

Sharing Economy and Privacy

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4.1 INTRODUCTION

Information privacy has long been at the center of policy debates focusing on design and operations of online platforms (e.g., Karwatzki et al. 2017). According to the Centre for International Governance Innovation-Ipsos report (2018), nearly half of North American Internet users report that their privacy-related concerns have been increasing over time. Better understanding of the antecedents and elements of information privacy is particularly important in the context of sharing economy platforms, as participating in the services they facilitate often involves exchanging highly personal and intimate information, such as addresses, photos, personal items, phone numbers, and individual preferences (Lutz et al. 2018; Teubner and Flath 2019).

Previous examinations of privacy considerations in sharing economy platforms have been primarily focused on rights and regulations by legal scholars, resulting market power and competition outcomes by economists, privacy-centered systems design by engineers and underlying cognitive and emotion-based mechanisms by psychologists. Following the central theme of this book, the goal of this chapter is to provide a common comprehensive framework that would allow scholars and scientists coming from different backgrounds to bridge disciplinary silos and advance research on information privacy issues arising in sharing economy platforms.

The framework we propose consists of two conceptual models. The first model is concerned with exchange of information. We focus on describing various types of information exchange that arise on sharing economy platforms across different purchase stages. As the platforms serve as intermediary between providers and consumers (Ranzini et al. 2017), leading to a triadic relationship between the three types of actors (providers, consumers, platforms), it is important to understand how the dyadic information exchanges underlying this dynamically evolving relationship may vary, depending on which particular dyad is involved. Put

differently, the first part of this chapter focuses on classifying all *possible* information exchanges on sharing economy platforms. Such complex information exchange is crucial for any functioning sharing economy platform (Lutz et al. 2018; Ranzini et al. 2017).

However, this exchange of information may raise privacy concerns among platform providers and consumers (Eckhardt et al. 2019; Teubner and Flath 2019). Consequently, possible information exchanges we describe in the next section may occur only if the platform users (individual providers and consumers) accept the risk that they may lose a certain degree of privacy in exchange for receiving certain benefits (Dinev and Hart 2006; Lutz et al. 2018). But how do the users trade off the relevant risks and benefits? In the second part of this chapter, we examine how platform users decide which of the possible information exchanges they choose to participate in (i.e., *accepted* information exchanges), using the privacy calculus framework.

4.2 EXCHANGE OF INFORMATION

In this section, we discuss three types of information exchange. First, we examine the exchange of information between platform users and the intermediating sharing economy platform. Then, we consider the exchange of information between providers and consumers. Finally, we discuss the exchange of information between platforms.

4.2.1 *Exchange of Information Between Platform Users and the Intermediating Platform*

The exchange of information between platform users and an intermediating platform includes the exchange of mandatory data, voluntary data, and behavioral data (Ranzini et al. 2017). Platform users exchange such data with the intermediating platform to participate in the sharing economy. The exact nature of the information exchanges can be different for providers and consumers, depending on the platform context (Lutz et al. 2018).

Mandatory data refer to information that platform users must provide to sign up on the sharing economy online platform such as real names, email address, and phone number. Such data are mainly collected through online forms (Ranzini et al. 2017) accompanying account registrations, or by asking new users to verify their identities by linking with existing Facebook or Google accounts. Providers and consumers may be asked to share different data (Lutz et al. 2018). On TaskRabbit, for instance, service providers are required to fill in quite a broad range of information fields necessary to create an account on the platform, including their name, email address, phone number, address, photo, and description of their applicable

skills. By contrast, individuals seeking to onboard TaskRabbit platform as service consumers, are only required to share their name, email address, and zip code to create an account.

Voluntary data refer to information that platform users may provide to develop their profile further on the platform. Platform users may choose to share such information to appear more trustworthy and likeable, hoping to increase the likelihood of getting engaged in more transactions facilitated by the sharing economy platform (Ranzini et al. 2017; Teubner and Flath 2019). For this data type, providers and consumers may also choose to share different information items with the platform. On Airbnb, for instance, providers (hosts) can enrich their profile with more personal description and enhanced textual and visual descriptions of the property they would like to rent. Such information can make their profile (and their property) more appealing for potential consumers (guests). As for consumers, they can also choose to share more personal details, both in textual and visual (through their photo) formats, hoping that such additional information may enhance their likeability in the eyes of potential hosts (Lutz et al. 2018; Ranzini et al. 2017).

One of the key considerations related to the exchange of mandatory and voluntary data is that it is always *explicit*, meaning that platform users deliberately provide such information to access and engage with sharing economy platforms (Ranzini et al. 2017). The third type of shared information, comprising behavioral data, is fundamentally different in this respect. Specifically, sharing economy platforms often collect behavioral data *implicitly*, by tracking platform users' behavior (Fay et al. 2009). There are multiple purposes that such information can serve. First, platforms may use it to assess the effectiveness of the platform user interface by analyzing bounce rates (the percentage of website visitors who navigate away after viewing only one page) and mapping user journeys from the initial onboarding to submitting posttransaction feedbacks (Fay et al. 2009). Second, such data enable platforms to learn more about their users' preferences and personalize the user experiences on the platform accordingly (Bleier and Eisenbeiss 2015). Personalization refers to the ability to adapt content to individuals automatically, based on their inferred preferences (Chellappa and Sin 2005; Karwatzki et al. 2017). Personalization helps sharing economy platforms to recommend tailored content to platform users (Ranzini et al. 2017). While both platform providers and consumers may find some of these adaptations appealing, such data-driven personalization at scale may also backfire. Prior studies have shown that excessive personalization may result in platform users finding it too intrusive (e.g., Karwatzki et al. 2017).

Table 4.1 summarizes these three types of information exchange between platform users and the intermediating platform. In the next subsection, we discuss the information exchanges between platform providers and consumers.

TABLE 4.1 *Types of shared information*

Mandatory data	Voluntary data	Behavioral data
Aim: Getting access to the platform	Aim: Increase likelihood of participation	Aim: Analyze users' behavior on the platform
Means of collection: forms, linking with existing Facebook or Google accounts	Means of collection: forms	Means of collection: cookies, pixels
Examples: real names, email address	Examples: personal description, photos	Examples: visit frequency, bounce rates

4.2.2 *Exchange of Information Between Platform Consumers and Providers*

Once platform users establish their relationship with the platform (either by registering or subscribing), they can start interacting with other platform users. Following a commonly used classification of the different stages of the customer journey, in this subsection we use it to discuss information exchanges between platform consumers and providers that frequently occur at such stages: prepurchase stage, purchase stage and the postpurchase stage (Lemon and Verhoef 2016).

The prepurchase stage encompasses all interactions between consumers and providers that take place before the transaction or purchase occurs (Lemon and Verhoef 2016). Following registering or subscribing to the platform, consumers and providers typically exchange product information, related to the good or the service characteristics and delivery terms (Lemon and Verhoef 2016). For instance, consumers may have questions about products and may want to learn more details before deciding to book a service or purchase a good. On Airbnb, for instance, potential guests may contact hosts through the intermediating platform to obtain more information about the price or the amenities of the offered property before deciding to book a short-term stay. Providers typically respond to such requests by providing necessary information.

The purchase stage refers to all the interactions between consumers and providers that are directly related to the transactions (goods purchase or services booking) (Lemon and Verhoef 2016). At this stage, a typical information exchange is focused on payments and fulfillments. For example, Airbnb guests can exchange information with selected hosts to secure the property booking.

Finally, consumers and providers may exchange information during the postpurchase stage, which typically encompasses all posttransactional interactions (Lemon and Verhoef 2016). At this stage, they can exchange information

related to exchanging or repairing the good or fixing service access issues (Ranzini et al. 2017). On TaskRabbit, for example, consumers and providers may contact each other through the platform to arrange their meeting place and time, and exchange information about required tools and job access. On Uber, drivers may call riders on their way through the platform if there is traffic, an accident or if they have trouble finding the rider at the requested location.

While consumers and providers exchange information mainly through the intermediating sharing economy platform, they can also do that outside the platform (Ranzini et al. 2017) if platform users are comfortable exchanging the contact means (typically their email addresses or phone numbers) necessary for such nonplatform information exchange. On Airbnb platform, for instance, hosts may share their private phone numbers so guests can contact hosts if there is any issue with the property during their stays.

4.2.3 *Exchange of Information Between Platforms*

In our current information-driven economy, data generate economic value for online platforms and offers a competitive advantage (Awad and Krishnan 2006). Online platforms always look to acquire new data to learn more about their current users or to identify and attract promising new ones. The access to such data helps them improve their targeting and personalization.

Unbeknownst to many platform stakeholders, many platforms share detailed information about their users with other online platforms to help them enrich their data and profit in the process (Kim et al. 2018). Moreover, online platforms may choose to share their users' data with some (but not all) of the partnering platforms strategically, to strengthen their strategic competitive advantage. For example, Facebook gave access to some of its data to Airbnb, Lyft, and Netflix (Satariano and Isaac 2018).

In sum, the advances in digital transformation enable sharing economy platforms and their key stakeholders (consumers and providers) to exchange rich data across different dyads through several consumer journey stages and for multiple purposes – we summarize these information flows in Figure 4.1. However, the sheer *possibility* of such information flows and its pervasiveness today may not necessarily indicate the expansion (or even existence) of such flows in the future, as this would require *acceptance* of such information flows by key platform stakeholders. Over past several years, many journalists and scholars have emphasized how the invasiveness of such information exchange could raise serious privacy concerns among platform providers and consumers (e.g., Kim et al. 2018). In the next section, we examine the privacy calculus framework and discuss its implications for the acceptance of various information exchanges in the sharing economy.

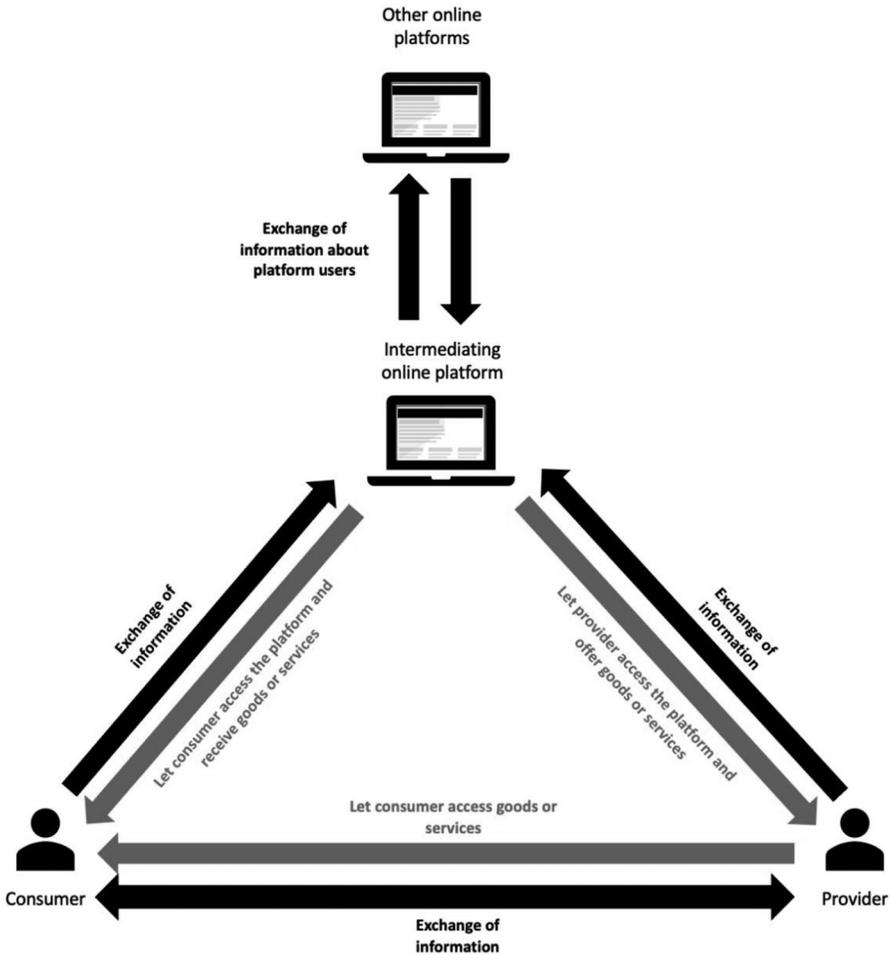


FIGURE 4.1 Exchange of information in the sharing economy.

4.3 PRIVACY CALCULUS

The information exchanges discussed in Section 4.2 may occur only if the platform users accept the risk that they may lose a certain degree of privacy in exchange for receiving certain benefits (Dinev and Hart 2006; Lutz et al. 2018). But how do the users trade off the relevant risks and benefits? We adopt the *privacy calculus* framework to shed light on these tradeoffs (Dienlin and Metzger 2016; Dinev and Hart 2006).

The *privacy calculus* is a rational analysis that focuses on the relative benefits and risks of disclosing information (Dinev and Hart 2006). In the context of the sharing economy, the privacy calculus implies an assessment of the risks of disclosing

information versus an evaluation of the potential benefits derived from participation in the sharing economy. In this perspective, platform users accept losing a certain degree of information privacy if expected outcomes are worth the risks (Dienlin and Metzger 2016).

In the following subsections, we will explore the benefits and risks that could be potentially derived from participation in the sharing economy.

4.3.1 *Risks of Disclosing Information*

Yates and Stone (1992) define risk as “the possibility of loss.” In the context of sharing economy platforms, users may decide against pursuing an access to a good or service due to the uncertainty associated with the required personal data disclosing (Ranzini et al. 2017). Such uncertainty generates concerns among platform users about information privacy practices (Bart et al. 2005).

Privacy concerns refer to the extent to which individuals are concerned about online platforms’ collection and use of their data and worry about potential misuse (Hong and Thong 2013; Karwatzki et al. 2017). Such concerns relate to data collection, unauthorized secondary use of data, improper access, and errors (Malhotra et al. 2004; Smith et al. 1996). In the case of sharing economy, privacy concerns may also include considering potential physical privacy threats (Lutz et al. 2018; Teubner and Flath 2019). In the following discussion, we examine each of these risk dimensions.

4.3.1.1 Data Collection

Concerns about data collection are defined as “the degree to which a person is concerned about the amount of individual-specific data possessed by others relative to the value of benefits received” (Malhotra et al. 2004, p. 338). In the sharing economy context, the amount of data relates to the number of pieces of information that pass through the intermediating platform. Not only does it include the information that is required to access the sharing economy platform but also encompasses the information the users share on the platform afterwards. Sharing economy platforms where consumers and providers typically share a large amount of information are likely to generate such concerns (Lutz et al. 2018).

Let us illustrate the intrinsic data collection using TaskRabbit as an example. Platform providers are required to share their name, email address, phone number, physical address, photo, and skills description when they sign up. For their part, platform consumers are required to share their name, email address, and zip code to create an account. Then, service providers need to further detail their skills and price ranges, while service consumers need to describe the task that needs to be completed and the task options. Consumers and providers may also contact each other to organize their meeting. After the task is completed, consumers may post reviews on the platform and assess the reliability of the provider.

On other sharing economy platforms, the number of stages at which the information needs to be disclosed could be lower, but the information context could be potentially more invasive, such as geolocation information, necessary for facilitating real-time matching on sharing economy platforms. For example, on Uber, besides sharing basic personal information when registering to access the platform (such as name, email address, and phone number) and rating their experiences after each transaction, drivers and riders must also disclose to the platform their exact location, as it is required to connect and match drivers and users in real time (Thelen 2018).

As these examples illustrate, the amount of exchanged data may vary across intermediating platforms, depending on the sector in which they operate. For instance, the travel sector that requires the exchange of more personal information may generate more privacy concerns than in other sectors (Bart et al. 2005).

Moreover, the amount of exchanged information may vary across different types of platform users; for example, consumers and providers may need to share substantially different volumes of information. On Airbnb, for instance, while both hosts and guests are required to exchange information about themselves to sign up such as names, email addresses, dates of birth, and photos, hosts also need to post detailed information about their property such as location and amenities to attract potential guests (Ranzini et al. 2017). After booking, hosts may also need to share their personal contact details (such as phone number or email address) and information to access the rented property (such as key or door code) either through or outside the platform (Lutz et al. 2018; Teubner and Flath 2019). Overall, the amount of information expected to be shared by hosts is much greater, and the disclosure of information is more intimate and prejudicial for them (Lutz et al. 2018; Teubner and Flath 2019). Such asymmetry against hosts who must take on more risks when disclosing information may discourage some of them to participate in the sharing economy.

4.3.1.2 Unauthorized Secondary Use

Concerns about unauthorized secondary use refer to platform users' concerns that data collected for a defined purpose may also be used for another purpose without their consent. Secondary use of data may be internal or external (Malhotra et al. 2004; Smith et al. 1996).

Internally, the unauthorized secondary use may occur within the organization that initiated the data collection. For instance, the user data that was initially collected for research purposes may be used afterwards for marketing purposes (Cespedes and Smith 1993; Smith et al. 1996).

Externally, the secondary use of data is often associated with unauthorized sharing of the user data with other platforms. A typical example is the external sale or rental of data (Smith et al. 1996). As mentioned earlier, the exchange of data with external parties like other platforms is particularly perceived as unacceptable among platform users (Kim et al. 2018).

Overall, platform users that may share highly personal information (Lutz et al. 2018) may be particularly concerned about unauthorized secondary use.

4.3.1.3 Improper Access

Concern about improper access refers to the “concern that data about individuals are readily available to people not properly authorized to view or work with this data” (Smith et al. 1996, p. 172). Users may be concerned that intermediating platforms do not spend enough time and effort to prevent improper access and protect personal information (Malhotra et al. 2004). Sharing economy platforms that let platform members comment on their experience interacting with other members are particularly susceptible to such concerns.

4.3.1.4 Errors

Platform users may also be concerned that the protection implemented by the platforms against deliberate and accidental errors is not adequate (Smith et al. 1996). For instance, data coding in databases and files could be inaccurate (Malhotra et al. 2004). Such concern raises the question about the responsibility of the platform in spotting errors (Smith et al. 1996).

4.3.1.5 Physical Privacy Threats

Physical privacy refers to “individuals’ sense of having a private space that others cannot enter against their will” (Lutz et al. 2018, p. 1475). In the sharing economy context, platform users often allow other users temporary access to their personal property (such as cars on Uber or homes on Airbnb), which can raise serious concerns about potential physical privacy threats. Such threats may include surveillance, discomfort, and intrusion through the sharing of physical spaces (Lutz et al. 2018; Teubner and Flath 2019).

4.3.2 *Individual Benefits of Disclosing Information*

We turn now to examining how platforms users may account for various potential benefits derived from the participation in the sharing economy in their privacy calculus. We focus on three main benefits for platform users: Economic, reputation and social capital benefits (Ranzini et al. 2017).

4.3.2.1 Economic Benefits

Participating in the sharing economy may provide multiple economic benefits to platform users (Belk 2014; Bucher et al. 2016; Hamari et al. 2016). Economic benefits

represent not only earnings for the platform providers who can offer access to their goods or services to a large potential audience, but also savings for platform consumers who can benefit from accessing such services or goods at a much lower price point compared with prices for alternative options associated with the similar consumption experience (Lutz and Newlands 2018; Ranzini et al. 2017). For example, providers on ride-sharing platform earn money by driving local riders around cities, while consumers gain by obtaining a ride at a comparatively low price.

The economic benefits may extend beyond the pure financial considerations. Besides the tangible value component based on the core consumption experience (e.g., getting from point A to point B), consumers may derive additional value associated with the speed and convenience of obtaining the experience.

Another important aspect of evaluating economic benefits, especially on the provider side, is related to perceived audience size, which represents platform users' perception of the potential reach of the platform (Teubner and Flath 2019). The possibility of reaching a larger number of potential consumers is particularly important for providers who may derive higher economic benefits from the greater demand or higher prices associated with the higher number of potential consumers on the platform (Teubner and Flath 2019).

4.3.2.2 Reputation

Platform users may also benefit from interacting with reputational mechanisms embedded in many sharing economy platforms (Park et al. 2014; Ranzini et al. 2017). Reputation enables individuals to obtain and maintain a higher status within a community (Wasko and Faraj 2005). In essence, these mechanisms allow platform users to obtain greater value in the future (through attracting more demand and/or charging higher prices) from their better past behavior on the platform.

Disclosing certain mandatory personal information is essential for proper functioning of such reputation-based systems, as they require unambiguous and longitudinal (over time) platform users' identification based on such information. In addition, users may gain a better reputation by voluntarily disclosing more information. On sharing economy platforms, a more developed user profile (containing more information about the user and/or their platform-related assets and services) may signal higher trustworthiness (Ranzini et al. 2017; Teubner and Flath 2019). On Airbnb, for instance, guests tend to trust hosts with more developed and accurate profiles (Ranzini et al. 2017).

4.3.2.3 Social Capital

The possibility to connect with other individuals in a meaningful way is another important motivation to participate in online communities (Hamari et al. 2016; Ranzini et al. 2017; Wasko and Faraj 2005), such as sharing economy platforms. However, social

interactions between users in the sharing community inside and outside the platform (Ranzini et al. 2017) typically involve informal information exchanges above and beyond the level of individual data disclosure required by the platform.

4.3.3 *Operating the Calculus*

As we posited at the beginning of this section, participation in the sharing economy involves a mental process called the privacy calculus (Teubner and Flath 2019). In the sharing economy context, it involves analyzing trade-offs between the perceived risks related to information disclosure, namely data collection, unauthorized secondary use, improper access, errors, and physical privacy threats (Lutz et al. 2018; Malhotra et al. 2004; Ranzini et al. 2017; Smith et al. 1996) and its main perceived benefits namely economic, social capital, and reputation derived from participation in the sharing economy (Hamari et al. 2016; Lutz et al. 2018; Teubner and Flath 2019).

This privacy calculus typically involves two stages: *before and during* interacting with the platform. In the first stage, potential platform users assess expected benefits and risks based on what they know about the sharing economy platform under consideration. If expected benefits are greater than expected risks, users would start engaging with the platform. Conversely, if risks are expected to outweigh benefits, users may decide that accessing the sharing economy platform is not worth it (Dinev and Hart 2006; Teubner and Flath 2019). For instance, users may learn that the amount or sensitivity of information required to access the platform is too high and decide that the expected platform benefits are not high enough to outweigh expected risks associated with sharing such information. It is no coincidence that sharing economy platforms primarily focus on explaining benefits to potential users, rather than discussing various risks associated with the required information exchanges. For example, at the recruiting stage, Uber focuses on showing potential drivers how they can increase their earnings by subscribing and participating in the platform, rather than explaining potential risks associated with mandatory and continuous geolocation data disclosure while on the job.

Figure 4.2 presents the privacy calculus and the intention to access the sharing economy platform. In the second stage, platform users assess benefits and risks during the use of the sharing economy platform. While platform users could only rely on their expectations about perceived benefits and risks associated with engaging with the sharing economy platform in the first stage, now they can evaluate their actual experience with the platform. Based on that evaluation, they decide whether perceived risks from the completed and ongoing information disclosures outweigh the perceived benefits associated with using the platform. If so, the users might decide to decrease their engagement or even to stop interacting with the platform (Dinev and Hart 2006; Trepte et al. 2017). Consequently, sharing economy platforms often emphasize and communicate to current users how they may gain more benefits by increasing their platform engagement, which is often accompanied by

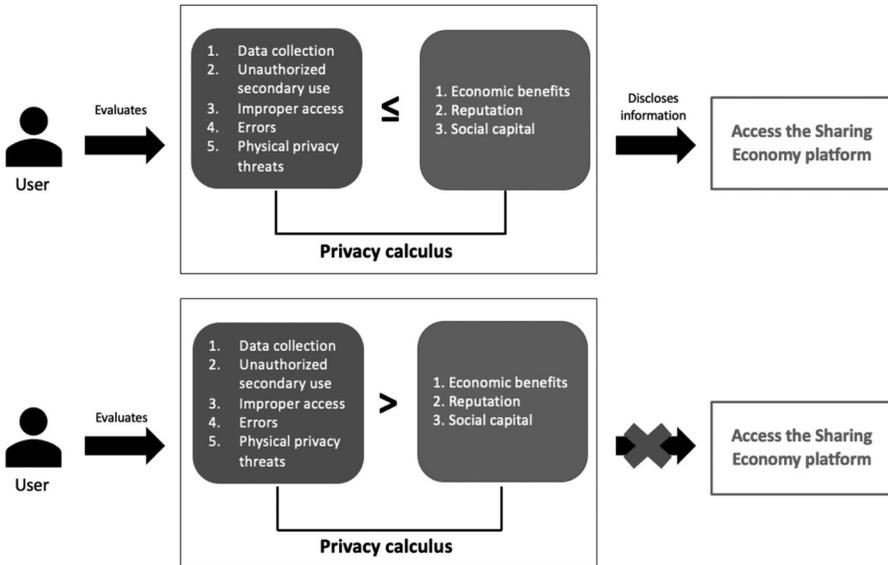


FIGURE 4.2 Privacy calculus before accessing the sharing economy platform.

additional information disclosures by the users. Such a strategy often features new, higher tiers to entice the users to follow that path. For example, Airbnb advertises an opportunity for hosts to receive the *superhost* title when they meet four requirements: Host at least ten stays a year, have an average rating at or above 4.8, maintain a 90 percent response rate and not allow their cancellation rate to exceed 1 percent (Airbnb, 2019).

Privacy calculus in both stages depends on trust, as it is an important internal factor behind overcoming uncertainty and increasing the likelihood of participating in the sharing economy (Ranzini et al, 2017). Moorman et al. (1993, p. 82) define trust as “a willingness to rely on an exchange partner in whom one has confidence.” Trust includes three dimensions: Competence, reliability, and safety (Dinev and Hart 2006). Competence represents “the ability of the trustee to have the necessary expertise to perform the behavior expected by the trustor” (Dinev and Hart 2006, p. 66). Reliability reflects a trustor’s perception that the trustee is honest and sincere, and safety refers to the trustors’ belief that the trustee won’t disclose their personal information to a third party (Dinev and Hart 2006).

In the context of triadic relationships underlying sharing economy platforms, it is important to distinguish between trust beliefs between platform users (providers and consumers), and trust toward the intermediating platform. Trust between platform users within a community is essential in a context where members share personal information with other platform users (Lutz et al. 2018). For instance, Uber explains on its platform how respect between drivers and riders is essential to build trustworthy social dynamics and provides practical tips. Trust toward the intermediating

platform is also important. Platform users need to be sure that the intermediating platform will protect their data (Lutz et al. 2018; Ranzini et al. 2017) and will not disclose it to external parties without their explicit permission (Kim et al. 2018). Towards this goal, intermediating platforms may implement trust-building cues and submit to independent external data audits to signal to their users that their data is protected and will not get misused.

Finally, elements of individual's privacy calculus may get influenced by one's culture (Trepte et al. 2017). Privacy is a right that is shared all over the world but that is perceived differently depending on the culture (Altman 1977; Trepte et al. 2017). In their study, Trepte et al. (2017) show how cultural dimensions influence one's avoidance of privacy risks. Individuals from a collective culture appear to give more importance to privacy risks and tend to avoid them, compared to individuals from individualist cultures. In addition, cultures presenting higher uncertainty avoidance (such as in Germany or the Netherlands) tend to avoid privacy risks.

4.4 ROLES OF INFORMATION TRANSPARENCY AND PRIVACY LITERACY

While the framework we have outlined in this chapter describes models of both possible and acceptable information flows, many researchers and policymakers have been questioning the assumptions underlying these models: Information transparency (ensuring that all sharing economy participants can observe all possible information flows) and privacy literacy (ensuring that platforms users are able to make informed trade-offs inherent in operating the privacy calculus that determines all acceptable information flows).

Although the concept of information transparency has been studied in the general context of information privacy, the role of transparency in the sharing economy has been relatively understudied. Information transparency refers to "the extent to which an online firm provides features that allow consumers to access the data collected about them and informs them about how and for what purposes the acquired information is used" (Karwatzki et al. 2017, p. 372). Amidst growing privacy concerns, governments enact policies to protect online users' data. For instance, the European General Data Protection Regulation (GDPR) aims at delineating data protection for European individuals. It defines rules about the type of data companies can process, the time data can be stored and the way to communicate data collection and use to individuals (Kumar, 2018). This regulation renders data collection more difficult for online platforms and may have stronger overall impact on the sharing economy platforms that are more dependent on collecting personally identifiable information. For example, the more information Airbnb and Uber obtain about their users, the more efficient the matching is between hosts and guests, or drivers and riders (Teubner and Flath 2019).

Although prior research has shown how higher information transparency may reduce perceived consumer vulnerability in e-commerce and advertising contexts

(Aguirre et al. 2015; Martin et al. 2017), further research is needed to understand potential positive and negative impacts of information transparency on different types of sharing economy platform users. On the one hand, the presence of information transparency cues may provide platforms users with more control about the way their data are collected and used. However, higher platform transparency may also potentially negatively bias the individual private calculus outcomes, and this effect is likely to be moderated by privacy literacy.

Trepte et al. (2015, p. 339) define online privacy literacy as “a combination of factual or declarative (‘knowing that’) and procedural (‘knowing how’) knowledge about online privacy.” In terms of declarative knowledge, online privacy literacy refers to the users’ knowledge about technical aspects of online data protection, related laws and directives, as well as institutional practices. In terms of procedural knowledge, online privacy literacy refers to the users’ ability to apply strategies for individual privacy regulation and data protection. It helps empower individuals engaging in practices that may affect their online privacy (Trepte et al. 2015). Prior research has shown the importance of online privacy literacy as a mediator to spending more time on social network sites (Bartsch and Dienlin 2016). However, since knowledge is an important dimension of perceived control, consumers who are high in online privacy literacy also have a higher willingness to control their online privacy and lower desire to disclose information (Awad and Krishnan 2006). From this perspective, educating and empowering users of sharing economy platforms to raise their privacy literacy may also lead to a higher sense of control of the way their data are collected and used, but, at the same time, could also reduce their willingness to disclose personal information on these platforms.

Finally, we encourage future research to examine both prevalence and impact of dark patterns in the context of sharing economy. In the online context, dark patterns are defined as “interface design choices that benefit an online service by coercing, steering, or deceiving users into making decisions that, if fully informed and capable of selecting alternatives, they might not make” (Mathur et al. 2019). Prior studies have documented how dark patterns may lead e-commerce consumers and mobile app users to share personal information when they ordinarily would not and described the mechanisms through which such patterns may influence user actions and perceptions (e.g., Hartzog 2018). It is important to understand how the potential presence of such dark patterns on sharing economy platforms may affect accepted information flows.

Overall, despite this high complexity and variety of factors underlying privacy considerations, we expect that future research bridging the disciplinary silos studying different aspects of privacy and sharing will deepen our understanding of how sharing economy platforms could optimally balance operational efficiencies against privacy concerns and rights of their users. We hope the framework detailing both possible and accepted information flows and related classifications we have introduced in this chapter would be helpful in these future endeavors.

REFERENCES

- Aguirre, E., Mahr, D., Grewal, D., de Ruyter, K., and Wetzels, M. (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. doi:<http://dx.doi.org/10.1016/j.jretai.2014.09.005>
- Airbnb. (2019). How to Become a Superhost. www.airbnb.com/help/article/829/how-do-i-become-a-superhost
- Altman, I. (1977). Privacy Regulation: Culturally Universal or Culturally Specific? *Journal of Social Issues*, 33(3), 66–84.
- Awad, N. F. and Krishnan, M. S. (2006). The Personalization Privacy Paradox: An Empirical Evaluation of Information Transparency and the Willingness to Be Profiled Online for Personalization. *MIS Quarterly*, 30(1), 13–28. doi: www.jstor.org/stable/25148715
- Bart, Y., Shankar, V., Sultan, F., and Urban, G. L. (2005). Are The Drivers and Role of Online Trust the Same for All Web Sites and Consumers? A Large-Scale Exploratory Empirical Study. *Journal of Marketing*, 69(4), 133–152. doi:<https://doi.org/10.1509/jmkg.2005.69.4.133>
- Bartsch, M. and Dienlin, T. (2016). Control Your Facebook: An Analysis of Online Privacy Literacy. *Computers in Human Behavior*, 56(March), 147–154. doi:<https://doi.org/10.1016/j.chb.2015.11.022>
- Belk, R. (2014). You Are What You Can Access: Sharing and Collaborative Consumption Online. *Journal of Business Research*, 67(8), 1595–1600. doi: <https://doi.org/10.1016/j.jbusres.2013.10.001>
- Bleier, A. and Eisenbeiss, M. (2015). Personalized Online Advertising Effectiveness: The Interplay of What, When, and Where. *Marketing Science*, 34(5), 669–688. doi:<https://doi.org/10.1287/mksc.2015.0930>
- Bucher, E., Fieseler, C., and Lutz, C. (2016). What's Mine Is Yours (for a Nominal Fee) – Exploring the Spectrum of Utilitarian to Altruistic Motives for Internet-Mediated Sharing. *Computers in Human Behavior*, 62(September), 316–326. doi: <https://doi.org/10.1016/j.chb.2016.04.002>
- Centre for International Governance Innovation, and IPSOS. (2018). Data Privacy: New Global Survey Reveals Growing Internet Anxiety. <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=1719>
- Cespedes, F. V. and Smith, H. J. (1993). Database Marketing: New Rules for Policy and Practice. *MIT Sloan Management Review*, 34(4), 7–22.
- Chellappa, R. K. and Sin, R. G. (2005). Personalization Versus Privacy: An Empirical Examination of the Online Consumer's Dilemma. *Information Technology and Management*, 6(2–3), 181–202. doi:<https://doi.org/10.1007/s10799-005-5879-y>
- Dienlin, T. and Metzger, M. J. (2016). An Extended Privacy Calculus Model for SNSs: Analyzing Self-Disclosure and Self-Withdrawal in a Representative US Sample. *Journal of Computer-Mediated Communication*, 21(5), 368–383. doi:<https://doi.org/10.1111/jcc4.12163>
- Dinev, T. and Hart, P. (2006). An Extended Privacy Calculus Model for e-Commerce Transactions. *Information Systems Research*, 17(1), 61–80. doi:<https://pubsonline.informs.org/doi/abs/10.1287/isre.1060.0080>
- Eckhardt, G. M., Houston, M. B., Jiang, B., Lambertson, C., Rindfleisch, A., and Zervas, G. (2019). Marketing in the Sharing Economy. *Journal of Marketing*, 83(5), 5–27. doi:10.1177/0022242919861929
- Fay, S., Mitra, D., and Wang, Q. (2009). Ask or Infer? Strategic Implications of Alternative Learning Approaches in Customization. *International Journal of Research in Marketing*, 26(2), 136–152. doi:<https://doi.org/10.1016/j.ijresmar.2008.12.003>

- Hamari, J., Sjöklint, M., and Ukkonen, A. (2016). The Sharing Economy: Why People Participate in Collaborative Consumption. *Journal of the Association for Information Science and Technology*, 67(9), 2047–2059. doi: <https://doi.org/10.1002/asi.23552>
- Hartzog, W. (2018). *Privacy's Blueprint: The Battle to Control the Design of New Technologies*. Cambridge, MA: Harvard University Press.
- Hong, W. and Thong, J. Y. (2013). Internet Privacy Concerns: An Integrated Conceptualization and Four Empirical Studies. *MIS Quarterly*, 37(1), 275–298. doi: www.jstor.org/stable/43825946
- Karwatzki, S., Dytynko, O., Trenz, M., and Veit, D. (2017). Beyond the Personalization–Privacy Paradox: Privacy Valuation, Transparency Features, and Service Personalization. *Journal of Management Information Systems*, 34(2), 369–400. doi: <https://doi.org/10.1080/07421222.2017.1334467>
- Kim, T., Barasz, K., and John, L. K. (2018). Why Am I Seeing This Ad? The Effect of Ad Transparency on Ad Effectiveness. *Journal of Consumer Research*, 45(5), 906–932. doi: <https://doi.org/10.1093/jcr/ucy039>
- Kumar, V. (2018). Transformative Marketing: The Next 20 Years. *Journal of Marketing*, 82(4), 1–12. doi: <https://doi.org/10.1509/jm.82.4.1>
- Lemon, K. N. and Verhoef, P. C. (2016). Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing*, 80(6), 69–96. doi: [10.1509/jm.15.0420](https://doi.org/10.1509/jm.15.0420)
- Lutz, C., Hoffmann, C. P., Bucher, E., and Fieseler, C. (2018). The Role of Privacy Concerns in the Sharing Economy. *Information, Communication and Society*, 21(10), 1472–1492. doi: <https://doi.org/10.1080/1369118X.2017.1339726>
- Lutz, C. and Newlands, G. (2018). Consumer Segmentation Within the Sharing Economy: The Case of Airbnb. *Journal of Business Research*, 88, 187–196. doi: <https://doi.org/10.1016/j.jbusres.2018.03.019>
- Malhotra, N. K., Kim, S. S., and Agarwal, J. (2004). Internet Users' Information Privacy Concerns (IUIPC): The Construct, the Scale, and a Causal Model. *Information Systems Research*, 15(4), 336–355. doi: <https://doi.org/10.1287/isre.1040.0032>
- Martin, K. D., Borah, A., and Palmatier, R. W. (2017). Data Privacy: Effects on Customer and Firm Performance. *Journal of Marketing*, 81(1), 36–58. doi: <https://doi.org/10.1509/jm.15.0497>
- Mathur, A., Acar, G., Friedman, M. J., Lucherini, E., Mayer, J., Chetty, M., and Narayanan, A. (2019). Dark patterns at scale: Findings from a crawl of 11K shopping websites. Proceedings of the ACM on Human-Computer Interaction, 3(Computer-Supported Cooperative Work), 1–32.
- Moorman, C., Deshpande, R., and Zaltman, G. (1993). Factors Affecting Trust in Market Research Relationships. *Journal of Marketing*, 57(1), 81–101. doi: <https://doi.org/10.1177/002224299305700106>
- Park, J. H., Gu, B., Leung, A. C. M., and Konana, P. (2014). An Investigation of Information Sharing and Seeking Behaviors in Online Investment Communities. *Computers in Human Behavior*, 31(February), 1–12. doi: <https://doi.org/10.1016/j.chb.2013.10.002>
- Ranzini, G., Etter, M., Lutz, Ch., and Vermeulen, I. (2017). Privacy in the Sharing Economy (April 30, 2017). <https://ssrn.com/abstract=2960942> or <http://dx.doi.org/10.2139/ssrn.2960942>
- Satariano, A. and Isaac, M. (2018) Facebook Used People's Data to Favor Certain Partners and Punish Rivals, Documents Show. *The New York Times*, December 5.
- Smith, H. J., Milberg, S. J., and Burke, S. J. (1996). Information Privacy: Measuring Individuals' Concerns about Organizational Practices. *MIS Quarterly*, 20(2), 167–196. doi: www.jstor.org/stable/249477
- Teubner, T. and Flath, C. M. (2019). Privacy in the Sharing Economy. *Journal of the Association for Information Systems*, 20(3), 213–242. doi: <https://doi.org/10.17705/1jais.00534>

- Thelen, K. (2018). Regulating Uber: The Politics of the Platform Economy in Europe and the United States. *Perspectives on Politics*, 16(4), 938–953. doi:<https://doi.org/10.1017/S1537592718001081>
- Trepte, S., Reinecke, L., Ellison, N. B., Quiring, O., Yao, M. Z., and Ziegele, M. (2017). A Cross-Cultural Perspective on the Privacy Calculus. *Social Media+ Society*, 3(1), 1–13. doi:<https://doi.org/10.1177/2056305116688035>
- Trepte, S., Teutsch, D., Masur, P. K., Eicher, C., Fischer, M., Hennhofer, A., and Lind, F. (2015). Do People Know About Privacy and Data Protection Strategies? Towards the “Online Privacy Literacy Scale” (OPLIS). In: S. Gutwirth, R. Leenes, and P. de Hert (Eds.) *Reforming European Data Protection Law. Law, Governance and Technology Series* (pp. 333–365). Dordrecht: Springer.
- Wasko, M. M., and Faraj, S. (2005). Why Should I Share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice. *MIS Quarterly*, 29(1), 35–57.
- Yates, J. F. and Stone, E. R. (1992). Risk appraisal. In J. F. Yates (Ed.), *Wiley Series in Human Performance and Cognition. Risk-Taking Behavior* (pp. 49–85). Oxford: John Wiley.& Sons.