner and Kahn 2001), and self-referential processing (Conty, George, and Hietanen 2016) may subject to change. Further, the enhancing effect of the presence of others on socially desirable behavior may not be replicable in a world where people get used to being observed. Future research should explore the new psychological and behavioral consequences of being observed that are introduced to the society with the change of the observer from other people to corporations.

Chapter 4

CUI BONO? EXPLORING CONSUMERS' RESPONSES TOWARDS PRIVACY NOTICES

4.1 Introduction

"We use cookies and other tracking technologies to enhance your site experience and for analytical purposes." Every day, many consumers receive a great number of notifications about cookies, which is one of the various advanced technologies that provide means for companies to collect consumers' data (Michael 2016). Although consumers are concerned about how companies collect and use their personal information, they do not know the exact ways in which their data is collected (Graeff and Harmon 2002). With the aim of giving more control to individuals over their personal data, General Data Protection Regulation (GDPR) was implemented in May 2018. This regulation requires companies to ask for the users' consent for cookies before data collection begins. In Europe, GDPR has implemented an opt-in policy; companies need to get the consent of consumers. In the US, regulators prefer opt-out mechanisms; for instance, consumers can opt-out behaviorally targeted advertisements through AdChoices. Either opting in or opting out, consumers see various notifications or icons (Figure 1) that remind them that companies do observe their behavior. In this article, we explore how privacy notices influence consumers' inferences about companies and their intention to use the products or services and extend the prior research through delineating the underlying process.

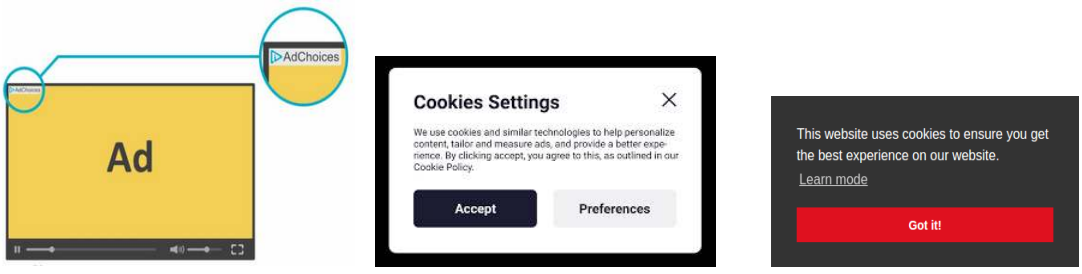


Figure 4.1: Privacy Notices Used by the Companies

4.2 Conceptual Development

Data became the most powerful resource and is considered as the new oil for the digital era (The Economist 2017). With the goal of acquiring more data from consumers, companies allocate resources for tracking, monitoring, and analyzing how people act in the marketplace at pre, during or post decision making stages (Zwebner and Schrift 2020). In the last decade, in addition to incorporating tracking technologies, companies also started to let consumers know about how they use these practices for observing them. For instance, companies inform consumers that their previous purchases are being used for making recommendations, or the products they have viewed are still waiting in the shopping cart. These messages typically used in the marketplace make consumers aware that they are being observed (Zwebner and Schrift 2020). We propose that a privacy notice is one of the messages companies use that increases the salience of the sense of being observed. Therefore, exploring the influence of privacy notices on consumers' reactions requires going beyond the privacy notice itself and understanding how consumers respond to being observed by others.

We use the term "being observed" to refer to the occasions of being tracked, recorded, targeted, or seen by other parties. Emerging research stream exploring consumers' reactions towards being observed suggests that consumers do not want to be observed. Zwebner and Schrift (2020) showed that consumers are averse to being observed, especially during the preference construction stage, as it undermines decision autonomy. This, in turn, can make consumers refrain from being observed and alter their preferences. Consumers' reluctance to be observed is also uncovered in the studies that explore their responses to the notifications that increase the salience of being observed. An exploratory study showed that users respond to cookie disclaimers negatively (Kulyk et al. 2018). Analysis of the acceptance rate of cookies after the implementation of GDPR revealed that 88% of the users ignore or close the cookie banner (Mueller 2019). Turow et al. (2009) demonstrated that young adults are averse to be tracked; 86% of them don't want to receive customized advertisements based on what they do on the websites other than the one they are visiting. When they are asked for consent, only 5.5% of people give consent for tracking of intrusive data such as location information (Godinho de Matos and Adjerid 2021). Receiving something in exchange for the acquisition of their personal

data such as personalized ads or coupons does not help much. Tucker (2012) showed that consumers find them intrusive, as receiving these ads makes them realize that the companies have been collecting their personal information without their consent. Despite consumers' aversion to be tracked, they do not have a means of escape. Even when they do not give consent, it is difficult for users to avoid being observed by companies as most web pages continue tracking them (Sanchez-Rola et al. 2019). Recently, Brough et al. (2021) have suggested the bulletproof glass effect; although privacy notices are expected to increase the sense of security, they reduce consumers' purchase intention on a website as these notices decrease their trust. Taking a step back and exploring how consumers process privacy notices, Cara and Dumitrasciuc (2021) demonstrate that cognitive engagement is not a significant predictor of changing the default settings of privacy. In other words, users do not put much effort into thinking about the content or changing the preferences, and they do not process the information presented in the privacy disclaimer. In fact, public surveys show that most Americans are neither aware of companies' and governments' data collection practices, nor capable of understanding privacy policies they receive from various applications and websites (Pew 2019). If an American user read every word of privacy policies, they would spend 201 hours, and the value of lost time would be $781 billion (McDonald and Cranor 2008). A key implication of this research stream is that consumers react negatively to being observed that can be triggered by the privacy notices and the main reason leading to this aversion may not be about the privacy notice itself. Bringing up a new perspective and extending the prior literature, we predict that this aversion stems from the processes that are triggered by the perception of being observed.

Research also implied that asking for permission to track can have positive outcomes for both companies and consumers. Making a distinction between overt and covert data collection, the former involves informing consumers that their data is collected while the latter collects data without awareness, Aguirre et al. (2015) shows that covertly collecting data and using them for personalized ads decreases consumers' willingness to click as they feel vulnerable. However, overt data collection increases click through rates (Tam and Ho 2006) as it may signal reliability of the company (Kim and Kim 2011). This finding provides insights about the potential benefits of overt data collection for online advertisement effectiveness. Exploring the consequences of overt data sharing, Schmidt, Bornschein and Maier (2020) showed that when consumers accept

cookies and share data, they perceive the price change fairer and increase their purchase intention. The underlying mechanism for the effect is that giving consent for collecting information leads consumers to attribute the outcomes of data sharing to themselves as opposed to the company. This research stream demonstrates that despite being limited to specific contexts, observing consumers and asking for permission to track can have favorable outcomes for companies. More critical for our research, these findings suggest that consumers use the privacy notice as a cue to make attributions to the companies or judge the capabilities of them.

Synthesizing key findings of the prior research, we suggest that privacy notices make consumers aware that they are being observed, which, in turn, triggers a process that stems from the nature of being observed and leads to a reactance towards these notices. Social influence literature shows that when one's actions are being observed, individuals think about the observers and the impression they make to them which leads to the distortion of their behavior (Ariely and Levav 2000; Asch 1956; Calder and Burnkrant 1977; Deutsch and Gerard 1955; Ratner and Kahn 2002). This finding implies that being observed can shift one's attention to the other party and make them consider what the others think (Ratner and Kahn 2002), or what they have (Ariely and Levav 2000). In line with this implication, we predict that the sense of being observed triggered by the privacy notices lead people to think about the party that sends this message and information being collected by them. In other words, it increases the salience of the company that sends the privacy notice and prevents consumers from paying attention to the message communicated in the privacy notice itself.

In a typical information disclosure setting, the actor shares personal information with other parties. Privacy calculus model suggests that while deciding whether to provide information or not, individuals calculate the costs and benefits of disclosure (Laufer and Wolfe 1977). If the benefits surpass the risks, then consumers become more willing to share personal information (Dinev and Hart 2006). Although both benefits and costs are crucial factors of this calculation, research shows that the primary reason behind information disclosure is anticipated benefits as various elements such as trust to the other party can mitigate the anticipated costs (Krasnova et al. 2010). Sun, Wang and Shen (2021) suggest that perceived benefits and costs are not necessarily independent; both of them could be high but as long as the perceived benefits are relatively higher, individuals

disclose information. Here, we suggest that being observed by other parties can be considered as a form of information disclosure in which the actor has a passive role. Although consumers decide whether to give consent to this data collection, other parties are more active as they collect information which changes the self-centered nature of the privacy calculus. As the observer, the company in our case, is salient, consumers who receive privacy notices from companies try to calculate not only their own benefits, but also companies' benefits and think about which party benefits the most. However, consumers lack the necessary knowledge to make this calculation as they do not really know the extent to which they provide data to companies, the value of their data, and how companies use them (for a review, Acquisti, Brandimarte, and Loewenstein 2020). Despite the lack of knowledge regarding the details of tracking and data recording practices of companies, they have an intuition that companies benefit from this data collection more than them. In a classical exchange between a buyer and seller, one party benefits more than the other from a transaction (Bhattacharjee, Dana, and Baron 2017). We propose that consumers think of a data collection setting as a zero-sum market exchange. The asset is consumers' data which are being collected by companies from consumers, and consumers do not know what they will receive in exchange for them, or how their data will be used. As they do not receive immediate benefits or consider some of the potential benefits intrusive such as customized ads (Tucker 2012), they think that companies should be benefitting more than them. To test our prediction about the disproportion of benefits that are perceived to be in favor of companies, we conducted a pilot study with 100 participants recruited from Amazon Mechanical Turks online panel (52 female; M_{age}=40.8 years). We told participants that "Many companies track consumers and collect their data. Both consumers and companies receive benefits from it". Then we asked them to report which party benefitted from it the most by allocating 100% between two parties: consumers and companies. In line with our expectation, findings pointed out an imbalance between companies and consumers. A paired sample t-test showed that consumers thought that companies benefitted ($M_{companies}$=85.52, $SD_{companies}$=15.63) more than consumers ($M_{consumers}$=14.48, $SD_{consumers}$=15.63) from tracking practices (t (99) = 22.73, p <.001). This finding provided support for our prediction that consumers' calculus results in the disproportion of benefits in favor of the companies provided by tracking activities.

Looking from the company's perspective, tracking consumers, and collecting their data provide numerous benefits to them such as increasing their sales and profits and generating advertisements through targeting consumers based on what they viewed or purchased before (Lambrecht and Tucker 2013), what they read (Zhang and Katona 2012), or which keywords they searched on the search engines (Desai, Shin and Staelin 2014). Apart from providing monetary benefits, collecting data help companies understand their consumers. Companies implement technologies for understanding and improving consumers' experience on their website (Waisberg and Kaushik 2009), they create customer profiles across various touch points (Wagner and Majchrzak 2006). These practices suggest that observing consumers through collecting data and tracking them can help companies identify the needs and desires of consumers and address them in a successful way. In other words, observing consumers can be considered as a process that help companies put customers' interests at the center of firm's actions which is referred to as customer centricity (e.g., Burmann, Meurer and Kanitz 2011; Lamberti 2013). To better understand managers' views on observing consumers with the goal of achieving customer centricity, we conducted a survey with 31 executives from an Executive MBA class at a private university (7 females; M_{age}=39.26 years) with a minimum of 8 and maximum of 28 years of work experience. These executives were asked to state whether they agreed with the statement suggesting that alongside with the various goals, the primary objective of tracking was to put customers' interest at the center of companies' actions (Appendix C). 84% of the survey respondents (N= 26/31) agreed with the statement, indicating that companies consider tracking consumers as a means to become more consumer centric. Only 16% of the respondents (N= 5/31) did not agree with the statement and thought that the primary objective of tracking was not being consumer centric ($\chi^2(2)= 5.135$, p=.02). The findings of our pilot studies suggest that there is a mismatch between companies' and consumers' understanding of consumer centricity. On the one hand, consumers believe that companies disproportionately benefit from observing them and collecting their data. On the other hand, companies observe their consumers to serve them in a better way and provide them more benefits.

Given the implications of extant literature and our preliminary results, we predict that consumers who receive a privacy notice will think that they are being observed and react negatively to the privacy notice. This negative effect is driven by the calculation of the benefits they and the company will receive from this observation. This calculus will

be concluded with the idea that companies benefit from tracking more than consumers, which decreases the perceived customer centricity of the company. As consumers consider tracking as an activity yielding profit to companies, we expect to observe a positive association of the perceived profitability of a company and anticipated tracking activities of it. Even when the company is non-profit, privacy notices are likely to change the perceived profit orientation of them because they are considered as an indicator of companies' goal of making profit rather than serving consumers. This, in turn, decreases perceived customer centricity of the companies. In line with the research showing that perceived customer centricity increases consumers' loyalty intentions (Gulati 2007; Lee et al. 2015), we predict that consumers' willingness to use a product or a service in future will decrease as a function of the lower levels of perceived customer centricity when consumers receive a privacy notice.

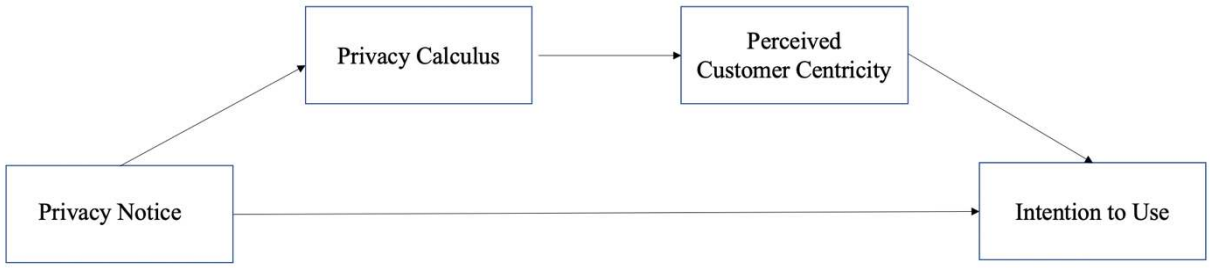


Figure 4.2: Conceptual Model of

Cui Bono?:Exploring Consumers' Responses Towards Privacy Notices

4.3 Overview of Studies

In the remainder of this article, we present results from seven studies that test our predictions. All of our studies have an initial screening question and an attention check question embedded in the study. In Study 1, we show a positive correlation between the perceived profitability of a company and its tracking activities. In Study 2A, exploring secondary data obtained from a university, we show in a real setting that consumers are averse to privacy notices; they do not tend to allow companies to track them. In Study 2B, testing our main prediction in a more controlled setting, we demonstrate that privacy notices decrease consumers' willingness to use a browser in future. In Studies 3A and 3B, we show that willingness to use an application or a platform in future decreases for

consumers who receive a privacy notice and provide direct empirical evidence for our proposed mechanism that receiving a privacy notice decreases perceived customer centricity of the company as well as making it seem more profit oriented, which in turn decreases users' willingness to use the product. In Study 4, we show that the negative effect of privacy notices applies to the non-profit companies as receiving a privacy notice changes the perceived profit orientation of a company. Finally, in Study 5, using field data, we show that the effect can be mitigated when users are provided with an option to decline cookies as it can change the privacy calculus.

Table 4.1: Overview of Studies

Studies	**Objective**	**Design**	**Key Findings**
Pilot Study 1	To explore consumers' privacy calculus	N=100 Allocate 100% between two parties: companies and consumers	Consumers' calculus results in the disproportion of benefits in favor of the companies.
Pilot Study 2	To explore managers' view on observing consumers for achieving customer centricity	N=31(executives) Agree/Disagree with the statement suggesting that the primary goal of tracking is achieving customer centricity.	Managers consider tracking consumers as a means to become more consumer centric.
Study 1	To explore the link between the profitability of a company and anticipated tracking activities	N=177 Respond to the questions about the profit, tracking activities and motive of the company for 40 companies from Fortune 500 list.	Consumers consider the profitability of a company as a proxy for the tracking activities that they engaged. The more a company made profit, the more consumers thought that it would observe consumers with the goal of making profit rather than serving consumers.
Study 2A	To explore consumers' aversion towards privacy notices using secondary data.	Exploring the metrics before and after the implementation of privacy notices on a website	The number of users, new users and pageviews had a significant decline after the privacy notices were implemented on the website
Study 2B	To explore consumers' aversion towards privacy notices using in a more controlled setting.	N=191 Single factor (Notification Type: Privacy Notice vs. Control) between-subjects design DV: Usage intention	Receiving a privacy notice decreased consumers' tendency to use the browser in future.

Study 3A	To explore the underlying mechanism, increase generalizability, provide empirical support for our conceptualization.	N=193 Single factor (Notification Type: Privacy Notice vs. Control), between-subjects design. DV: Usage intention Mediator: Customer centricity Measure: Anticipated tracking	The effect was robust across different types of privacy notices. Receiving a privacy notice decreased perceived customer centricity of the firm, which reduced consumers' willingness to use the app.
Study 3B	To clarify the underlying psychological process.	N=201 Single factor (Notification Type: Privacy Notice vs. Control), between-subjects design. DV: Usage intention Mediator: Difference between the perceived profit and customer orientation Covariate: Trust	Privacy notice made consumers perceive the company more profit and less customer oriented, which decreased the usage intention. The effect was not driven by the decrease in consumers' trust. Instead, it resulted from the attributions made to the company based on the use of privacy notices.
Study 4	To provide stronger evidence for the proposed mechanism and extend the implications of our findings	N=671 2 (Company Type: For-Profit, Non-Profit) x 2 (Privacy Notice: Available, Control) between-subjects design DV: Purchase intention Mediator: Customer centricity Measure: Profit orientation	Privacy notices made companies perceived as profit oriented, decreased perceived customer centricity of it and consumers' purchase intention.
Study 5	To explore a boundary condition	Exploring the metrics before and after a change in privacy notices on a website	Giving an option to decline cookies could improve consumers' willingness to accept the cookies.

4.3.1 Study 1: Exploring the Association Between Perceived Profitability of a Company and Anticipated Tracking Activities

The main objective of Study 1 is to explore the perceived relationship among companies' profit, tracking activities and motives. Our pilot study showed a disproportion of benefits in favor of companies. In other words, consumer think that companies profit more than consumers as a result of tracking. In Study 1, we explore consumers' perception of the link between profitability of a company and its tracking activities. We predict that the

more profitable the companies are perceived, the more they will be considered engaging in tracking activities. Further, we expect that if companies are thought as engaging in extensive tracking, they will be perceived as being motivated by making profit rather than serving customers. To test these predictions, we conducted a study based on Bhattacharjee, Dana and Baron (2017).

Method

We recruited one hundred and ninety-one US residents on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment. 14 participants failed to pass the attention check question; and, thus, they were excluded from the analysis, which resulted in a final sample size of one hundred and seventy-seven (83 females; M_{age} = 42.02 years SD_{age} = 12.07 years). We randomly selected 40 companies on the Fortune 500 list, 8 companies from each quintile, as these companies were profitable and mostly known by consumers. For each company, participants first read a short description of the company (e.g., Walmart Inc. is a multinational retail corporation that operates a chain of hypermarkets, discount department stores, and grocery stores). After reading the description, participants reported whether they were familiar with the company on a 3-point scale (1= *never heard of it*, 3=*familiar*).

Upon reporting their familiarity, participants rated the extent to which they thought that the company made profit in the last year ("How much profit do you think this business made on average (of businesses in general) in the last year?"; 0 = *zero or less*, 5 = *a lot more than average*). Participants then rated the extent to which they thought that this business tracked its consumers (1=*Not at all*, 3=*To great extent*). The first half of the participants responded to the question exploring perceived profit of the company first, the second half responded the perceived tracking activities question first. Finally, participants reported the perceived motives of these companies: "What is the most important motive of this business?" (1= *to serve consumers*, 3= *to make money*).

Results

In line with the analysis of Bhattacharjee, Dana and Baron (2017), we only kept the respondents that were familiar with the given company. If participants were not familiar with the company, their responses were excluded from analysis (N = 1030, or 14.55%, of 7080 total participant-company responses were removed).

Perceived Profitability. Across companies, the mean ratings of profit and perceived tracking were positively correlated (r (38) =.42, p =.0064, Figure 4.3). As the perceived profitability of a company increased, participants thought that they would be engaging in tracking activities more.

From the Fortune 500 list, we collected data regarding the actual profit of each company. In line with the findings of Bhattacharjee, Dana and Baron (2017), there was a high positive correlation between the perceived profit and the log of actual profit (r (38) =.64, p =.0001). Together, these findings suggested that individuals made accurate judgments about the profitability of each company. Further, they believed that profit was an indicator of the tracking activities a company engaged in.

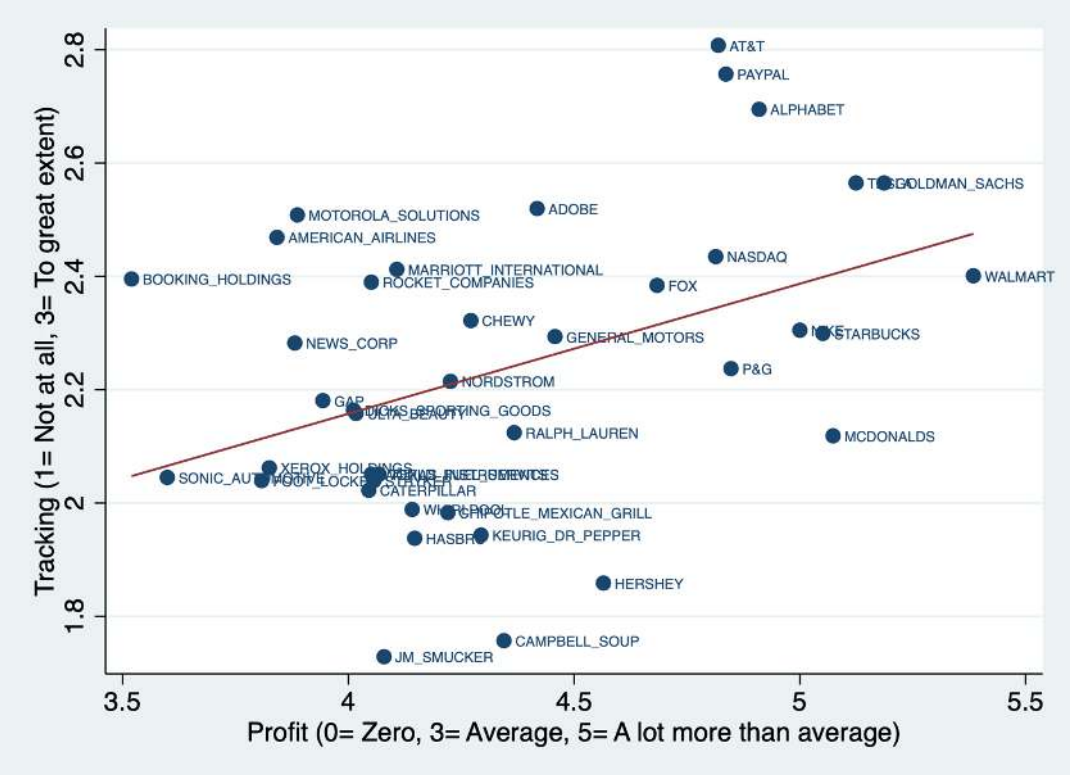


Figure 4.3: Relation Between Perceived Profit and Anticipated Tracking Activities of Fortune 500 Companies

Anticipated Motives. Across companies, the mean ratings of perceived tracking and anticipated motives were positively correlated (r (38) =.48, p=.0018). As the tracking activities increased, company's motive was perceived as making money rather than

serving customers. In line with the findings of our pilot study exploring consumers' association of profit and tracking and on the contrary to the managers' perspective that we showed in our other pilot study, tracking was perceived as an activity that aimed to increase profits rather than understanding the needs and desires of the customers, decreasing the perceived customer centricity of a company.

Anticipated Tracking Activities. To explore how perceived profitability of a company and perceived motives influenced anticipated tracking activities of a company, we ran a regression analysis. As illustrated in Table 2, controlling for familiarity with the company, anticipated motive of the company, company fixed effects, age, gender and education of the participants, perceived profitability of a company increased participants' anticipation of tracking activities (B = .27, SE =.03, p < .001). Note that we included every data point in the analysis and controlled for the familiarity with the company for this analysis.

Table 4.2: The Influence of the Perceived Profit of a Company on the Anticipated Tracking Activities

	(1)	(2)	(3)	(4)	(5)	(6)
Perceived Profit	0.323***	0.318***	0.283***	0.291***	0.259***	0.271***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)
Familiarity with the Company		0.019	-0.008	-0.021	-0.038	0.049
		(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
Anticipated Motive			0.303***	0.304***	0.306***	0.265***
			(0.05)	(0.05)	(0.05)	(0.05)
Age				0.005*	0.006*	0.005*
				(0.00)	(0.00)	(0.00)
Gender: male				0.068	0.063	0.069
				(0.07)	(0.07)	(0.07)
Education: Undergraduate degree				0.180	0.176	0.183
				(0.16)	(0.16)	(0.16)
Education: Graduate degree				0.423**	0.416**	0.413*
				(0.16)	(0.16)	(0.16)
Market Value					0.083***	
					(0.01)	
Company fixed effects	×	×	×	×	×	✓
R2	0.10	0.10	0.13	0.15	0.17	0.27
N	7080	7080	7080	7080	7080	7080

The coefficients from OLS regressions are reported. Standard errors are clustered at the individual level and given in parentheses. * p<0.01, ** p<0.05, *** p<0.001.

The results of Study 1 demonstrated the strong association between profit and tracking. Consumers consider the profitability of a company as a proxy for the tracking activities that they engaged. The more a company made profit, the more consumers thought that it would observe consumers with the goal of making profit rather than serving consumers.

4.3.2 Study 2A: Field Study Exploring Users' Responses to Privacy Notices

Study 2A aims to explore our main prediction that people have an aversion towards privacy notices. With this goal, we acquired secondary data through collaborating with a private university and exploring the website metrics of their homepage. Having around 8000 students, this university implemented privacy notices on their websites on January 15, 2021 as a part of GDPR regulations. Until this date, everyone visiting the website was included in the number of users and pageview. However, after this date, only the visitors who accept cookies were counted. Visitors who closed the privacy notice or customized and rejected cookies were not reflected in the numbers. Therefore, examining website traffic would provide preliminary evidence about users' reactions to privacy notices, and we expected that users reacted negatively when privacy notices popped up.

Results

Our dataset consisted of the number of users, new users and pageviews over a period of 5 years. Each year started on January 15 and ended on January 14. (i.e., 01.15.2017-01.14.2018). So, the final date in our dataset is January 14, 2022. We explored the influence of the availability of the privacy notice on the daily website metrics of the number of users, new users and pageviews controlling for the monthly and annual fixed effects. As illustrated in the Table 4.3, regression analyses showed that the implementation of the privacy notices in the website decreased the number of users, the number of new users on the webpage, and the number of pageviews. Around 10% of the visitors accepted cookies, and 90% of them might have closed the website, closed the privacy notice, or did not authorize the website to track (Table 4.4, Figure 4.4).

Table 4.3: The Influence of the Privacy Notice on the Website Metrics

	(1) New Users	(2) Users	(3) Pageviews
Privacy notice	-1043.4***	-1523.9***	-8540.7***
	(115.62)	(152.78)	(580.50)
Constant	1274.5***	1979.9***	3638.3***
	(41.49)	(54.83)	(208.31)
Year FE	✓	✓	✓
Month FE	✓	✓	✓
N	1826	1826	1826
R2	0.60	0.67	0.71

The coefficients from OLS regressions are reported. Standard errors are clustered at the individual level and given in parentheses. * p<0.01, ** p<0.05, *** p<0.001.

Table 4.4: Total Number of Users, New Users and Pageviews of the Webpage of a University from 2017 to 2022

Years	Number of Users	New Users	Pageviews
2017	522,072	478,667	1,633,279
2018	542,829	489,269	1,628,805
2019	557,192	471,782	2,602,549
2020	590,683	504,916	3,728,652
2021	55,428	48,464	454,491

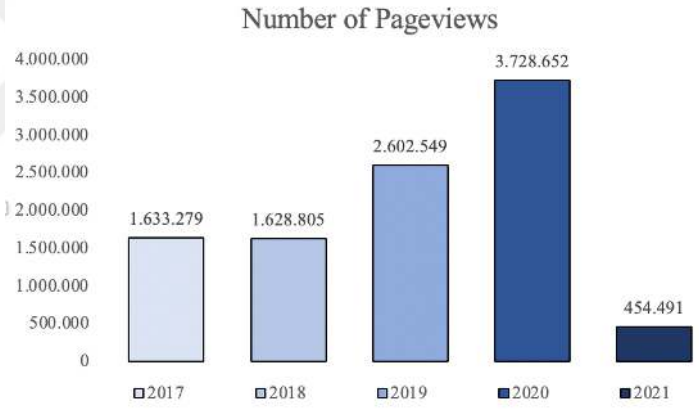


Figure 4.4: Graphical Representation of the Change in the Number of Pageviews From 2017 to 2022

4.3.3 Study 2B: Exploring the Influence of Privacy Notices on Consumers' Willingness to Use the Browser

The main objective of Study 2B is to provide further causal evidence for consumers' aversion to privacy notices. With this goal, we prepared two versions of an internet browser mockup that included real messages used in the marketplace. We expected that receiving a privacy notice would decrease consumers' willingness to use the browser in future.

Method

We recruited one hundred ninety-four US residents (91 females; M_{age} = 43.4 years) on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment. Two participants failed a screening question asked at the beginning of the survey; and one participant failed to pass the attention check question and, thus, was excluded from the final analysis. The study employed a single factor (Notification Type: Privacy Notice vs. Control), between-subjects design. Participants were randomly assigned to one of the two conditions. Participants in the Privacy Notice condition were asked to imagine that they opened their browser on their personal computer and a privacy notice popped up. In the notification, it was written that "Your browsing history is at risk! If this problem is not fixed, your online activity can be tracked. Restore privacy and keep your searches private". Below the message, there were two buttons, "Not Now" and "Restore Privacy". This privacy notice asked consumers to do something which would in turn improve the service they would receive from the company. For the control group, we thought that an update setting would be proper as it would also ask consumers to engage in an activity that would enhance their experience. Therefore, participants in the control condition were asked to imagine that an update notice popped up when they opened their browser on their personal computer. More specifically, it was written in the notification that "Your browser is outdated! A new update for the Browser is available and will be applied as soon as you relaunch". Below the message, there were two buttons, "Not Now" and "Relaunch" (see Figure 4.5 for the visuals used in the experiment). Participants only viewed these messages; they were not asked to report what they would do or which button they would click on. After viewing these messages, they were asked to report how likely they would be to use this browser in future (1=*Not likely*, 7= *Very likely*).

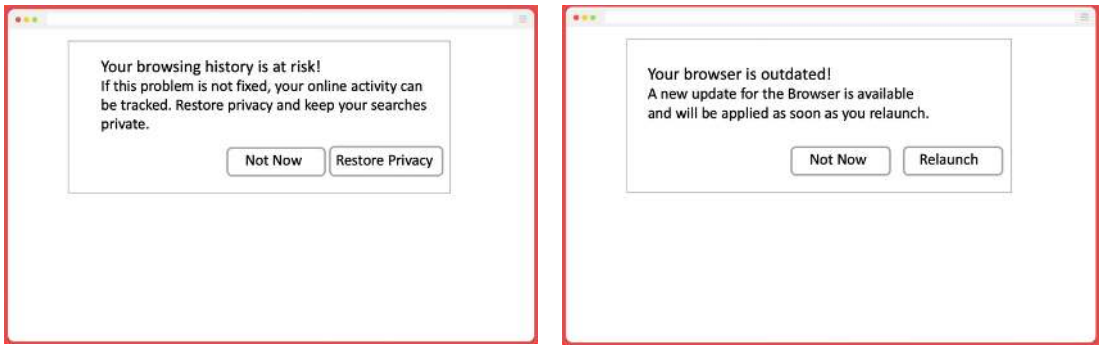


Figure 4.5: Visuals Used in Study 2B

Results

A one-way ANOVA revealed a significant effect of the notification type on willingness to use the browser ($F(1, 189) = 25.235$, $p < .001$). Supporting our main prediction, participants who imagined receiving a privacy notice reported a lower willingness to use the browser in future ($M_{privacy\ notice} = 3.53$, $SD_{privacy\ notice} = 1.89$) than those who imagined receiving a pop-up about an update ($M_{control} = 4.94$, $SD_{control} = 1.97$). This finding showed that consumers were averse to privacy notices, and when they received it, their usage intention decreased, which could damage companies that aimed to increase consumer loyalty.

Using data from the field and the lab, Study 2A and 2B demonstrate that consumers are averse to privacy notices. Receiving a privacy notice decreases their tendency to accept it and even use the browser in future.

4.3.4 Study 3A: The Role of Customer Centricity

Study 3A has four objectives. The main objective is to explore the underlying mechanism of the effect of privacy notice on willingness to use, and to test our process explanation. We predict that when consumers receive a privacy notice that ask them to accept or customize, consumers rely on their calculus that suggests that companies benefit from tracking more than them, which decreases perceived customer centricity of the company. This, in turn, will decrease consumers' willingness to use. To test this proposition, we measured perceived customer centricity.

The second objective of this study is to increase the generalizability of our findings across different types of privacy notices sent by companies, and across different types of media that consumers use. With this goal, we asked participants to imagine a scenario involving the use of an application on a smart phone.

The message we used in Study 2B may be perceived as intrusive. Although it is one of the messages used in the marketplace, it creates a sense of danger and threat. The

third objective of this study is to decrease the perceived intrusiveness of the message. With this goal, we used a message that asks for a permission to track.

The fourth objective is to empirically show that privacy notices trigger the perception of being observed. In our conceptualization, we suggest that privacy notice is one of the messages that makes it salient to the consumers that they are being observed. To provide evidence for this prediction, we included a manipulation check question and measured the extent to which our participants thought that the company would track their activities.

Method

We recruited one hundred ninety-three participants (126 females; M_{age} = 35.4 years) on Prolific to complete the study in exchange for a small monetary payment. The study employed a single factor (Notification Type: Privacy Notice vs. Control), between-subjects design. Participants were randomly assigned to one of the two conditions. Participants in the Privacy Notice condition were asked to imagine that while they were using an application on their smartphone, a privacy notice popped up and asked them to allow application to track their activity across other companies' apps and websites. Participants in the control condition were asked to imagine that while they were using an application on their smartphone, a notification about an update popped up and asked them to install the update that was available (see Figure 4.6 for the visuals used in the study). Afterwards, all participants were asked to rate their willingness to use this application in future and complete the customer centricity scale adapted from Habel et al. (2020) (see Appendix C), the order of which was randomized. Finally, they were asked to think about the notification they received and rate the extent to which they thought that the application would track their activities.

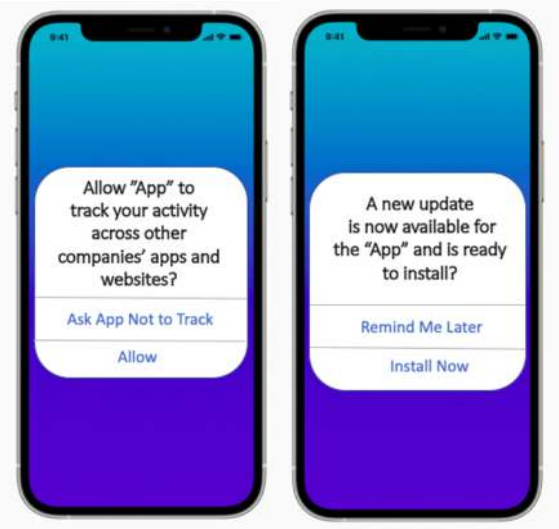


Figure 4.6: Visuals Used in Study 3A

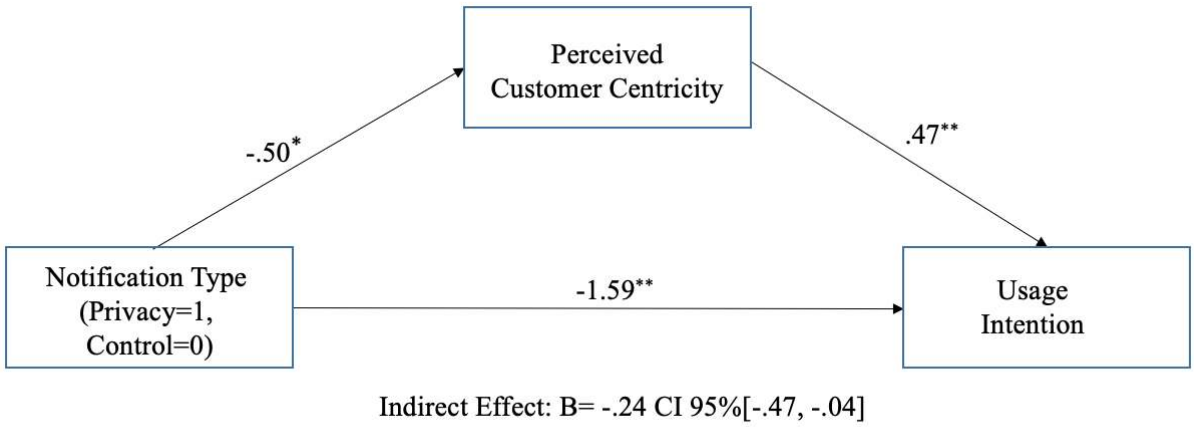
Results

Manipulation Check. A one-way ANOVA revealed a significant effect of the notification type on the expectations regarding companies' tracking (F (1, 191) = 10.002, p = .002). Participants in the Privacy Notice condition thought that the application they used would track them ($M_{privacy\ notice}$ = 6.04, $SD_{privacy\ notice}$ = 1.21) more than the ones in the control condition ($M_{control}$ = 5.45, $SD_{control}$ = 1.39). This finding suggested that receiving a privacy notice that asked consumers for permission to track increased consumers perception of being observed.

Willingness to use. A one-way ANOVA revealed a significant effect of the notification type on willingness to use (F (1, 191) = 63.984, p < .001). Replicating our finding in Study 2, participants who imagined receiving a privacy notice reported a lower willingness to use the application in future ($M_{privacy\ notice}$ = 3.06, $SD_{privacy\ notice}$ = 1.72) than those who imagined receiving a notification about an update ($M_{control}$ = 4.89, $SD_{control}$ = 1.44).

Customer Centricity. We computed a composite customer centricity score by averaging participants' responses to scale items (Cronbach's alpha = .89). Then we tested the proposed mediation model using PROCESS (Hayes 2018) Model 4 with 10,000 bootstrapped samples. In the model, we included notification type (0: control, 1: privacy notice) as the independent variable, willingness to use as the dependent variable, and the perceived consumer centricity as the mediator. Mediation analysis showed that the

perceived consumer centricity mediated the relationship between the notification type and willingness to use. More specifically, the privacy notice reduced the perceived consumer centricity of the company (b = -.50; t = -2.44, p = .016), which decreased consumers' willingness to use the application (b = .47; t = 6.44, p = .000). The index of mediation was significant (Effect = -.24, %95 CI: [-.48, -.05]), and the direct effect was reduced after accounting for the proposed mediator but remained significant (Effect = -1.59, %95 CI: [-2.00, -1.17]), suggesting a partial mediation (see Figure 4.7 for path coefficients).



NOTE.—Path coefficients of mediation model. *p < .05; **p < .001.

Figure 4.7: Mediation Model in Study 3A

4.3.5 Study 3B: The Role of Profit and Customer Orientation

The main objective of Study 3B is to clarify the proposed mechanism. Study 1 demonstrated that consumers consider tracking as an activity that was profit oriented rather than customer centric. In our study design, we imposed participants to choose either profit or customer orientation for a given company. However, it may not be the case in the marketplace, as many companies can be both profit oriented and customer oriented at the same time. In Study 3B, we measure the perceived profit and customer orientation separately, and use the difference of these measures as the main dependent variable. We predict that the difference between the perceived profit and customer orientation of a company would be perceived as higher for the consumers who receive a privacy notice.

We further build upon the extant research to delineate the psychological processes underlying these findings. Recently, Brough et al. (2021) showed that one of the reasons for why consumers react negatively to the privacy notices was the decrease in trust because they were considered as formal contracts. However, our research proposes that our effect is driven by the privacy calculus, and subsequent decrease in the consumer centricity, which is triggered by privacy notices. In other words, it is not driven by the perception of privacy notices; rather, it is driven by the attributions made to the company based on the sense of being observed triggered by the use of privacy notices. To rule out trust as a potential mechanism for the observed effect, we measured consumers' trust and included it into our mediation model. We predicted that even when we controlled for the trust, our proposed mediator would yield significant results. To test these predictions, we conducted a study, the scenario of which was adapted from Zwebner and Schrift (2020).

Method

We recruited two hundred and two US residents on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment, one of whom failed to pass the attention check question, leaving us with a sample of two hundred and one participants (105 females; M_{age} = 41.1 years). The study employed a single factor (Notification Type: Privacy Notice vs. Control), between-subjects design. Participants were informed that an e-retailer was launching a new platform for vacation packages. Then, participants were randomly assigned to one of the two conditions. Participants in the Privacy Notice [Control] condition were asked to imagine that they opened the website of the platform and received a privacy [welcome] notice. Afterwards all participants responded to the items measuring interest in using the platform (adapted from Zwebner and Schrift 2020). More specifically, they rated the extent to which they were willing to explore the platform (1=*Not at all*, 7=*Very much*), how interested they are in using such a platform (1=Definitely not interested, 7=Extremely interested), the extent to which they value such a platform (1=*Not at all*, 7=*Very much*), and how much they would be willing to pay for a premium membership to the platform (scale from 0 to $7). Afterwards, they reported the extent to which they think that this platform was profit oriented and customer oriented on a 100-point slider scale, the order of which was randomized. Then, they were asked to rate how comfortable they would be with the way their data would be collected and stored by this platform (0=*Not at all*, 100=*Extremely*, adapted from Brough et al 2021). Finally,

they reported the extent to which they think that the platform would track their activities, completed an attention check question and provided demographics.

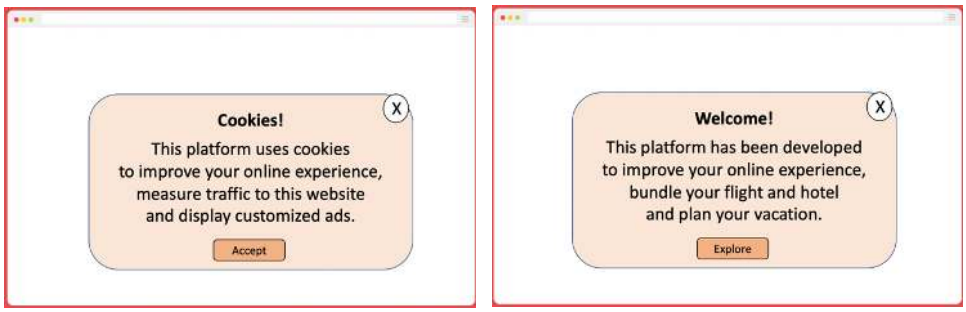


Figure 4.8: Visuals Used in Study 3B

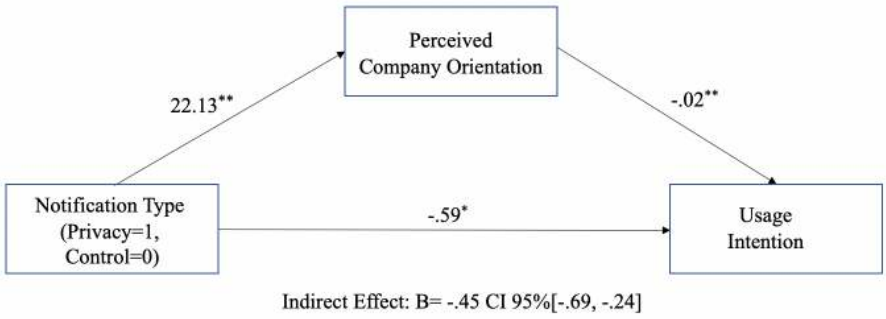
Results

Manipulation Check. A one-way ANOVA revealed a significant effect of the notification type on the expectations regarding companies' tracking (F (1, 199) = 5.36, p = .022). Participants in the Privacy Notice condition thought that the application they used would track them ($M_{privacy\ notice}$ = 6.10, $SD_{privacy\ notice}$ = 1.07) more than the ones in the control condition ($M_{control}$ = 5.74, $SD_{control}$ = 1.12). This finding suggested that receiving a privacy notice increased consumers perception of being observed.

Interest in using the platform. We generated a composite score out of 4 items (Cronbach's alpha= .89). A one-way ANOVA revealed a significant effect of the notification type on the interest in using the platform (F (1, 199) = 27.43, p < .001). Replicating our main finding, participants who received a privacy notice reported a less interested in using the platform ($M_{privacy\ notice}$ = 3.25, $SD_{privacy\ notice}$ = 1.42) than those who received a welcome message ($M_{control}$ = 4.30, $SD_{control}$ = 1.40).

Underlying Mechanism. We calculated a difference score using profit and customer orientation questions for identifying the perceived orientation of the platform. Then we tested the proposed mediation model using PROCESS (Hayes 2018) Model 4 with 10,000 bootstrapped samples. In the model, we included notification type (0: control, 1: privacy notice) as the independent variable, interest in using the platform as the dependent variable, and the company orientation as the mediator. Mediation analysis

showed that the perceived company orientation mediated the relationship between the notification type and interest in using the platform. More specifically, the privacy notice influenced the company orientation (b = 22.13; t = 4.43, p = .000), which decreased consumers' interest in using the platform (b = -.02; t = -8.25, p = .000). The index of mediation was significant (Effect = -.45, %95 CI: [-.69, -.24]), and the direct effect was reduced but still significant (Effect = -.60, %95 CI: [-.96, -.24]), suggesting a partial mediation (please see Figure 4.9 for path coefficients). When we controlled for the trust, the effect did not change (the index of moderated mediation controlling for trust: Effect = -.16, %95 CI: [-.30, -.06]).



NOTE.—Path coefficients of mediation model. *p < .05; **p < .001.

Figure 4.9: Mediation Model in Study 3B

Trust as a Potential Mechanism. We conducted a mediation analysis similar to the one described above with one difference; we substituted company orientation with trust. Results showed that the availability of a privacy notice decreased consumers' trust (b = -11.19; t = -2.73, p = .007), which decreased consumers' interest in using the platform (b = -.03; t = 11.60, p = .000). The index of mediation was significant (Effect = -.35, %95 CI: [-.61, -.09]), and the direct effect was reduced but still significant (Effect = -.70, %95 CI: [-1.01, -.39]). Considering the mediation indices, our proposed mediator had a more explanatory power. Further, when we controlled for the company orientation, trust did not mediate the effect (Effect = -.06, %95 CI: [-.25, .13]). In a study reported in the web

appendix, we only tested our proposed mediator, and the results yielded in a full mediation model (please see Appendix C).

Study 3A and 3B had important results. First, they showed that our effect was robust across different privacy notices and control conditions. Receiving a privacy notice decreased consumers' usage intentions. Second, they provided direct evidence supporting our proposed mechanism. More specifically, Study 3A showed that receiving a privacy notice decreased perceived customer centricity of the firm, which reduced consumers' willingness to use the app. Further, Study 3B showed that privacy notice made consumers perceive the company more profit and less customer oriented, which decreased the usage intention. Finally, Study 3B showed that our effect was not driven by the decrease in consumers' trust resulted from the bulletproof glass effect. Instead, it resulted from the attributions made to the company based on the use of privacy notices.

4.3.6 Study 4: Exploring the Influence of Profit Orientation and Privacy Notice

The main objectives of Study 4 are to provide stronger evidence for the proposed mechanism and to extend the implications of our results through measuring purchase intention. Our findings have provided evidence that consumers believe that companies benefitted more than consumers from tracking, which made them less consumer centric. In Study 1, with a correlational design, we show that as the perceived profitability of a company increased, the perceived tracking activities also increased. In Study 3B, we showed that privacy notice influenced the perceived company orientation; the difference between the profit and customer orientation was considered as higher for the company that sent a privacy notice. Building on these findings, we test our process by highlighting the profit orientation of the company through employing a 2 (Company Type: For-Profit, Non-Profit) x 2 (Privacy Notice: Available, Control) between-subjects design. We propose that consumers consider tracking as an activity that yields profits to the companies. When consumers receive a privacy notice from a non-profit organization as opposed to not receiving it, the perceived profit orientation of the company will increase. As the primary goal of non-profits is to serve the society rather than making profit (Bhattacharjee, Dana, and Baron 2017), receiving a privacy notice from them will make consumers think that companies will make profit from collecting their data. Thus, we

predict that a non-profit organization would be considered more profit oriented, and less consumer centric when it sends a privacy notice to customers. As the findings of Study 1 show that profit is closely associated with tracking, we do not expect to see the effect of privacy notice for profit-oriented companies because profit implies tracking. Further, we do not expect to see a significant difference between a non-profit and a for-profit company when consumers receive a privacy notice from them. Finally, in line with the findings of Lee, Bolton, and Winterich (2017), we expect to see that consumers will report higher willingness to purchase a product from a non-profit framing of the company as opposed to the for-profit framing as our manipulation involves a social cause of an organization. In this study, we also test the influence of the privacy notice against a more neutral control group and do not show any message that could improve company perceptions.

Method

We recruited six hundred eighty-six participants on MTurk to complete the study in exchange for a small monetary payment, nine of which could not pass the initial screening question and six of them failed to pass the attention check question, leaving us with a final sample of six hundred seventy-one participants (345 females; M_{age} = 43.67 years). The study used a 2 (Company Type: For-Profit, Non-Profit) x 2 (Privacy Notice: Available, Control) between-subjects design. For Company Type manipulation, we adapted the manipulation used by Bhattacharjee, Dana and Baron (2017) and Aaker, Vohs and Mogilner (2010). All participants were informed about Artsy, which was an organization that helped artisans in developing nations to market their handmade products through buying them and distributing them to retailers in developed countries or selling them on its own website. In the For-Profit [Non-Profit] condition, participants also read that "The organization operates as a for-profit. Its leadership decides how to allocate resources to best pursue its mission by trying to maximize its profit." ["The organization operates as a non-profit. Its leadership decides how to allocate resources to best pursue its mission."] Then, all participants were asked to imagine that they opened the website of the organization. In the For-Profit [Non-Profit] condition, we stated that they opened the website of "artsy.com" ["artsy.org"].

Participants in the Privacy Notice Available condition were informed that when they opened the website, a privacy notice popped up. In this privacy notice they read that "This website uses cookies to analyze and measure your engagement with our content and provide a better experience" (Figure 4.10).

Figure 4.10: Privacy Notice Used in Study 4

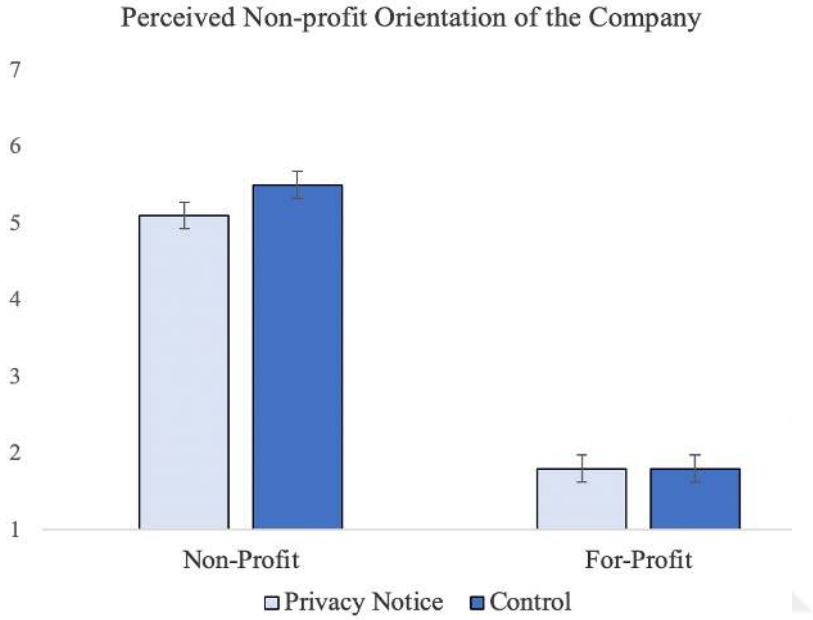
Participants could see the accept button, preferences button, and the symbol that could make the privacy notice disappear; however, they were not further told about clicking on any of these buttons. In the Privacy Notice Control condition, participants did not view this privacy notice. Afterwards, participants were asked to report their purchase intention ("How likely would you be to purchase a product on this website?"; 1=*Not likely*, 7=*Very likely*) and completed the adapted version of the perceived customer centricity scale (Habel et al. 2020). Finally, they responded to the manipulation check questions which we measured by asking them to rate the extent to which that they thought that Artsy was a for-profit organization and non-profit organization (adapted from Aaker, Vohs, and Mogilner 2010).

Results

Manipulation Checks. A 2 x 2 ANOVA revealed the main effect of the company type on the manipulation check question. As expected, participants in the For-Profit conditions perceived Artsy as a for-profit organization more than the ones in the Non-Profit conditions ($M_{for\text{-}profit,\ control}$= 6.29, $SD_{for\text{-}profit,\ control}$= 1.23; $M_{for\text{-}profit,\ privacy\ notice}$= 6.30, $SD_{for\text{-}profit,\ privacy\ notice}$= 1.25; $M_{non\text{-}profit,\ control}$= 2.82, $SD_{non\text{-}profit,\ control}$= 1.87; $M_{non\text{-}profit,\ privacy\ notice}$= 3.03, $SD_{non\text{-}profit,\ privacy\ notice}$= 2.00; ($F$ (1,667) =718.849, p <.001), and interaction was not significant (p=.43).

For the non-profit question, a 2 x 2 ANOVA revealed the main effect of profit. As expected, participants in the Non-Profit conditions perceived Artsy as a non-profit organization more than the one in the For-Profit conditions ($M_{for\text{-}profit,\ control}$= 1.80, $SD_{for\text{-}profit,\ control}$= 1.37; $M_{for\text{-}profit,\ privacy\ notice}$= 1.80, $SD_{for\text{-}profit,\ privacy\ notice}$= 1.40; $M_{non\text{-}profit,\ control}$=

5.50, $SD_{non\text{-}profit,\ control}$= 1.69; $M_{non\text{-}profit,\ privacy\ notice}$= 5.10, $SD_{non\text{-}profit,\ privacy\ notice}$= 1.93; ($F$ (1,667) =780.203, p <.001). The interaction was not significant (p=.10). However, pairwise comparisons showed that participants in the Non-Profit condition who did not receive a privacy notice perceived the organization as more non-profit than the ones who received a privacy notice (F (1,667) =5.232, p=.022, Figure 4.11). In other words, receiving a privacy notice influenced the perceived non-profit orientation of the company.



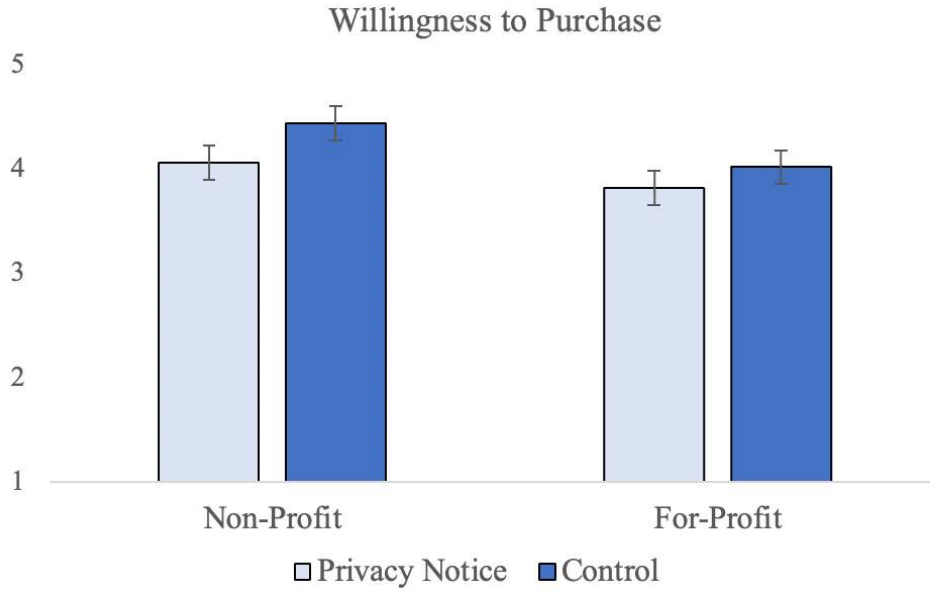
NOTE.—Error bars represent standard errors.

Figure 4.11: Perceived Non-Profit Orientation of the Company

Purchase intention. A 2 x 2 ANOVA predicting purchase intention indicated a significant main effect of privacy notice (F (1,667) =6.288, p =.012) and a significant main effect of company type, (F (1, 667) =8.134, p =.004; Figure 4.12). It did not reveal a significant interaction (F(1,667)= .628, p=.43). As expected, contrasts showed that when privacy notice was not available, participants reported a higher willingness to purchase from the non-profit company as opposed to a for-profit company ($M_{for\text{-}profit,\ control}$= 4.01, $SD_{for\text{-}profit,\ control}$= 1.43; $M_{non\text{-}profit,\ control}$= 4.43, $SD_{non\text{-}profit,\ control}$= 1.54; F (1,667) = 6.677, p =.01).

Moreover, for the non-profit companies, participants reported a higher willingness to purchase when they did not view a privacy notice compared to when they received a

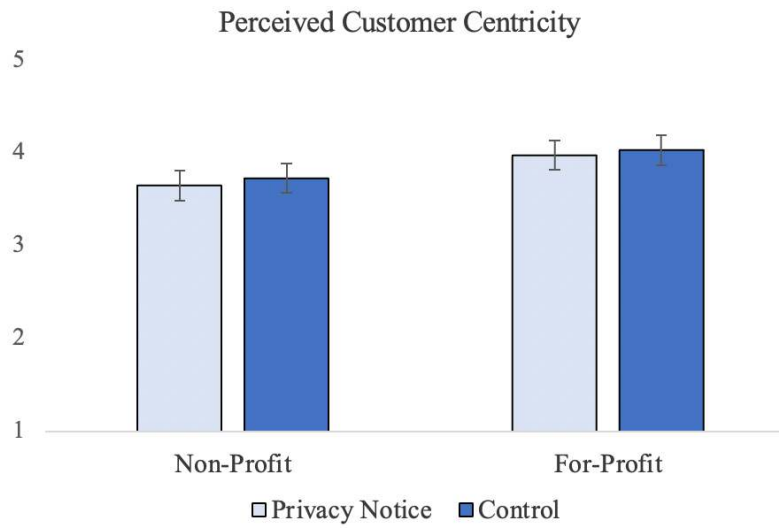
privacy notice. ($M_{non\text{-}profit,\ control}$= 4.43, $SD_{non\text{-}profit,\ control}$= 1.54; $M_{non\text{-}profit,\ privacy\ notice}$= 4.05, $SD_{non\text{-}profit,\ privacy\ notice}$= 1.53; ($F$ (1,667) =5.379, p=.021).



NOTE.—Error bars represent standard errors.

Figure 4.12: Purchase Intention as a Function of Profit Orientation and the Use of Privacy Notice

Perceived Customer Centricity. A 2 x 2 ANOVA predicting perceived customer centricity indicated a significant main effect of company type (F (1,667) = 7.322, p =.007). Contrasts showed that when privacy notice was available, participants perceived the for-profit company as more consumer centric than the non-profit company ($M_{for\text{-}profit,\ privacy\ notice}$= 3.98, $SD_{for\text{-}profit,\ privacy\ notice}$= 1.39; $M_{non\text{-}profit,\ privacy\ notice}$= 3.65, $SD_{non\text{-}profit,\ privacy\ notice}$= 1.56; F (1,667) =3.906, p =.049).



NOTE.—Error bars represent standard errors.

Figure 4.13: Perceived Customer Centricity
as a Function of Profit Orientation and the Use of Privacy Notice

Study 4 showed that receiving a privacy notice changed how consumers perceived the profit orientation of a non-profit company and decreased perceived customer centricity of it. These results indicated that privacy notices were especially more dangerous for non-profit companies as it decreased consumers' willingness to purchase products from them.

4.3.7 Study 5: Mitigating the Negative Influence of Privacy Concerns

The main objective of Study 5 is to explore a boundary condition. According to data protection regulations, companies should notify and receive permission from consumers before starting the data collection. In the marketplace, companies have their own ways of tailoring their messages and options they provide. We noticed that consumers mostly have two options when they received a privacy notice: i) accept or ii) change the settings (Figures 4.14-16).

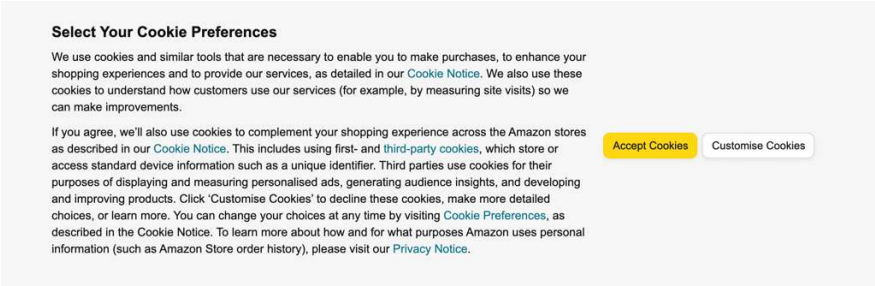


Figure 4.14: Privacy Notice of Amazon

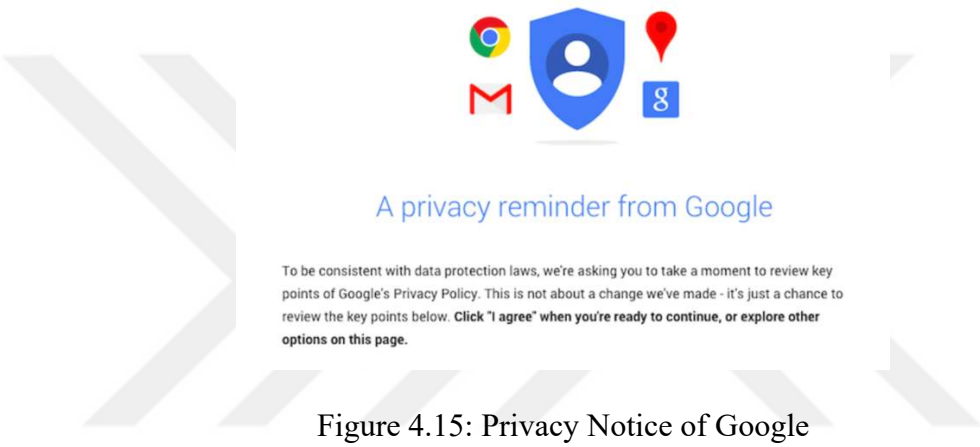


Figure 4.15: Privacy Notice of Google

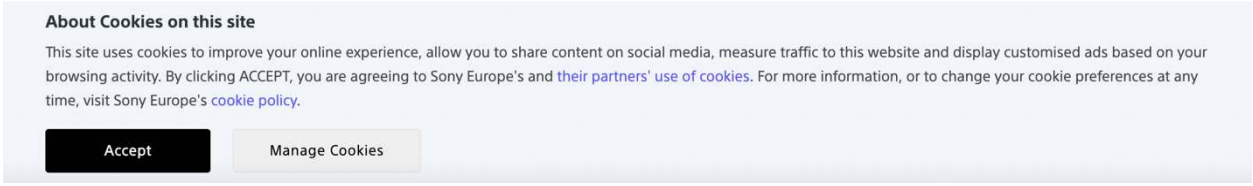


Figure 4.16: Privacy Notice of Sony

In our studies, we used similar designs and showed that privacy notices have a negative influence on consumers. This effect stems from the privacy calculus; consumers estimate the benefits and costs each party will receive, which decreases perceived customer centricity of the company. As demonstrated across multiple studies, consumers believe that companies benefit from tracking more than them. We predict that giving an option to decline the cookies could mitigate the negative consequences of privacy notices

for two reasons. First, it will be considered as a signal sent by the companies that they are willing to waive the benefits they receive from data collection. If they click on decline, companies cannot track them or receive benefits more than them. Thus, it will decrease the perceived benefits of the company, which will increase consumers' tendency to accept cookies. Second, research on privacy paradox demonstrated that consumers tend to disclose more personal information when they have control (Brandimarte et al. 2013). In line with this finding, we expect that giving an option to decline will empower consumers and make them realize that they actually have control over their data. Consequently, consumers will allow cookies more when they have an option to decline. In Study 5, we measure our prediction in the field.

Method

As in Study 2A, we collaborated with a private university. This university implemented privacy notices on January 15, 2021 for the first time. In this version, the website provided two options to the users, allowing, or changing preferences. On February 24, 2022, privacy notice was changed. In this version, users were also provided with an option to decline. We compared the website metrics from February 25 to March 4, 2022 and compared it with previous week (February 16- February 23, 2022) during which the privacy notice only provided two options to the users.

Results

As illustrated in the Table 4.5, regression analyses showed that controlling for the month, a change in the privacy notice increased the number of users, the number of new users on the webpage, and the number of pageviews. These findings demonstrated that giving the option to decline the privacy notice could improve consumers' willingness to accept the cookies.

Table 4.5: The Influence of a Change in the Privacy Notice on the Website Metrics

	(1) New Users	(2) Users	(3) Pageviews
Privacy notice	358.8***	477.1***	2380.8***
	(26.01)	(44.30)	(237.23)
Constant	128.5***	191.4***	1159.2***
	(15.02)	(25.57)	(136.96)
Month FE	✓	✓	✓
N	16	16	16
R2	0.96	0.94	0.94

The coefficients from OLS regressions are reported. Standard errors are clustered at the individual level and given in parentheses. * p<0.01, ** p<0.05, *** p<0.001.

4.4 General Discussion

With the proliferation of the use of technology in the age of artificial intelligence, companies have started to extensively use tracking and recording practices to acquire data regarding their consumers. As part of protection of data regulations, companies have to notify their consumers when they track them, which rapidly increase the number of times a consumer receives privacy notices on a regular day. In this paper, across nine studies, with experiments supported by the secondary data obtained from a university, we show that consumers are averse to privacy notices; they do not prefer allowing companies to track them, their willingness to use the browsers or applications decreases, and they have a lower willingness to purchase a product from a website that has a privacy notice. The effect is driven by the fact that consumers feel observed by the companies when they receive a privacy notice, which makes them calculate the benefits and costs each party receives. They believe that companies benefit from tracking more than consumers, and their primary motivation behind tracking is to make profit rather than serving consumers' needs and desires, which is in contradiction with managers' perspective as they report that their main goal is to be more consumer centric. Consumers think that the more companies make profits, the more they are observed by them. Further, consumers perceive non-profit companies as more profit oriented when they receive a privacy notice from them. The effect is mitigated when the privacy notice provides an option to decline as it signals companies' willingness to waive the potential benefits acquired from

observing consumers. Our findings contribute to the several research streams in marketing and provide managerial implications.

Our first and foremost contribution is to the newly emerging research stream exploring consumers' reactions towards being observed by the companies. Our results are in line with the recently documented phenomenon of the aversion to being observed (Zwebner and Schrift 2020). Consumers have concerns about data security, confidentiality, and the use of their data by other parties (Lambrecht and Tucker 2013; Morey et al. 2015; Steenkamp and Geyskens 2006). As they are living in a world where their data can be collected and used for targeting them, marketers should find a way to assure consumers that their personal information is not being collected as long as they do not give permission. Further, consumers should be explicitly informed about the benefits each party will receive, which they can take into consideration while doing their privacy calculus.

Exploring the consequences of receiving privacy notices, Brough et al. (2021) have showed that the sense of security created by the privacy notices is illusory, as these notices decrease consumers' purchase intention as a function of undermined trust. Further, Hoofnagle and Urban (2014) suggest that privacy policies provide companies the means to collect and use consumers' information rather than protecting consumers. Extending these findings, we identify a new process and show that consumers evaluate the potential outcomes of being observed that is triggered by the use of privacy notices, which, in turn, influences their judgment of the company. As privacy notices continue to be an inevitable part of consumers lives, marketers should find additional ways to improve the impact of privacy notices on consumer and company related outcomes. Our findings suggest that elements in the choice architecture that can influence the privacy calculus can help mitigating the negative impact. Future research should design interventions that can change consumers' perception of being observed or their cost benefit analyses and identify the ways in which consumers' wellbeing can be improved.

Our findings also contribute to the research exploring consumers attributions to the companies. To the best of our knowledge, we, for the first time, show that being observed can influence privacy calculus. Up to date, privacy calculus is referred to as the analysis of the costs and benefits the individual would receive (e.g., Dinev and Hart 2006;

Laufer and Wolfe 1977). In this study, we, for the first time, show that consumers also calculate the benefits that the company would receive when they think that they are being observed by them. So, privacy calculus is not only for the self-related costs and benefits, but also about the costs and benefits the company would get. This finding suggest that contextual cues can influence the cost benefit analysis of consumers, and companies should be aware of it. Second, we extend the anti-profit beliefs hypothesis suggested by Bhattacharjee, Dana, and Baron (2017). They proposed and demonstrated that people considered profit as in conflict with societal good. We replicate some of their findings and extend it through showing that profitability is closely associated with tracking activities of companies, and consumers perceive these activities to be profit-oriented rather than customer centric. We demonstrate that anti-profit beliefs are not simply about consumers' judgment of social good done by firms, it can also extend to different domains such as data collection, tracking or privacy violation. Even when there is no information about the profitability of a company, consumers make judgments about it which has downstream consequences for companies. In addition to profitability, other company characteristics can influence consumers' expectations from them. For instance, research has shown that small companies are expected to be communion oriented as opposed to large ones (Yang and Aggarwal 2019). Contributing to the emerging research that suggests that superficial characteristics of a company can shape consumers' expectations (e.g., Yang and Aggarwal 2019), we show that privacy notices, which are in effect as an operationalization of data protection laws, can shape consumers' expectations and lead them to make attributions to the company. In Study 1, we find that as the company size increases, operationalized by the market value data, consumers expectations about their tracking activities increase (r (38) =.48, p =.0015). More critically, we also show that privacy notices can change the perceived profit orientation of a company. As these findings suggest, seemingly unrelated elements can influence consumers' relationship with the companies. As consumers' privacy calculus can be influenced by contextual cues, marketers should find ways to communicate their message regarding the privacy of consumers' data in a way that can be processed by consumers.

Our findings also extend the customer centricity literature. Customer centricity has been considered as an asset that helps companies achieve competitive advantage (e.g., Selden and MacMillan 2006; Shah et al. 2006; Lee et al. 2015). Companies are also aware of the valuable role of customer centricity and highlight its importance in their company

cultures. For instance, on its website, Amazon states that “Amazon’s mission is to be Earth’s most customer-centric company” (2022). However, what companies do for achieving customer centricity may not be perceived as consumer centric. To the best of our knowledge, our study is the first to document a mismatch between managers’ and consumers’ view of customer centricity. We identify a domain, which is data collection, where perceived customer centricity of consumers diverges from that of managers. Further, we measured customer centricity in different ways, and showed that tracking activities were not considered as customer centric by consumers. Although there is a growing interest in defining and conceptualizing customer centricity (e.g., Burmann, Meurer, and Kanitz 2011; Habel et al. 2020), future research can integrate both managers’ and consumers’ perspective to identify the key values of customer centricity to provide a common ground for both parties, which will provide means to improve consumer wellbeing and companies’ success.

Chapter 5

CONCLUSIONS

Technological revolution has started off transforming the society and marketplace, which increased the range and depth of the interactions between consumers and different form of technologies. This dissertation identifies an outcome of these interactions, the perception of being observed, and provides insights regarding the potential antecedents and consequences for both consumers and companies. We use the term "being observed" to refer to the occasions when consumers think that they are being tracked, recorded, targeted, or seen by other parties that mostly consist of companies. With the goal of delineating what it means to be observed in the age of artificial intelligence, we conducted in-depth interviews, extensive literature reviews, experiments and explored secondary data. This chapter synthesizes the main findings that contribute to the understanding of the perception of being observed. First, we summarize the antecedents we identified. Second, we describe the processes through which the perception of being observed operates. Third, we report the outcomes that we demonstrated in our studies.

Across three essays, we identified the antecedents of the perception of being observed, which are related to the self, technology itself, the interaction of them and the practices in the marketplace. First of all, the extent to which people think that they are being observed that captures the anticipation of other parties' attention is associated with individuals' tendency to attend to their inner processes. In other words, self-consciousness predicts the perception of being observed; the more self-conscious an individual is, the more observed they would feel. Second, born of the integration of technology, the perception of being observed is influenced by the individuals' ability and willingness to engage with technology. The more anxious the consumers are while using technology, the more they think that they are being observed. Third, privacy concerns increase the perception of being observed. Consumers' concerns about the privateness and security of their data suggests that they consider the possibility that other parties, either people or corporations, can observe them. Fourth, the recording practices in the marketplace such

as security cameras in the store environments or tracking technologies used in the online settings can increase the perception of being observed. Finally, privacy notices, which have been integrated into consumers' lives with the General Data Protection Regulations in 2018, makes it salient to the consumers that they are being observed by the companies. Although the main goal of GDPR is to assure the data protection and privacy, these privacy notices make people aware of the other parties that can observe their actions. Future research can explore the contextual cues that can make consumers aware that they are being observed including product choices and the design of online and offline stores and identify the individual differences that interact with the perception of being observed.

The processes that we reported in this dissertation suggests that consumers have an economic approach to issues regarding being observed by other parties that can influence the privacy of their data. We demonstrated that consumers consider data as a resource and being observed as a utilization of their resource without reciprocity. This, in turn, increases their motivation to protect their resources that can be time, money, or data during their interactions with the companies. Making the interaction reciprocal through offering something during the interaction can attenuate the effect. Consumers also think about the consequences of being observed that goes beyond the interaction period. When they are being observed by other parties, they make comparisons between the self and the observer and think about potential benefits and costs that each party receives. This privacy calculus results in the belief that companies benefit from observing consumers more than the consumers themselves, which increases the perceived profit orientation and decreases the perceived customer orientation of the company. Protection of resources and the cost benefit analysis triggered by the perception of being observed suggests that consumers employ a more analytical thinking style and try to make conscious decisions when they are being observed by companies. A possible direction for future research could be the exploration of whether and when being observed triggers affective as opposed to analytical processes. Identifying the factors that increase people's reliance on emotions as opposed to reason will enhance our understanding about the psychological mechanisms triggered by being observed.

Our findings demonstrated that being observed can shape a variety of consumer behavior. Consumers who chronically have a higher perception of being observed are more sensitive to the data collection practices used in the marketplace, which decreases

their willingness to disclose personal information. This finding suggests that the perception of being observed can translate the privacy concerns into privacy protective behavior. Further, being observed decreases customer engagement; individuals become less willing to spend their time, money, or data in their interactions with the companies. When it is salient to the consumes that they are being observed through the use of privacy notices, the way consumers make inferences about the company orientation changes. These findings suggest that being observed by the companies can have detrimental consequences for building sustainable consumer-brand relationships, consumer wellbeing and company success. However, we also demonstrated that contextual cues that can signal companies' customer orientation or willingness to waive the benefits that can be gained through collecting data on consumers can improve the outcomes. Further, providing additional resources can balance the loss of one's data can also attenuate the negative outcomes of being observed. Apparently, consumers will continue to be observed by the companies at least in the near future, future research should identify the factors that can improve their attitudes towards being observed, and design interventions that enhance their wellbeing.

Overall, this dissertation contributes to the consumer behavior literature by looking into the new-age experiences of modern consumers like Jane that we mentioned at the beginning of this manuscript and providing an understanding of it. Through collecting data from approximately 5000 participants in our experiments and surveys as well as using secondary data, we identified the perception of being observed, developed a scale to measure it, and demonstrated some of its consumer and company related outcomes. The findings of this dissertations suggest that the perception of being observed is a non-interactive, non-social form of social influence that can change consumer behavior. Anticipating that other parties, especially companies, can collect data about consumers can influence the way people act, and even lead to counter normative behaviors including decreased donation likelihood to the charities and spending on products and additional services, and reduced data disclosure on social media platforms that are designed for sharing. Exploring the antecedents and consequences of the perception of being observed is important and timely considering the extensive use of data collection in the marketplace. Being among the pioneers who explore and try to conceptualize what it means to be "being observed", I hope that our research would open a new field of exploration for researchers, provide insights to the managers and public

policy makers that can improve consumer experiences, and enhance the wellbeing of consumers.

BIBLIOGRAPHY

Aaker, Jennifer, Kathleen D. Vohs, and Cassie Mogilner (2010), "Nonprofits are seen as warm and for-profits as competent: Firm stereotypes matter," *Journal of Consumer Research*, 37(2), 224-37.

Aalto University (2012), "Negative effects of computerized surveillance at home: Cause of annoyance, concern, anxiety, and even anger", *ScienceDaily*, www.sciencedaily.com/releases/2012/10/121008101646.htm

Abrams, Dominic, Margaret Wetherell, Sandra Cochrane, Michael A. Hogg, and John C. Turner (1990), "Knowing what to think by knowing who you are: Self-categorization and the nature of norm formation, conformity and group polarization", *British journal of social psychology*, 29(2), 97-119.

Acquisti, Alessandro, Laura Brandimarte, and George Loewenstein (2020), "Secrets and likes: The drive for privacy and the difficulty of achieving it in the digital age," *Journal of Consumer Psychology*, *30*(4), 736-58.

Acquisti, Alessandro, and Jens Grossklags (2005), "Privacy and rationality in individual decision making", *IEEE security & privacy*, 3(1), 26-33.

Aggarwal, Pankaj (2004), "The effects of brand relationship norms on consumer attitudes and behavior", *Journal of consumer research*, *31*(1), 87-101.

Aguirre, Elizabeth, Dominik Mahr, Dhruv Grewal, Ko De Ruyter, and Martin Wetzels (2015), "Unraveling the personalization paradox: The effect of information collection and trust-building strategies on online advertisement effectiveness," *Journal of Retailing,* 91(1), 34-49.

Aiello, Gaetano, Raffaele Donvito, Diletta Acuti, Laura Grazzini, Valentina Mazzoli, Virginia Vannucci, and Giampaolo Viglia (2020), "Customers' willingness to disclose personal information throughout the customer purchase journey in retailing: The role of perceived warmth", Journal of Retailing, 96(4), 490-506.

Aiello, John R., and Kathryn J. Kolb (1995), "Electronic performance monitoring and social context: Impact on productivity and stress", *Journal of Applied Psychology*, 80(3), 339.

Alge, Bradley J. (2001), "Effects of computer surveillance on perceptions of privacy and procedural justice", *Journal of Applied Psychology*, 86(4), 797.

Alpizar, Francisco, and Peter Martinsson (2013), "Does it matter if you are observed by

others? Evidence from donations in the field", *The Scandinavian Journal of Economics*, *115*(1), 74-83.

Altman, Irwin (1975), "The environment and social behavior", *Brooks/Cole Publishing Company.*

Argo, Jennifer J., Darren W. Dahl, and Rajesh V. Manchanda (2005), "The influence of a mere social presence in a retail context", *Journal of consumer research*, *32*(2), 207-12.

Ariely, Dan, and Jonathan Levav (2000), "Sequential choice in group settings: Taking the road less traveled and less enjoyed", *Journal of consumer Research*, *27*(3), 279-90.

Asch, Solomon E. (1956), "Studies of independence and conformity. A minority of one against a unanimous majority", *Psychological Monographs*, 70.

Bagozzi, Richard P. (1975), "Marketing as exchange", *Journal of marketing*, *39*(4), 32-9.

Baillon, Aurélien, Asli Selim, and Dennie van Dolder (2013), "On the social nature of eyes: The effect of social cues in interaction and individual choice tasks", *Evolution and Human Behavior*, *34*(2), 146-54.

Baker, Julie, Michael Levy, and Dhruv Grewal (1992), "An experimental approach to making retail store environmental decisions", *Journal of retailing*, *68*(4), 445.

Baltazar, Matias, Nesrine Hazem, Emma Vilarem, Virginie Beaucousin, Jean-Luc Picq, and Laurence Conty (2014), "Eye contact elicits bodily self-awareness in human adults", *Cognition*, *133*(1), 120-7.

Banerjee, Syagnik (2019), "Geosurveillance, location privacy, and personalization", *Journal of Public Policy & Marketing*, 38(4), 484-99.

Bar-Anan, Yoav, Timothy D. Wilson, and Daniel T. Gilbert, (2009), "The feeling of uncertainty intensifies affective reactions", *Emotion*, 9(1), 123.

Barasch, Alixandra, Gal Zauberman, and Kristin Diehl (2018), "How the intention to share can undermine enjoyment: Photo-taking goals and evaluation of experiences", *Journal of Consumer Research*, *44*(6), 1220-37.

Basil, Debra Z., Nancy M. Ridgway, and Michael D. Basil (2006), "Guilt appeals: The mediating effect of responsibility", *Psychology & Marketing*, *23*(12), 1035-1054.

Bateson, Melissa, Daniel Nettle, and Gilbert Roberts (2006), "Cues of being watched enhance cooperation in a real-world setting", *Biology letters*, *2*(3), 412-414.

Beckers, Sander FM, Hans Risselada, and Peter C. Verhoef (2014) "Customer

engagement: A new frontier in customer value management", In *Handbook of service marketing research*. Edward Elgar Publishing.

Benight, Charles C., Erika Swift, Jean Sanger, Anne Smith, and Dan Zeppelin (1999), "Coping self-efficacy as a mediator of distress following a natural disaster", *Journal of Applied Social Psychology*, *29*(12), 2443-64.

Bennett, Colin J. (1995), "The political economy of privacy: a review of the literature", *Hackensack, NJ: Center for Social and Legal Research.*

Beresford, Alastair R., Dorothea Kübler, and Sören Preibusch (2012), "Unwillingness to pay for privacy: A field experiment", *Economics letters*, *117*(1), 25-7.

Berghel, Hal (2018), "Malice domestic: The Cambridge analytica dystopia", *Computer*, *51*(5), 84-9.

Berman, Ron, Shiri Melumad, Colman Humphrey, and Robert Meyer (2019), "A tale of two Twitterspheres: Political microblogging during and after the 2016 primary and presidential debates", Journal of Marketing Research, 56(6), 895-917.

Bhattacharjee, Amit, Jason Dana, and Jonathan Baron (2017), "Anti-profit beliefs: How people neglect the societal benefits of profit." *Journal of personality and social psychology,* 113(5), 671.

Boateng, Godfred O., Torsten B. Neilands, Edward A. Frongillo, Hugo R. Melgar-Quiñonez, and Sera L. Young (2018), "Best Practices for Developing and Validating Scales for Health, Social, and Behavioral Research: A Primer", *Frontier Public Health*. 6(149).

Bourrat, Pierrick, Nicolas Baumard, and Ryan McKay (2011), "Surveillance cues enhance moral condemnation", *Evolutionary Psychology*, *9*(2), 147470491100900206.

Brandeis, Louis and Samuel Warren (1890), "The right to privacy", *Harvard law review*, 4(5), 193-220.

Brandimarte, L., Alessandro Acquisti, and George Loewenstein (2013), "Misplaced confidences: Privacy and the control paradox," *Social psychological and personality science*, 4(3), 340-7.

Bright, Laura F., Hayoung Sally Lim, and Kelty Logan (2021), " 'Should I Post or Ghost?': Examining how privacy concerns impact social media engagement in US consumers", *Psychology & Marketing*, 38(10), 1712-22.

Brodie, Roderick J., Ana Ilic, Biljana Juric, and Linda Hollebeek (2013), "Consumer

engagement in a virtual brand community: An exploratory analysis", *Journal of business research*, *66*(1), 105-114.

Brough, Aaron R., and Kelly D. Martin (2021), "Consumer privacy during (and after) the COVID-19 pandemic", *Journal of Public Policy & Marketing*, 40(1), 108-10.

Brough, Aaron R., David A. Norton, Shannon L. Sciarappa, and Leslie K. John (2021), "The Bulletproof Glass Effect: Unintended Consequences of Privacy Notices," *Journal of Marketing Research*, 00222437211069093.

Bulao, Jacquelyn (2022), "How much data is created every day in 2022?", *Techjury*. https://techjury.net/blog/how-much-data-is-created-every-day/#gref

Burmann, Christoph, Jörg Meurer, and Christopher Kanitz (2011), "Customer centricity as a key to success for pharma," *Journal of Medical Marketing,* 11(1), 49-59.

Buss, David M., and Michael F. Scheier (1976), "Self-consciousness, self-awareness, and self-attribution", *Journal of Research in Personality*, *10*(4), 463-68.

Calder, Bobby J., and Robert E. Burnkrant (1977). "Interpersonal influence on consumer behavior: An attribution theory approach", *Journal of Consumer Research*, *4*(1), 29-38.

Cao, Jinwei, and Andrea Everard (2008), "User attitude towards instant messaging: The effect of espoused national cultural values on awareness and privacy", *Journal of Global Information Technology Management*, 11 (2), 30–57.

Cara, Corina, and Lorena Florentina Dumitrașciuc (2021), "GDPR consent pop-ups. How are we thinking about them? An Elaboration Likelihood perspective," *Journal of International Business and Management,* 4(1), 01-10.

Carrascal, Juan Pablo, Christopher Riederer, Vijay Erramilli, Mauro Cherubini, and Rodrigo De Oliveira (2013), "Your browsing behavior for a big mac: Economics of personal information online", In *Proceedings of the 22nd international conference on World Wide Web* (pp. 189-200).

Carver, Charles S., and Michael F. Scheier (1978), "Self-focusing effects of dispositional self-consciousness, mirror presence, and audience presence", *Journal of Personality and Social Psychology*, *36*(3), 324.

Cattell, Raymond B. (1966), "The scree test for the number of factors", *Multivariate behavioral research*, *1*(2), 245-76.

Chan, Eugene Y., and Najam U. Saqib (2021), "Privacy concerns can explain

unwillingness to download and use contact tracing apps when COVID-19 concerns are high", *Computers in Human Behavior*, 119, 106718.

Chaudhuri, Arjun, and Morris B. Holbrook (2001), "The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty", *Journal of marketing*, *65*(2), 81-93.

Chen, Kai-Ying, and Meng-Lin Chang (2013), "User acceptance of 'near field communication'mobile phone service: an investigation based on the 'unified theory of acceptance and use of technology' model", *The Service Industries Journal*, *33*(6), 609-23.

Cho, Hichang, Jae-Shin Lee, and Siyoung Chung (2010), "Optimistic bias about online privacy risks: Testing the moderating effects of perceived controllability and prior experience", *Computers in Human Behavior*, *26*(5), 987-95.

Churchill Jr, Gilbert A. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of marketing research*, *16*(1), 64-73.

Clark, Margaret S., and Judson Mils (1993), "The difference between communal and exchange relationships: What it is and is not", *Personality and social psychology bulletin*, *19*(6), 684-91.

Clark, Herbert H., and Gregory L. Murphy (1982), "Audience design in meaning and reference", *Advances in psychology*, 9, 287-99.

Cloarec, Julien, Lars Meyer-Waarden, and Andreas Munzel (2022), "The personalization–privacy paradox at the nexus of social exchange and construal level theories", *Psychology & marketing*, *39*(3), 647-61.

Conty, Laurence, Nathalie George, and Jari K. Hietanen (2016), "Watching eyes effects: When others meet the self", *Consciousness and cognition*, *45*, 184-97.

Cooper, Randolph B., and Robert W. Zmud (1990), "Information technology implementation research: a technological diffusion approach", *Management science*, 36(2), 123-39.

Cowan, Kirsten, Ana Javornik, and Peilin Jiang (2021), "Privacy concerns when using augmented reality face filters? Explaining why and when use avoidance occurs", *Psychology & Marketing*, *38*(10), 1799-1813.

Dahl, Darren W., Heather Honea, and Rajesh V. Manchanda (2005), "Three Rs of interpersonal consumer guilt: Relationship, reciprocity, reparation", *Journal of consumer Psychology*, *15*(4), 307-15.

Dahl, Darren W., Rajesh V. Manchanda, and Jennifer J. Argo (2001), "Embarrassment in

consumer purchase: The roles of social presence and purchase familiarity", *Journal of consumer research*, *28*(3), 473-81.

Demoulin, Nathalie TM, and Souad Djelassi (2016), "An integrated model of self-service technology (SST) usage in a retail context", *International Journal of Retail & Distribution Management*.

DeParle, Jason (2020). The coronavirus class divide: Space and privacy. *NY Times Online.* https://www.nytimes.com/2020/04/12/us/politics/coronavirus-poverty-privacy.html.

Desai, Preyas S., Woochoel Shin, and Richard Staelin (2014), "The company that you keep: When to buy a competitor's keyword," *Marketing Science*, 33(4), 485-508.

DeVoe, Sanford E., and Jeffrey Pfeffer (2007), "When time is money: The effect of hourly payment on the evaluation of time", *Organizational Behavior and Human Decision Processes*, *104*(1), 1-13.

Deutsch, Morton, and Harold B. Gerard (1955), "A study of normative and informational social influences upon individual judgment", *The journal of abnormal and social psychology*, *51*(3), 629.

Diebold, Francis X. (2012), "A Personal Perspective on the Origin (s) and Development of' Big Data: The Phenomenon, the Term, and the Discipline". *PIER Working Paper No. 13-003,* http://dx.doi.org/10.2139/ssrn.2202843

Dinev, Tamara, and Paul Hart (2006), "An extended privacy calculus model for e-commerce transactions," *Information systems research*, 17(1), 61-80.

Dorsch, Michael J., Kjell Y. Törnblom, and Ali Kazemi (2017), "A review of resource theories and their implications for understanding consumer behavior", *Journal of the Association for Consumer Research*, *2*(1), 5-25.

Duhigg, Charles (2012), *The power of habit: Why we do what we do in life and business*, Random House.

Duval, T. Shelley, and Neal Lalwani (1999), "Objective self-awareness and causal attributions for self-standard discrepancies: Changing self or changing standards of correctness", *Personality and Social Psychology Bulletin*, *25*(10), 1220-1229.

Duval, Shelley, and Robert A. Wicklund (1973), "Effects of objective self-awareness on attribution of causality", *Journal of experimental social Psychology*, *9*(1), 17-31.

Fabrigar, Leandre R., Duane T. Wegener, Robert C. MacCallum, and Erin J. Strahan (1999), "Evaluating the use of exploratory factor analysis in psychological research", *Psychological methods*, *4*(3), 272.

Falk, Armin, and Urs Fischbacher (2006). A theory of reciprocity. *Games and economic behavior*, *54*(2), 293-315.

Fayyad, Usama, Gregory Piatetsky-Shapiro, and Padhraic Smyth (1996), "From data mining to knowledge discovery in databases", *AI magazine*, *17*(3), 37.

Fazli-Salehi, Reza, Ivonne M. Torres, Rozbeh Madadi, and Miguel Ángel Zúñiga (2021), "Conspicuous consumption: impact of narcissism and need for uniqueness on self-brand and communal-brand connection with public vs private use brands", *Journal of Consumer Marketing*.

Federal Trade Commission (2016), "Online tracking", *Federal Trade Commission*, https://www.consumer.ftc.gov/articles/0042-online-tracking

Feng, E. (2019), "How China is using facial recognition technology", *NPR*, https://www.npr.org/ 2019/12/16/788597818/how-china-is-using-facial-recognition-technology

Fenigstein, Allan, Michael F. Scheier, and Arnold H. Buss (1975), "Public and private self-consciousness: Assessment and theory", *Journal of consulting and clinical psychology*, *43*(4), 522.

Fenigstein, Allan (1984), "Self-consciousness and the overperception of self as a target", *Journal of personality and social psychology*, *47*(4), 860.

Fiske, Alan P. (1992), "The Four Elementary Forms of Sociality: Framework for a Unified Theory of Social Relation", *Psychological Review*, *99*(4), 689-723.

Froming, William J., G. Rex Walker, and Kevin J. Lopyan (1982), "Public and private self-awareness: When personal attitudes conflict with societal expectations", *Journal of Experimental Social Psychology*, *18*(5), 476-87.

Gangestad, Steven W., and Mark Snyder (2000), "Self-monitoring: Appraisal and reappraisal", *Psychological bulletin*, *126*(4), 530.

Gautam, Akash, Puneet Mathur, Rakesh Gosangi, Debanjan Mahata, Ramit Sawhney, and Rajiv Ratn Shah (2020, May), "# metooma: Multi-aspect annotations of tweets related to the metoo movement", In Proceedings of the International AAAI Conference on Web and Social Media(14), 209-16.

Gelbrich, Katja, and Britta Sattler (2014), "Anxiety, crowding, and time pressure in public self-service technology acceptance", *Journal of Services Marketing*.

Ghosh, Pulak and Janakiraman Moorthy (2015), "Big data and consumer privacy", *The Journal for Decision Makers (*1), 95.

Giesler, Markus. (2006), “Consumer gift systems”, *Journal of consumer research*, *33*(2), 283-90.

Gilovich, Thomas, Victoria Husted Medvec, and Kenneth Savitsky (2000), “The spotlight effect in social judgment: An egocentric bias in estimates of the salience of one's own actions and appearance”, *Journal of personality and social psychology*, *78*(2), 211.

Godinho de Matos, Miguel, and Idris Adjerid (2021), "Consumer consent and firm targeting after GDPR: The case of a large telecom provider." *Management Science*.

Gouldner, Alvin W. (1960). “The norm of reciprocity: A preliminary statement”, *American sociological review*, 161-78.

Graeff, Timothy R. (1996), “Image congruence effects on product evaluations: The role of self-monitoring and public/private consumption”, *Psychology & Marketing*, *13*(5), 481-99.

Graeff, Timothy R., and Susan Harmon (2002), "Collecting and using personal data: consumers’ awareness and concerns," *Journal of consumer marketing*.

Gudykunst, William B., Seung-Mock Yang, and Tsukasa Nishida (1987), “Cultural differences in self-consciousness and self-monitoring”, *Communication Research*, 14(1), 7-34.

Gulati, Ranjay (2007), "Silo busting: How to execute on the promise of customer focus," *Harvard business review*, 85(5), 98-108.

Gusher, T. (2022). “How companies are investing in data and analytics.” EY. https://www.ey.com/en_us/consulting/how-companies-are-investing-in-data-and-analytics

Habel, Johannes, Roland Kassemeier, Sascha Alavi, Philipp Haaf, Christian Schmitz, and Jan Wieseke (2020), "When do customers perceive customer centricity? The role of a firm’s and salespeople’s customer orientation," *Journal of Personal Selling & Sales Management*, 40(1), 25-42.

Halbesleben, Jonathon RB, and W. M. Bowler (2007), “Emotional exhaustion and job

performance: the mediating role of motivation", *Journal of applied psychology*, *92*(1), 93.

Halbesleben, Jonathon RB, Jean-Pierre Neveu, Samantha C. Paustian-Underdahl, and Mina Westman (2014), "Getting to the "COR" understanding the role of resources in conservation of resources theory", *Journal of management*, *40*(5), 1334-1364.

Harborth, David, and Sebastian Pape (2021), "Investigating privacy concerns related to mobile augmented reality apps–A vignette based online experiment", *Computers in Human Behavior*, 122, 106833.

Hayes, Andrew F. (2018), "Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation", *Communication monographs*, *85*(1), 4-40.

Hobfoll, Stevan E. (1989), "Conservation of resources: a new attempt at conceptualizing stress", *American psychologist*, *44*(3), 513.

Hobfoll, Stevan E. (2002), "Social and psychological resources and adaptation", *Review of general psychology*, *6*(4), 307-324.

Hoffman, Donna L. and Thomas P. Novak (1997), "A New Marketing Paradigm for Electronic Commerce," *Information Society*, 13 (1), 43–54.

Hollebeek, Linda D., Mark S. Glynn, and Roderick J. Brodie (2014), "Consumer brand engagement in social media: Conceptualization, scale development and validation", *Journal of interactive marketing*, *28*(2), 149-165.

Hoofnagle, Chris Jay, and Jennifer M. Urban (2014), "Alan Westin's privacy homo economicus," *Wake Forest Law Review,* 449, 261.

Hoyer, Wayne D., Mirja Kroschke, Bernd Schmitt, Karsten Kraume, and Venkatesh Shankar (2020), "Transforming the customer experience through new technologies", *Journal of Interactive Marketing*, 51, 57-71.

Hsu, Li-Chun, Kai-Yu Wang, Wen-Hai Chih, and Wei-Ching Lin (2019), "Modeling revenge and avoidance in the mobile service industry: moderation role of technology anxiety", *The Service Industries Journal*, 1-24.

Hull, Jay G., Ronald R. Van Treuren, Susan J. Ashford, Pamela Propsom, and Bruce W. Andrus (1988), "Self-consciousness and the processing of self-relevant information", *Journal of personality and social psychology*, *54*(3), 452.

Ioannou, Athina, Iis Tussyadiah, and Alaa Marshan (2021), "Dispositional mindfulness as an antecedent of privacy concerns: A protection motivation theory perspective", *Psychology & Marketing*, *38*(10), 1766-78.

Irving, R. H., Christopher A. Higgins, and Frank R. Safayeni (1986), “Computerized performance monitoring systems: Use and abuse”, *Communications of the ACM*, 29(8), 794-801.

Jagadish, H. V. (2020), “Circles of Privacy”, *Journal of Consumer Psychology*, *30*(4), 774-79.

John, Leslie K., Alessandro Acquisti, and George Loewenstein (2011), “Strangers on a plane: Context-dependent willingness to divulge sensitive information”, *Journal of consumer research*, *37*(5), 858-73.

Johnson, Jennifer Wiggins, and Pamela E. Grimm (2010), “Communal and exchange relationship perceptions as separate constructs and their role in motivations to donate”, *Journal of Consumer Psychology*, *20*(3), 282-294.

Kaiser, Henry F. (1960), “The application of electronic computers to factor analysis”, *Educational and psychological measurement*, *20*(1), 141-51.

Kaiser, Henry F. (1970), “A second generation little jiffy”, *Psychometrika*, *35*(4), 401-15.

Kim, Kyongseok, and Jooyoung Kim (2011), "Third-party privacy certification as an online advertising strategy: An investigation of the factors affecting the relationship between third-party certification and initial trust," *Journal of Interactive Marketing*, *25*(3), 145-58.

Konrath, Sara, Brian P. Meier, and Brad J. Bushman (2014), “Development and validation of the single item narcissism scale (SINS)”, *PLOS one*, *9*(8), e103469.

Krasnova, Hanna, Sarah Spiekermann, Ksenia Koroleva, and Thomas Hildebrand (2010), "Online social networks: Why we disclose," *Journal of information technology*, 25(2), 109-25.

Krasnova, Hanna, and Natasha F. Veltri (2010), “Privacy calculus on social networking sites: Explorative evidence from Germany and USA”, *43rd Hawaii international conference on system sciences*, 1-10, IEEE.

Krauss, Robert M., and Susan R. Fussell (1991), “Perspective-taking in communication: Representations of others' knowledge in reference”, *Social cognition*, 9(1), 2-24.

Kulyk, Oksana, Annika Hilt, Nina Gerber, and Melanie Volkamer (2018), “‘This website uses cookies’: Users’ perceptions and reactions to the cookie disclaimer”, *European Workshop on Usable Security (EuroUSEC)*.

Kumar, Vineet (2013), *Profitable Customer Engagement: Concept, Metrics and Strategies*. SAGE Publications India.

Kurt, Didem, J. Jeffrey Inman, and Jennifer J. Argo (2011), “The influence of friends on consumer spending: The role of agency–communion orientation and self-monitoring”, *Journal of Marketing Research*, *48*(4), 741-54.

Lamberti, Lucio (2013), "Customer centricity: the construct and the operational antecedents," Journal of Strategic marketing, 21(7), 588-612.

Lambrecht, Anja, and Catherine Tucker (2013), "When does retargeting work? Information specificity in online advertising," *Journal of Marketing research*, *50*(5), 561-76.

Laufer, Robert S., and Maxine Wolfe (1977), "Privacy as a concept and a social issue: A multidimensional developmental theory," *Journal of social Issues*, 33(3), 22-42.

Lee, Saerom, Lisa E. Bolton, and Karen Page Winterich (2017), "To profit or not to profit? The role of greed perceptions in consumer support for social ventures," *Journal of Consumer Research*, 44(4), 853-76.

Lee, Ju-Yeon, Shrihari Sridhar, Conor M. Henderson, and Robert W. Palmatier (2015), "Effect of customer-centric structure on long-term financial performance," *Marketing Science*, *34*(2), 250-68.

Levitin, Anany V., and Thomas C. Redman (1998), “Data as a resource: properties, implications, and Prescriptions”, *MIT Sloan Management Review*, *40*(1), 89.

Liang, Hai, Fei Shen, and King-wa Fu (2017), “Privacy protection and self-disclosure across societies: A study of global Twitter users”, *new media & society*, *19*(9), 1476-97.

Lin, Hsin-Hui, Shinjeng Lin, Ching-Hsuan Yeh, and Yi-Shun Wang (2016), Measuring mobile learning readiness: scale development and validation. *Internet Research*, *26*(1), 265-87.

Litman, Leib, Jonathan Robinson, and Tzvi Abberbock (2017), “TurkPrime.com: A versatile crowdsourcing data acquisition platform for the behavioral sciences”, *Behavior Research Methods*, 49(2), 433-42.

Lowry, Paul Benjamin, Jinwei Cao, and Andrea Everard (2011), “Privacy concerns versus desire for interpersonal awareness in driving the use of self-disclosure technologies: The case of instant messaging in two cultures”, *Journal of Management Information Systems*, 27(4), 163-200.

Maras, Marie-Helen (2012), “The social consequences of a mass surveillance measure: What happens when we become the ‘others’?”, *International Journal of Law, Crime and Justice*, 40(2), 65-81.

Margulis, Stephen T. (1977), “Conceptions of privacy: Current status and next steps”, *Journal of Social Issues*, *33*(3), 5-21.

Marshall, Bryan A., Peter W. Cardon, Daniel T. Norris, Natalya Goreva, and Ryan D’Souza (2008), “Social networking websites in India and the United States: A cross-national comparison of online privacy and communication”, *Issues in Information Systems,* 9(2), 87-94.

Maseeh, Haroon Iqbal, Charles Jebarajakirthy, Robin Pentecost, Denni Arli, Scott Weaven, and Md Ashaduzzaman (2021), “Privacy concerns in e-commerce: A multilevel meta-analysis”, *Psychology & Marketing*, *38*(10), 1779-98.

Massara, Francesco, Francesco Raggiotto, and W. Gregory Voss (2021), “Unpacking the privacy paradox of consumers: A psychological perspective”, *Psychology & Marketing*, *38*(10), 1814-27.

Mathwick, Charla, Caroline Wiertz, and Ko De Ruyter (2008), “Social capital production in a virtual P3 community”, *Journal of consumer research*, *34*(6), 832-49.

Mattioli, Dana (2012), “On Orbitz, Mac users steered to pricier hotels”, *Wall Street Journal*, *23*.

McDonald, Aleecia M., and Lorrie Faith Cranor (2008), “The cost of reading privacy policies,” *Isjlp*, 4, 543.

Meuter, Matthew L., Amy L. Ostrom, Mary Jo Bitner, and Robert Roundtree (2003), “The influence of technology anxiety on consumer use and experiences with self-service technologies”, *Journal of Business Research*, *56*(11), 899-906.

Michael, Paul (2016), “8 Ways Retailers Are Tracking Your Every Move,” *Money*, http://money.com/money/4506297/how-retailers-track-you/.

Mogilner, Cassie, and Jennifer Aaker (2009), “The time vs. money effect: Shifting product attitudes and decisions through personal connection”, *Journal of Consumer Research*, *36*(2), 277-91.

Morey, Timothy, Theodore Forbath, and Allison Schoop (2015), “Customer data: Designing for transparency and trust,” *Harvard Business Review*, 93(5), 96-105.

Mueller, Roger (2019), “76% of users ignore cookie banners!” *Amazee Metrics,* https://www.amazeemetrics.com/en/blog/76-ignore-cookie-banners-the-user-behavior-after-30-days-ofgdpr/#:~:text=In%20summary%2C%20the%20willingness%20to,ignoring%20or%20closing%20the%20banner.

Murphy, H. (2021), “WhatsApp delays privacy changes that led to user outcry”,

Financial Times, https://www.ft.com/content/5bb0c828-79e0-468b-9f8c-8f1609b9603c

Nissenbaum, Helen (2009), *Privacy in context: Technology, policy, and the integrity of social life*, Stanford University Press.

Norberg, Patricia A., Daniel R. Horne, and David A. Horne (2007), "The privacy paradox: Personal information disclosure intentions versus behaviors", *Journal of Consumer Affairs*, 41, 100– 26.

Nunnally, Jum C. and Ira H. Bernstein (1994), *Psychometric Theory,* New York, NY: McGraw Hill.

Okada, Erica Mina, and Stephen J. Hoch (2004), "Spending time versus spending money," *Journal of consumer research*, *31*(2), 313-23.

Osborne, Jason W., Anna B. Costello, and J. Thomas Kellow (2008), "Exploratory factor analysis (EFA) is rightly described as both an art and a science, whereresearchers follow a series of analytic steps involving judgments more reminiscent of qualitative inquiry, an interesting irony given the mathematical sophistication underlying EFA models", *Best Practices in Quantitative Methods*, *86*.

Pancer, Ethan, Vincent Chandler, Maxwell Poole, and Theodore J. Noseworthy (2019), "How readability shapes social media engagement" *Journal of Consumer Psychology*, 29(2), 262-70.

Pancer, Ethan, Matthew Philp, Maxwell Poole, and Theodore J. Noseworthy (2022), "Content hungry: How the nutrition of food media influences social media engagement", *Journal of Consumer Psychology*, 32(2), 336-49.

Pansari, Anita, and Vera Kumar (2017), "Customer engagement: the construct, antecedents, and consequences", *Journal of the Academy of Marketing Science*, *45*(3), 294-311.

Papacharissi, Zizi, and Paige L. Gibson (2011), "Fifteen minutes of privacy: Privacy, sociality, and publicity on social network sites", In *Privacy online*, 75-89, Springer, Berlin, Heidelberg.

Petronio, Sandra (2002), "*Boundaries of privacy: Dialectics of disclosure"*, Suny Press.

Pew Research Center (2019), "Americans and privacy: Concerned, confused and feeling lack of control over their personal information," Washington, DC: Pew Research Center. Retrieved October 3, 2021, from https://

www.pewresearch.org/internet/wp-content/uploads/ sites/9/2019/11/Pew-Research-Center_PI_2019.11.15_ Privacy_FINAL.pdf

Pham, Michel Tuan, Caroline Goukens, Donald R. Lehmann, and Jennifer Ames Stuart (2010), "Shaping customer satisfaction through self-awareness cues", *Journal of Marketing Research*, *47*(5), 920-32.

Plangger, Kirk, and Matteo Montecchi (2020), "Thinking beyond privacy calculus: Investigating reactions to customer surveillance", *Journal of Interactive Marketing*, 50, 32-44.

Preacher, Kristopher J., and Robert C. MacCallum (2003), "Repairing Tom Swift's electric factor analysis machine", *Understanding statistics: Statistical issues in psychology, education, and the social sciences*, *2*(1), 13-43.

Quach, Sara, Park Thaichon, Ju-Yeon Lee, Scott Weaven, and Robert W. Palmatier (2020), "Toward a theory of outside-in marketing: Past, present, and future", *Industrial marketing management*, 10.1016/j.indmarman.2019.10.016.

Rainie, Lee and Maeve Duggan (2016), "Privacy and information sharing", *Pew Research Center*, *16*.

Rajaobelina, Lova, Sandrine Prom Tep, Manon Arcand, and Line Ricard (2021), "Creepiness: Its antecedents and impact on loyalty when interacting with a chatbot", *Psychology & Marketing*, *38*(12), 2339-56.

Ratner, Rebecca K., and Barbara E. Kahn (2002), "The impact of private versus public consumption on variety-seeking behavior", *Journal of Consumer Research*, *29*(2), 246-57.

Rosenberg, Morris (1965), "Rosenberg self-esteem scale (RSE)", *Acceptance and commitment therapy. Measures package*, *61*(52), 18.

Rydning, David Reinsel-John Gantz-John, J. Reinsel, and J. Gantz (2018), "The digitization of the world from edge to core", *Framingham: International Data Corporation*, *16*.

Rust, Roland T., and Ming-Hui Huang (2014), "The service revolution and the transformation of marketing science", *Marketing Science*, *33*(2), 206-21.

Sanchez-Rola, Iskander, Matteo Dell'Amico, Platon Kotzias, Davide Balzarotti, Leyla Bilge, Pierre-Antoine Vervier, and Igor Santos (2019), "Can I opt out yet? GDPR and the global illusion of cookie control," *Proceedings of the 2019 ACM Asia conference on computer and communications security*, 340-51.

Satariano, Adam (2019), "Real-time surveillance will test the British tolerance for

cameras", *New York Times*, https://www.nytimes.com/2019/09/15/technology/britain-surveillance-privacy.html.

Schmidt, Lennard, Rico Bornschein, and Erik Maier (2020), "The effect of privacy choice in cookie notices on consumers' perceived fairness of frequent price changes," *Psychology & Marketing*, 37(9), 1263-76.

Schrift, Rom, Klaus Wertenbroch, and Yonat Zwebner (2019), "The dark side of microtargeting: predicting consumers' preferences threatens their sense of free will", *ACR North American Advances*.

Schwarz, Norbert (2011), "Feelings-as-information theory", *Handbook of theories of social psychology*, *1*, 289-308.

Scott, Maura L., Kelly D. Martin, Joshua L. Wiener, Pam Scholder Ellen, and Scot Burton (2020), "The COVID-19 pandemic at the intersection of marketing and public policy", *Journal of Public Policy & Marketing*, 39(3), 257-65.

Selden, Larry, and Ian C. MacMillan (2006), "Manage customer-centric innovation-systematically," *Harvard business review*, 84(4), 108.

Shah, Denish, Roland T. Rust, Ananthanarayanan Parasuraman, Richard Staelin, and George S. Day (2006), "The path to customer centricity," *Journal of service research*, 9(2), 113-24.

Singh, Lisa, Shweta Bansal, Leticia Bode, Ceren Budak, Guangqing Chi, Kornraphop Kawintiranon, Colton Padden, Rebecca Vanarsdall, Emily Vraga, and Yanchen Wang (2020), "A first look at COVID-19 information and misinformation sharing on Twitter", arXiv preprint arXiv:2003.13907.

Slade, Emma L., Yogesh K. Dwivedi, Niall C. Piercy, and Michael D. Williams (2015), "Modeling consumers' adoption intentions of remote mobile payments in the United Kingdom: extending UTAUT with innovativeness, risk, and trust", *Psychology & Marketing*, *32*(8), 860-73.

Smith, H. Jeff, Tamara Dinev, and Heng Xu (2011), "Information privacy research: an interdisciplinary review", *MIS quarterly*, 989-1015.

Smith, H. Jeff, Sandra J. Milberg, and Sandra J. Burke (1996), "Information privacy: Measuring individuals' concerns about organizational practices", *MIS quarterly*, 167-96.

Smith, Michael J., Pascale Carayon, Katherine J. Sanders, Soo-Yee Lim, and David LeGrande (1992), "Employee stress and health complaints in jobs with and without electronic performance monitoring", *Applied ergonomics*, 23(1), 17-27.

So, Kevin Kam Fung, Ceridwyn King, and Beverley Sparks (2014), "Customer engagement with tourism brands: Scale development and validation", *Journal of Hospitality & Tourism Research*, 38(3), 304-29.

Song, Yong Whi, Hayoung Sally Lim, and Jeeyun Oh (2021), " 'We think you may like this': An investigation of electronic commerce personalization for privacy-conscious consumers", *Psychology & Marketing*, *38*(10), 1723-40.

Steenkamp, Jan-Benedict EM, and Inge Geyskens (2006), "How country characteristics affect the perceived value of web sites," *Journal of marketing*, 70(3), 136-50.

Steinmetz, J., Xu, Q., Fishbach, A., & Zhang, Y. (2016). Being observed magnifies action. *Journal of personality and social psychology*, *111*(6), 852.

Stamper, Christina L., and Suzanne S. Masterson (2002), "Insider or outsider? How employee perceptions of insider status affect their work behavior", *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *23*(8), 875-94.

Stanton, Jeffrey M., and Janet L. Barnes-Farrell (1996), "Effects of electronic performance monitoring on personal control, task satisfaction, and task performance", *Journal of Applied Psychology*, 81(6), 738.

Statista (2021), "Social media usage in the United States," https://www.statista.com/study/40227/social-social-media-usage-in-the-united-states-statista-dossier/

Streiner, David L., Geoffrey R. Norman, and John Cairney (2015), *Health measurement scales: A practical guide to their development and use*, Oxford, UK: Oxford University Press.

Sun, Yongqiang, Nan Wang, and Xiao-Liang Shen (2021), "Calculus interdependency, personality contingency, and causal asymmetry: Toward a configurational privacy calculus model of information disclosure," *Information & Management*, 58(8), 103556.

Swaminathan, Vanitha, Karen M. Stilley, and Rohini Ahluwalia (2009), "When brand personality matters: The moderating role of attachment styles", *Journal of consumer research*, 35(6), 985-1002.

Tam, Kar Yan, and Shuk Ying Ho (2006), "Understanding the impact of web personalization on user information processing and decision outcomes," *MIS quarterly*, 865-90.

Taylor, Humphrey (2003), "Most people are 'privacy pragmatists' who, while concerned

about privacy, will sometimes trade it off for other benefits", *The Harris Poll*, 17(19), 44.

Tene, Omer and Jules Polonetsky (2013), "A theory of creepy: technology, privacy and shifting social norms", *Yale JL & Tech.*, 16, 59.

Thakur, Rakhi (2013), "Customer adoption of mobile payment services by professionals across two cities in India: An empirical study using modified technology acceptance model", *Business Perspectives and Research*, *1*(2), 17-30.

The Economist Newspaper (2017), "The world's most valuable resource is no longer oil, but data," *The Economist*, https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data.

Triplett, Norman (1898), "The dynamogenic factors in pacemaking and competition", *The American journal of psychology*, *9*(4), 507-33.

Tucker, Catherine E. (2012), "The economics of advertising and privacy," *International journal of Industrial organization*, *30*(3), 326-329.

Turow, Joseph, Jennifer King, Chris Jay Hoofnagle, Amy Bleakley, and Michael Hennessy (2009), "Americans reject tailored advertising and three activities that enable it," *Available at SSRN 1478214*.

Unsal, Serkan (2020), "The State of Turkish Startup Ecosystem", *Startupwatch*, Volume. 1.

Van de Waerdt, Peter J. (2020), "Information asymmetries: recognizing the limits of the GDPR on the data-driven market", *Computer Law & Security Review*, 38, 105436.

Van Doorn, Jenny, Katherine N. Lemon, Vikas Mittal, Stephan Nass, Doreén Pick, Peter Pirner, and Peter C. Verhoef (2010), "Customer engagement behavior: Theoretical foundations and research directions", *Journal of service research*, *13*(3), 253-66.

Verhoef, Peter C. (2003), "Understanding the effect of customer relationship management efforts on customer retention and customer share development", *Journal of marketing*, *67*(4), 30-45.

Visentin, Marco, Annamaria Tuan, and Giandomenico Di Domenico (2021), "Words matter: How privacy concerns and conspiracy theories spread on twitter", *Psychology & Marketing*, *38*(10), 1828-46.

Vivek, Shiri D., Sharon E. Beatty, and Robert M. Morgan (2012), "Customer

engagement: Exploring customer relationships beyond purchase", *Journal of marketing theory and practice*, *20*(2), 122-146.

Vivek, Shiri D., Sharon E. Beatty, Vivek Dalela, and Robert M. Morgan (2014), "A generalized multidimensional scale for measuring customer engagement", J*ournal of Marketing Theory and Practice*, 22(4), 401-20.

Wagner, Christian, and Ann Majchrzak (2006), "Enabling customer-centricity using wikis and the wiki way", *Journal of management information systems*, *23*(3), 17-43.

Waisberg, Daniel, and Avinash Kaushik (2009), "Web Analytics 2.0: empowering customer centricity", *The original Search Engine Marketing Journal*, *2*(1), 5-11.

Walker, Russell (2015), "*From big data to big profits: Success with data and analytics"*, Oxford University Press.

Wang, Jing, Rui Zhu, and Baba Shiv (2012), "The lonely consumer: Loner or conformer?", *Journal of Consumer Research*, *38*(6), 1116-28.

Wang, Yang, Gregory Norice, and Lorrie Faith Cranor (2011), "Who is concerned about what? A study of American, Chinese and Indian users' privacy concerns on social network sites", *Proceedings of the 4th International Conference on Trust and Trustworthy Computing*, 146–53.

Westin, Alan F. (1967), *Privacy and freedom*, New York: Atheneum.

Wilson, Timothy D., David B. Centerbar, Deborah A. Kermer, and Daniel T. Gilbert (2005), "The pleasures of uncertainty: prolonging positive moods in ways people do not anticipate", *Journal of personality and social psychology*, *88*(1), 5.

Winegar, Angela G., and Cass R. Sunstein (2019), "How much is data privacy worth? A preliminary investigation", *Journal of Consumer Policy*, *42*(3), 425-40.

Winterich, Karen Page, Vikas Mittal, and Andrea C. Morales (2014), "Protect thyself: How affective self-protection increases self-interested, unethical behavior", *Organizational Behavior and Human Decision Processes*, *125*(2), 151-61.

Yang, Kiseol, and Judith C. Forney (2013), "The moderating role of consumer technology anxiety in mobile shopping adoption: differential effects of facilitating conditions and social influences", *Journal of Electronic Commerce Research*, *14*(4), 334.

Yang, Linyun W., and Pankaj Aggarwal (2019), "No small matter: How company size

affects consumer expectations and evaluations," *Journal of Consumer Research*, 45(6), 1369-84.

Zajonc, Robert B. (1965), "Social Facilitation: A solution is suggested for an old unresolved social psychological problem", *Science*, *149*(3681), 269-74.

Zhang, Kaifu, and Zsolt Katona (2012), "Contextual advertising," *Marketing Science*, *31*(6), 980-94.

Zhao, Min, and Claire I. Tsai (2011). The effects of duration knowledge on forecasted versus actual affective experiences. *Journal of Consumer Research*, *38*(3), 525-34.

Zor, Ozum, Kihyun Hannah Kim, and Ashwani Monga (2021), "Tweets We Like Aren't Alike: Time of Day Affects Engagement with Vice and Virtue Tweets", *Journal of Consumer Research*.

Zwebner, Yonat, and Rom Y. Schrift (2020), "On My own: the aversion to being observed during the preference-construction stage", *Journal of Consumer Research*, *47*(4), 475-99.

APPENDIX A: CHAPTER 2

Perception Of Being Observed Scale

1- Whenever I do something different than usual, I feel like I am being watched.

2- Even our simplest actions are being watched.

3- I think my current online activities will be the focus of the other parties' attention in the future.

4- I think that I cannot control the extent to which I am being watched.

5- When I take a selfie, I can't help thinking about whether someone can connect to my phone and see my photos at that time.

6- In general, I think that everyone is being watched while they are making purchases.

7- I have concerns that when I am using technological devices, I am being watched.

8- What I share privately in my online networks can be seen by anyone.

9- I believe that I am being recorded even when I do not give consent.

10- Coming across advertisements after I talk about a product makes me think that I am being recorded.

Note: We randomized the order of the items in our scale development studies. For the ease of reporting the inter-item correlations, we assigned numbers to the items as seen above and created the correlation matrices accordingly.

Correlation Matrix Tables

Table 1: Inter-item Correlation Matrix for Study 2A

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
1.										
2.	.58**									
3.	.57**	.60**								
4.	.34**	.43**	.39**							
5.	.51**	.44**	.46**	.27**						
6.	.39**	.55**	.48**	.45**	.39**					
7.	.56**	.60**	.54**	.43**	.56**	.54**				
8.	.46**	.53**	.51**	.38**	.39**	.41**	.50**			
9.	.46**	.56**	.53**	.53**	.46**	.62**	.60**	.44**		
10.	.31**	.44**	.39**	.46**	.36**	.50**	.55**	.33**	.57**	

Note. N= 450 ** p <.01

Table 2: Inter-item Correlation Matrix for Study 2b

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
1.										
2.	.71**									
3.	.50**	.59**								
4.	.50**	.61**	.51**							
5.	.73**	.69**	.45**	.41**						
6.	.55**	.67**	.47**	.64**	.50**					
7.	.66**	.69**	.59**	.56**	.61**	.72**				
8.	.64**	.65**	.56**	.49**	.67**	.58**	.58**			
9.	.56**	.70**	.54**	.69**	.54**	.63**	.60**	.59**		
10.	.55**	.55**	.45**	.56**	.49**	.62**	.61**	.56**	.58**	

Note. N= 143 ** p <.01

Table 3: Inter-item Correlation Matrix for Study 3A

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
1.										
2.	.49**									
3.	.39**	.48**								
4.	.38**	.44**	.38**							
5.	.47**	.41**	.41**	.29**						
6.	.40**	.53**	.42**	.45**	.34**					
7.	.57**	.58**	.46**	.43**	.51**	.52**				
8.	.41**	.49**	.42**	.40**	.38**	.36**	.43**			
9.	.43**	.54**	.45**	.49**	.40**	.57**	.59**	.36**		
10.	.35**	.49**	.32**	.45**	.34**	.43**	.54**	.33**	.50**	

Note. N= 534 ** p <.01

Table 4: Inter-item Correlation Matrix for Study 3b

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
1.										
2.	.57**									
3.	.50**	.54**								
4.	.46**	.56**	.46**							
5.	.55**	.48**	.47**	.38**						
6.	.42**	.64**	.54**	.56**	.40**					
7.	.60**	.61**	.53**	.53**	.56**	.61**				
8.	.51**	.56**	.51**	.45**	.43**	.47**	.50**			
9.	.52**	.71**	.52**	.55**	.54**	.61**	.63**	.50**		
10.	.37**	.54**	.46**	.45**	.47**	.60**	.59**	.40**	.60**	

Note. N= 354. **p<.01

Table 5: Inter-item Correlation Matrix for Study 4

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
1.										
2.	.59**									
3.	.44**	.36**								
4.	.42**	.35**	.32**							
5.	.57**	.46**	.38**	.30**						
6.	.36**	.50**	.33**	.48**	.38**					
7.	.53**	.47**	.43**	.53**	.45**	.53**				
8.	.41**	.42**	.37**	.38**	.33**	.35**	.49**			
9.	.46**	.59**	.44**	.52**	.35**	.70**	.60**	.54**		
10.	.43**	.47**	.34**	.48**	.37**	.59**	.54**	.40**	.58**	

Note. N= 200 ***p*<.01

Confirmatory Factor Analyses

Table 6: Test for Exact Fit for Study 2A

χ^2	df	p
172	35	<.001

Table 7: Fit Measures for Study 2A

			RMSEA %90 CI	
CFI	TLI	RMSEA	Lower	Upper
0.93	0.92	0.09	0.080	0.107

Table 8: Test for Exact Fit for Study 2B

χ^2	df	p
104	35	<.001

Table 9: Fit Measures for Study 2B

			RMSEA %90 CI	
CFI	TLI	RMSEA	Lower	Upper
0.93	0.91	0.1	0.09	0.14

Table 10: Test for Exact Fit for Study 3A

χ^2	df	p
125	35	<.001

Table 11: Fit Measures for Study 3A

			RMSEA %90 CI	
CFI	TLI	RMSEA	Lower	Upper
0.96	0.95	0.07	0.057	0.083

Table 12: Test for Exact Fit for Study 3B

χ^2	df	p
93	27	<.001

Table 13. Fit Measures for Study 3B

			RMSEA %90 CI	
CFI	TLI	RMSEA	Lower	Upper
0.96	0.95	0.08	0.065	0.102

Supplementary Study on Brand Trust

The goal of this study was to explore how the perception of being observed influences brand evaluations. Recent research has shown that being observed could lead to an aversion (Zwebner & Schrift, 2020) and influence consumers' preferences (Schrift, Wertenbroch & Zwebner, 2019). These studies suggest that the perception of being observed can shape consumer behavior. In line with these studies showing that being observed could lead to negative consequences, we expected that consumers who have higher levels of the perception of being observed would be more sensitive to the recording practices existing in the marketplace, and their attitudes will be more negative towards the companies upon learning that they have been observing consumers. To explore our hypothesis and test the predictive validity of the perception of being observed scale, we conducted an experiment.

Pretest

The pretest was designed to ensure that we selected the brands that consumers considered to be using recording practices. We asked the participants (N=50) to name a brand that recorded consumer data. Apart from technology companies such as Google and Amazon, the most frequently reported brand name was Nike. Therefore, we used the Nike brand in our experiment.

Method

We recruited 200 participants from Cloud Research (55% female, M_{age} = 45.46, SD_{age} =12.58). Participants were randomly assigned to one of the two conditions in which we

manipulated the information about recording practices. Participants read the following text:

> Companies are using multiple methods and sources to capture and process customer data. However, most of the time, consumers do not even know that some companies are collecting information about their location, activity, preferences, demographics, attitudes, and behaviors. Certain brands in the marketplace make announcements regarding their recording practices. Recently Nike has announced that the brand has been collecting consumer data for various purposes. [Recently, Nike has announced that the brand has not collected consumer data for any purpose.]

Upon reading this text, participants were asked to complete the Brand Trust scale (Chaudhuri and Holbrook 2001) and report the extent to which they believed that Nike would record consumer data. Afterwards, they were asked to complete the perception of being observed scale.

Results

We ran a one-way ANOVA to explore the influence of our manipulation on brand trust. The findings showed that the participants who learned that the brand was recording consumer data gave lower brand trust ratings ($M_{recorded}$ = 3.63 , $SD_{recorded}$ = 1.554) compared to the ones who learned that the brand was not recording data ($M_{not\ recorded}$ = 4.45 , $SD_{not\ recorded}$ = 1.480; F (1,198) = .14,404 , p < .001). There was not a significant difference between the perception of being observed scores depending on the condition (p >.05). However, we found a significant interaction between the recording information and the perception of being observed (F (3, 196) = 4.687, p =.032). The floodlight analysis (Johnson-Neyman technique) showed that participants who experienced higher levels of the perception of being observed (3.87 and above) were more influenced by the recording practices of the brands and decreased their brand trust (b =-.6507, SE =.1512). This result supports our findings that that consumers experiencing the perception of being observed are more sensitive towards recording technologies.

APPENDIX B: CHAPTER 3

Customer Engagement Scale Items Used in our Studies

1- I would feel very positive about shopping from this retailer.
2- Whenever I need to purchase something from an online retailer, I would visit the website of this retailer.
3- I would think about this retailer a lot when I am using it.

Resource Protection Scale Items Used in our Studies

1- Protecting my resources (e.g. data, time, money) would be at the center of my focus.
2- I would become more focused on protecting myself.
3- I would be concerned about protecting my own resources (e.g. data, time, money) and interests.

Additional Items Measured in Our Studies

Study 1

We also measured the maximum amount of money participants were willing to pay for the shipment of the book purchased from the platform on a $0-$30 slider scale. A one-way ANOVA revealed a marginally significant effect of the context on participants' willingness to pay (F (1, 259) = 3.23, $p < .074$). The amount participants were willing to pay was lower for the ones in the recorded condition ($M_{recorded}$ = 4.26, $SD_{recorded}$ = 3.51) than the ones in the control condition ($M_{control}$ = 5.03, $SD_{control}$ = 3.46).

Study 3

We measured the extent to which participants felt responsible for donating the money to the store's relief fund. A one-way ANOVA revealed a significant effect of the context on the sense of responsibility (F(1, 199) = 5.11, p = .025). Participants in the observed condition had a lower sense of responsibility ($M_{recorded}$ = 3.91, $SD_{recorded}$ = 3.30) than the ones in the control condition ($M_{control}$ = 5.00, $SD_{control}$ = 3.53).

Additionally, we asked participants to distribute 100% to the customers and store. The main effect of the context was not significant (p =.85); however, the share of responsibility assigned to the customers was positively correlated with the sense of responsibility measure (r =.28, p <.001).

In addition to the willingness to donate, we had a wtp measure. The context did not have a significant main effect on the wtp (p =.8); however, wtp was positively correlated with the willingness to donate (r=.42, p <.001).

Data Classification and Annotation Processes Used in Study 2B

We used a data-driven classification method. First, we read all the collected Tweets, determined whether they were relevant for our research, and created categories in line with the content shared by the users. Thus, our classification consisted of a two-step process.

1)Relevance: First, we determined whether the content of the tweet was relevant to our topic of interest. For instance, the word "record" has multiple senses, and the use of it as in "to record a song" was considered irrelevant. The use of the word "observe" in "As far as I observe..." was considered irrelevant. We coded the relevant tweets as 1, while the irrelevant tweets were coded as zero. There were incomplete sentences in Tweets. As it was not possible to exactly know how the sentence ended, we considered these incomplete tweets ambiguous and coded them as 3.

As we focus on individuals' experiences, the tweets that were relevant should be about people. There were tweets about other entities, such as animals or quantum particles which behaved differently when they were being observed. However, these tweets were not related to the scope of this project. Therefore, we considered them irrelevant.

Tweets about the documentaries such as The Great Hack and The Social Dilemma or major data scandals like Cambridge Analytica were considered relevant, as we assumed that people who tweeted about these topics were knowledgeable and concerned about

being observed by other parties. Even the tweets that simply mentioned the name of these documentaries were considered relevant.

Table 1: Examples

Relevant	"Bro I can't even talk to my mates anymore without being recorded I feel like I'm in the Truman show"
Irrelevant	"I heard of a car crash death being recorded as a COVID death. This is genuine. I thought they were joking at first too."
Seemingly irrelevant, but relevant	"Matt Hancock, the govt face of the pandemic. I'm not very re-assured. Poor leadership Poor management. If they were being observed by independent monitors like other public services are they would be under special measures."
Seemingly relevant, but irrelevant	"It was so much fun! We just all clicked and forgot it was being recorded! Surely we should now be winning ALL THE PODCAST GUEST AWARDS?"

2)Categorization: In the second step, we classified the tweets that were considered relevant based on their content. Exploring what people shared using the above-mentioned keywords led to the emergence of 8 categories.

1) Positive attitudes towards being observed. Tweets in this category expressed people's happiness about the recording practices. This category suggested that there was nothing problematic about being observed unless people acted in a wrong manner.
Example: "Public officials should not be concerned about being filmed/recorded. Public officials should be confident that they know they are following the laws and that the filmed/recorded truth supports their good and appropriate actions."

2) Change in one's actions. Tweets in this category were about the change in one's behavior while being recorded. Users shared their individual experiences about how they changed their behavior when they realized that their actions were being recorded. Further, they warned others and instructed them to act differently when they were being recorded.
Example: "I think people kinda unconsciously pitch their voice up a bit when they know they're being recorded because they get self conscious about being clear or understood."

3) Recording practices in the marketplace. Tweets in this category were related to the recording practices in the marketplace. People referred to certain brands (i.e. Xbox, Oppomobile, Twitter) and governments or mentioned general practices and

devices (i.e. microphones, CCTV cameras, “this call is being recorded” notifications). The recording practices in the marketplace could involve the themes that were present in the other categories. The main difference of this category was the element of the marketplace. If the tweet was about companies or specific recording practices, we categorized them in this group. However, Tweets that included a company name, and a keyword were not always relevant. For example, the Tweet saying that “I just recorded a video from Facebook” included both critical elements, but it was not related with the perception of being observed.

Example: “Yall when I go on Instagram the audio goes weird on my music like my screens being recorded”.

4) *Acting as if not being observed.* Tweets in this category were about the people who acted as if they were not being observed or people who did not care about being observed. In other words, being observed by others did not change anything in their behavior, they acted recklessly and carelessly. This category might look similar to the Category 2 at the first glance. The critical difference between these two categories was that #2 captured a realization of being observed by others which led to a change in one’s actions. However, #4 denoted that regardless of such a realization, people did not care about being observed. So, they behaved as usual or did not make any changes in their actions simply because they were being observed.

Example: “How come these women abuse to a policeman; she knows she is being recorded but still continues the abuse”.

5) Everything is being observed. Tweets in this category centered around the theme that everything was being observed. Whatever individuals did, they should be aware that their actions were being recorded and observed by other parties, and there was no way out of this system.

Example: “So when someone mentions doing something stupid online and tweets their motive it’s being recorded and flagged you can’t erase or delete it’s in the sky already”.

6) Negative attitudes towards being observed. Tweets in this category expressed people’s concerns about being observed and their negative emotions triggered by being observed. Any emotion that had a negative valence (i.e. anger, unhappiness, despair, stress, discontent) belonged to this group.

Example: “Nobody likes being recorded while tryna shop.”

7) Possibility of being observed. Tweets in this category were related to the possibility of being recorded. People were not really sure whether their actions were recorded, however, they imagined this possibility, asked whether it was the case, or had such an assumption.

Example: “Are these being recorded at all (she wondered).”

8) Naming or recommending the documentaries. Tweets in this category simply mentioned the name of the documentary or recommended it to others. This code only existed in “The Great Hack” and “The Social Dilemma” batches.

Example: “The Great Hack is an excellent watch.”

Data Annotation

Data annotation process had two stages. In Stage 1, as explained above, we read the Tweets and created an annotation manual which explained the data classification process. In Stage 2, independent annotators labeled five batches; Batch #1 including 577 Tweets with the keyword of being observed, batch #2 including 463 Tweets with the keyword of being recorded, batch #3 including 164 Tweets with the keyword of being observed, batch #4 including 574 Tweets with the keyword of The Social Dilemma, batch #5 including 567 Tweets with the keyword of being observed. The first three batches were also a part of the Stage 1. However, batch #4 and #5 were not categorized beforehand. Each batch was manually annotated by three annotators who were undergraduate or graduate students in social sciences. Nine unique annotators worked in this process, and two of them coded more than one batch. A total of 2,345 Tweets were labeled. The annotators were instructed to read the annotation manual and were allowed to ask questions while labeling the first 10 Tweets of each batch. For each Tweet, they determined whether the content was relevant, and to which category it belonged. At the end of each batch, we received feedback from the annotators according to which we updated our manual. We repeated this process to improve our annotation manual multiple times. After independent annotators read and determined the relevance and category of each tweet, we explored the differences in their classification. If the two out of three annotators regarded a tweet as relevant, we also considered it as relevant. Then, we compared the categories. If the majority of annotators agreed on the category, we

accepted it. If the annotators did not agree on the category, the item was excluded from the analysis.

There were two issues that were critical for the data classification and annotation processes. First, we were mainly interested in the perception of being observed rather than actual observations. There were tweets about being watched, seen, observed or recorded by other people at that moment such as “She was watching me”. However, these tweets were considered irrelevant, as they might refer to an action which both parties were aware of. However, “I am sure that she was watching me” referred to one’s perception about being watched. These tweets belonged to the Category 7 as they implied a probability of being observed by others. Second, each Tweet could belong to only one category. In case of the existence of two categories for a Tweet, coders chose the category that was more representative.

If we consider these categories as a continuum, we can say that #6 is at the negative end, #7 is neutral, and #1 is at the positive end of the continuum. The rest of the categories are more fluid in the sense that the content users shared do not communicate strong sentiments. However, we can position #5, #2, and #3 between negative and neutral, and #8 and #4 can be placed between neutral and positive. (#6-#5-#2-#3#7-#4-#8-#1)

Table 2 demonstrates the details such as the predetermined keywords, collection dates, the number of total and relevant tweets in our data set. As it can be seen on the table, the number of relevant tweets varied across the keywords (Hürriyetoğlu et al. 2016). The ratio of the relevant tweets to the total number of tweets was higher for the keyword of “The Social Dilemma”, which was expected as it was a documentary that aimed to inform the audience about the recording practices of companies. Apart from the content that was about “The Social Dilemma”, the ratio was high for the tweets collected with the keyword of “being recorded”. To measure the inter-annotator agreement, we computed Krippendorff’s alpha score (Krippendorff 2011). Inter-annotator agreement scores ranged between .44 and .62 for determining the relevance of tweets, and .33 and .77 for identifying the category of tweets. As the scope of our research is demonstrating an emerging phenomenon of the perception of being observed precisely, relatively low scores of Krippendorff’s alpha, which may result from our use

of the labels on which the majority of the three annotators agreed, do not pose a major problem.

Table 2: Details about the Data: Keywords Used for Data Collection, Date of Data Collection, Total Number of Tweets, The Number of Relevant Tweets, Krippendorff's Alpha Scores Demonstrating Inter-Annotator Agreement

Batch #	**Keyword**	**Date of Data Collection**	**Total Number of Tweets**	**Total Number of Relevant Tweets**	**Krippendorff's Alpha**
#1	Being Observed	02.11.2020	480	52	.62
#2	Being Recorded	20.12.2020	383	110	.56
#3	Being Observed	20.12.2020	128	8	.48
#4	The Social Dilemma	20.12.2020	509	431	.44
#5	Being Observed	07.05.2021	414	32	.48

Table 3 provides details about the number of tweets in each category. As it can be seen on the table, the number of tweets is not equal across categories. As our study aims to explore the nature of the perception of being observed, even the low number of tweets in each category provides insights about the potential consequences of this perception. Our findings show that users experience the perception of being observed (Table 2) and the themes that occurred most frequently are the change in users' actions (Category #2) and their negative attitudes towards recording practices (Category #6) (Table 3). These findings suggest that people are concerned about being observed by other parties and this perception of being observed leads to a change in individuals' behavioral patterns. Although there are certain instances when individuals can have positive attitudes towards recording practices (Category #1) or act as if they were not being observed (Category #4), negative attitudes and behavioral change are more common.

Table 3: Classification of Relevant Tweets

Batch #	**Category #1**	**Category #2**	**Category #3**	**Category #4**	**Category #5**	**Category #6**	**Category #7**	**Category #8**	**Krippendorff's Alpha**
#1-Being Observed	2	9	2	1	9	18	3	-	.64
#2-Being Recorded	6	38	7	11	8	9	3	-	.63
#3-Being Observed	-	1	-	1	-	2	2	-	.77

#4-The Social Dilemma	-	14	2	1	8	15	-	355	.33
#5-Being Observed	2	2	-	1	6	10	6	-	.59

To explore how often annotators agreed on the relevance and the category of tweets, and which categories they confused the most, we created a confusion matrix for the dataset of "#1- Being Observed". On the Table 4, the first row and the first column denote the categories. As we explored the confusion of annotators on the data collected with the keyword of "being observed", Category#8 does not exist. However, we have an additional category of #-1 which represents the agreement of annotators on the irrelevance of the given tweet to the scope of our research.

Table 4: Confusion Matrix of the "Batch #1 Being Observed" Dataset

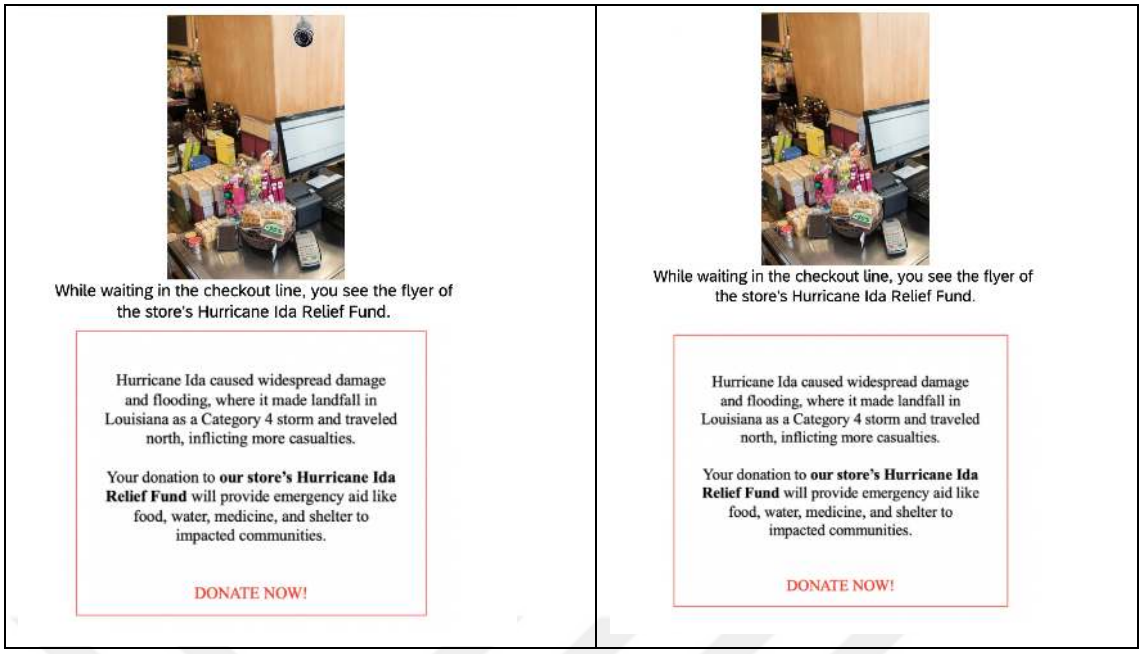
	#-1	#1	#2	#3	#4	#5	#6	#7
#-1	**406**	0	5	2	0	0	3	0
#1	0	**1**	0	0	0	0	1	0
#2	1	1	**8**	0	0	0	1	2
#3	1	0	0	**1**	0	0	0	0
#4	1	0	0	0	**1**	0	0	0
#5	4	0	0	1	0	**7**	3	2
#6	5	0	0	0	0	0	**12**	0
#7	4	1	1	1	0	0	1	**2**

The first row of our matrix shows that the probability of agreeing on the relevance of the content is around %98. This high percentage indicates that annotators could agree on whether the content of tweets was relevant or not for most of the time. Exploring their agreement on the specific categories, it can be seen that the probability of their agreement on Category #6 is around 7%. Although the ratio seems low, our findings show that annotators do not confuse this category with others as long as they consider the content relevant. However, the greatest degree of confusion lies between the categories of #5 and #6, while the former is about the belief regarding the pervasiveness of recording practices and the latter is about one's negative attitudes towards them. For instance, one of the confused tweets is "You hate being observed but you are under it". As it can be seen on this example, the content is both about being observed by others and the hatred toward

being observed. This confusion may result from the nature of the task given to the annotators. First, as the tweet could only belong to one category and we did not prioritize one of the themes over the others, the annotators might have difficulty in choosing one of them. Second, our goal was to identify as many consequences resulting from the perception of being observed as possible. However, some of the categories may be more inclusive which led to a confusion among annotators. For instance, tweets about the negative attitudes can also include elements that are about the ubiquitous use of recording technologies. Although our goal was to identify as many potential consequences as possible, future research could be more focused in exploring the perception of being observed. Whether the belief about the pervasiveness of the recording practices is considered as the default in the marketplace, or what kind of negative attitudes individuals have towards being observed could be examined.

Visual Stimuli Used in Study 3

Being Observed Condition	*Control Condition*
Imagine that you go grocery shopping. Before entering the store, you notice a banner hung on the entrance:  	Imagine that you go grocery shopping. Before entering the store, you notice a banner hung on the entrance: 
 The security cameras catch your eye as soon as you pass through the door. You walk around the aisles and pick up the items you need. Then, you head to cashier lines.	 Large packages of chips catch your eye as soon as you pass through the door. You walk around the aisles and pick up the items you need. Then, you head to cashier lines.



APPENDIX C: CHAPTER 4

Pilot Study: Managers' Perspective

Pilot study aimed to provide support for our prediction that the main purpose behind companies' tracking activities was to be more consumer centric, understand and address consumers' needs and desires.

Method

31 executives from an Executive MBA class at a private university (7 female; M_{age}=39.26 years) with a minimum of 8 and maximum of 28 years of work experience read the following statement.

> Many companies track consumers for various purposes such as designing new products and services, improving the existing ones, increasing sales, measuring performance. However, the primary objective of tracking is putting customers' interests at the center of the companies' actions and addressing them.

After reading the statement, participants selected one of the two options: “Yes, I agree. It is the primary objective” and “No, I don’t agree. It is not the primary objective”. Finally, executives provided demographic information.

Adapted version of the perceived consumer centricity scale (Habel et al. 2020)

- I, as a customer, am at the center of the company’s actions.
- The company caters its actions entirely to me as a customer.
- For the company, I play the undeniable primary role.
- The customers are the top priority for the company.

Additional Study Testing the Mediation Model

We recruited two hundred US residents on Amazon Mechanical Turk to complete the study in exchange for a small monetary payment, one of whom failed to pass the attention check question, leaving us with a sample of one hundred ninety-nine participants (100 females; M_{age} = 44.6 years). Our procedure was similar to the Study 3B, with only one difference. We did not collect participants’ trust ratings.

Results

Manipulation Check. A one-way ANOVA revealed a significant effect of the notification type on the expectations regarding companies’ tracking ($F(1, 199) = 6.66$, $p = .011$). Participants in the Privacy Notice condition thought that the application they used would track them ($M_{privacy\ notice} = 6.21$, $SD_{privacy\ notice} = 1.05$) more than the ones in the control condition ($M_{control} = 5.76$, $SD_{control} = 1.39$). This finding suggested that receiving a privacy notice increased consumers perception of being observed.

Interest in using the platform. We generated a composite score out of 4 items (Cronbach’s alpha= .89). A one-way ANOVA revealed a significant effect of the notification type on the interest in using the platform ($F(1, 199) = 9.09$, $p = .003$). Replicating our main finding, participants who received a privacy notice reported a less interested in using the platform ($M_{privacy\ notice} = 3.60$, $SD_{privacy\ notice} = 1.33$) than those who received a welcome message ($M_{control} = 4.21$, $SD_{control} = 1.47$).

Underlying Mechanism. We calculated a difference score using profit and customer orientation questions for identifying the perceived orientation of the platform. Then we

tested the proposed mediation model using PROCESS (Hayes 2018) Model 4 with 10,000 bootstrapped samples. In the model, we included notification type (0: control, 1: privacy notice) as the independent variable, interest in using the platform as the dependent variable, and the company orientation as the mediator. Mediation analysis showed that the perceived company orientation mediated the relationship between the notification type and interest in using the platform. More specifically, the privacy notice influenced the company orientation (b = 13.6; t = 2.97, p = .003), which decreased consumers' interest in using the platform (b = -.02; t = -6.96, p = .000). The index of mediation was significant (Effect = -.26, %95 CI: [-.47, -.08]), and the direct effect was no longer significant (CI: [-.70, .02]), suggesting a full mediation (see the figure below for path coefficients).