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EFFECTS OF BRAND ATTACHMENT ON CONSUMER INTENTION TO USE COMMERCIAL SHARING SYSTEMS: IMPLICATIONS FOR FASHION INDUSTRY

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PhD

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2019

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Effects of Brand Attachment on Consumer Intention to Use Commercial Sharing Systems: Implications for Fashion Industry

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A thesis submitted in partial fulfilment of the requirements

for the degree of Doctor of Philosophy

March 2019

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Abstract

Collaborative consumption (CC) has emerged as an innovative business model in the recent decades, providing consumers with temporary access to a product and reshaping the way of consumption. Commercial sharing systems (CSSs), such as car-sharing (e.g., Zipcar), accommodation-sharing (e.g., Airbnb) and fashion-sharing (e.g., Renttherunway) systems, are typical models of CC.

As the commercial sharing business starts to thrive, many CSSs choose to cooperate with famous brands to attract consumers, such as the cooperation between the car-sharing service provider Car2go and the brand Mercedes-Benz. However, this strategy may not be effective. As prior research on the extended self suggests, if consumers have strong attachment to the brand (i.e., have incorporated the brand as a part of the extended self), they would prefer ownership of the brand's product rather than sharing it with strangers. However, no study so far has empirically examined the effect of brand attachment on consumers' intention to use the sharing service. In addition, previous studies did not advise any strategy to mitigate the negative effect of brand attachment. To shed light on these issues, this study integrated theories on extended self, face consciousness, and psychological ownership to explain how brand attachment affects the CSS usage and how the effect of brand attachment on the CSS usage can be altered, which is essential for the success of CSSs.

Based on the intensive review of the relevant literature, four hypotheses were proposed. The study posited that brand attachment could negatively influence consumers' intention to use the sharing system to rent products of their attached brands (i.e., sharing likelihood); besides, three moderators could alter this relationship, namely face consciousness, brand prestige, and psychological ownership. Specifically, the effect of brand attachment on sharing likelihood could be mitigated by consumers' desire to gain face and psychological ownership, and the high brand prestige level could strengthen the moderating effect of face consciousness.

The thesis conducted three empirical studies to test the hypotheses. In Study 1, the main effect of brand attachment on sharing likelihood were examined via online surveys. A preliminary interview was conducted for the selection of product categories and the design of research scenarios. Based on the interview results, the fashion product-sharing and the car-sharing contexts were chosen in which interviewees considered product brand to be important when using the CSS. In Study 1a (fashion clothes-sharing) and Study 1b (car-sharing), 279 and 277 responses of Chinese consumers were analyzed, respectively. The results supported that brand attachment had a significant negative effect on consumer sharing likelihood.

In Study 2, the moderating roles of face consciousness and brand prestige were tested. Study 2a used the fashion bag-sharing context. An online experiment was conducted with participants from the two biggest cities (i.e., Beijing and Shanghai) of mainland China, and 541 eligible responses were analyzed. Results showed that face consciousness mitigated the negative effect of brand attachment on sharing likelihood, but high brand prestige did not strengthen this moderating effect. To enhance robustness of the results, Study 2b tested these findings in the car-sharing context with 551 eligible responses. The results of Study 2b replicated those of Study 2a.

In Study 3, the moderating role of psychological ownership was examined in the fashion bag-sharing context. Study 3 employed a 2 (brand prestige: high/low) × 2 (psychological ownership: high/low) between-subjects experimental design. The participants were recruited from Beijing and Shanghai and 482 usable responses were analyzed. The results confirmed that high psychological ownership level attenuated the negative effect of brand attachment on sharing likelihood.

The contribution of this study is threefold. First, the study successfully applied the concept of extended self to the brand level to explain consumers' CSS usage. Second, by testing the moderating effect of face consciousness, the study adds to the literature that the social factor also plays an important role in determining CSS usage. Third, the study reveals how psychological ownership could mitigate the negative effect of brand attachment on sharing

likelihood in the CSS context. With these findings, CSS companies can better choose the appropriate products and brands to provide, target the potential customer segments, and design the promotion strategies. Moreover, it may further help facilitate the worldwide transformation to the CC model, and hopefully lead the world to a collaborative, efficient and sustainable future.

Acknowledgement

First of all, I would like to give my deep appreciation to my supervisors, Dr. Sojin Jung and Prof. Tsan-Ming Choi, for all their support, advice, and understanding over the years of my study. Time really flies! I still remember, from the beginning of my doctoral study, Dr. Jung devoted her time and effort to reviewing my works and provided valuable comments on the development of my research. Prof. Choi shared his experience and encouraged me with his insights. He has motivated me to think more deeply about the problems I faced in my research and find ways to resolve them. They have brought my thesis to completion. I have learned from them the vision and passion to be an academician.

I would like to thank the Board of Examiners of my oral examination, the chair, Dr. Rachel Wai-Yee Yee, and two external examiners, Dr. Maggie Chuoyan Dong (City University of Hong Kong), and Prof. Maria Hae Jung Kim (University of North Texas). Dr. Rachel Yee participated in both my registration confirmation meeting and the final examination, and always encouraged and inspired me with her insightful advice. Prof. Maria Kim thoroughly reviewed my thesis, gave detailed comments, and challenged me to think deeply as a qualified researcher. Dr. Maggie Dong provided her suggestions to improve my work and additional tips for publication in high-ranking journals in marketing. I am very grateful for all their kind advice and comments.

I would also like to personally thank the team members of my research group, Ms. Yajun Cai, Dr. Hau-Ling Chan, Mr. Yue Chen, Dr. Shu Guo, Dr. Bin Shen, Ms. Xin Wen, and Ms. Yi-Ning Fung. There have been a lot of precious memories with them through the entire study period. They are far more than simply teammates but also genuine friends.

Finally, I give my sincere appreciation to my family—my parents and grandmother. Thank them for always understanding and supporting me with their endless love. They are my greatest blessing and strongest motivation. This thesis is dedicated to them.

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Chapter 1 Introduction

In recent years, the focus of marketing research has shifted from the “tangible” (i.e., the physical products) to the “intangible” (i.e., the experiential services) in the marketplace (Milanova & Maas, 2017; Mont, 2002), and thus “service-dominant logic” has been identified as marketing’s future orientation (Ballantyne & Varey, 2008). Along with this service-oriented trend, an increasingly popular consumption model called collaborative consumption (CC) has emerged, which provides consumers with temporary access to a product (Botsman & Rogers, 2010). There are many terms used to describe groups of related business and consumption practices in the literature, such as “consumer sharing” (Belk, 2010), “sharing economy” (Heinrichs, 2013; Puschmann & Alt, 2016), “the mesh” (Gansky, 2010), “access-based consumption” (Bardhi & Eckhardt, 2012), “product-service systems” (Mont, 2002), “peer-to-peer economy” (Weber, 2016), and “commercial sharing systems” (Lamberton & Rose, 2012). The CC business models, such as the car-sharing, house-sharing, and bike-sharing services have been expanding globally. For example, the car-sharing company Zipcar has branched out its service area from USA to the Europe and Canada; the famous house-sharing platforms, Airbnb now provides services in about 65,000 cities across 191 countries (Dickinson, 2018); in China, several bike-sharing systems such as Ofo and Mobike provide convenient short-distance transport in cities. Moreover, over the past few years, a few CC online platforms have been introduced into the fashion and luxury sector as well (e.g., Bagborroworsteal and Renttherunway). In the Chinese market, fashion clothes and luxury bag-renting platforms such as Yi23 and Youmiao have also emerged.

The growth of CC models brings great business opportunities. For instance, Airbnb raised USD 850 million with its new financial plan in July 2016 (O'Brien, 2016). Meanwhile, Airbnb was valued at around USD 30

billion, an increase of 20% from 2015 (O'Brien, 2016), and its revenue soared 89 percent relative to the same time in 2015, estimated near USD 1.7 billion (Love, 2016). In the Chinese markets, the transaction volume of CC business topped USD 500 billion in 2016, an increase of 103% as compared to 2015 (Zhong & Zheng, 2017). The Chinese company Didi Chuxing is now the largest ride-sharing company in the world, and in 2015 Didi passengers shared 1,143,000 rides per day on average (Pennington, 2017). The Chinese bike-sharing companies Mobike and Ofo together have over 6 million weekly users, and in some cities, they are the second or third most-used form of public transportation, which creates convenience for consumers while reducing carbon emission (Pennington, 2017). These facts evidence that CC can benefit both consumers and the environment.

With many sharing systems starting to flourish, commercial sharing companies are trying to attract consumers to participate in their sharing systems. Previous studies have found that the "economic aspects" of using commercial sharing systems (CSSs), such as convenience, cost saving, and resource availability are important to the sharing users (Baumeister, Scherer, & Wangenheim, 2015; Möhlmann, 2015; Tussyadiah, 2016). This can be well explained by the utility-based sharing model (e.g., Lamberton & Rose, 2012). However, unlike bike-sharing or other similar sharing markets where consumers seek functional products or services, fashion-sharing markets heavily rely on brands (Kumar & Steenkamp, 2013). Consumers would evaluate the fashion-sharing service primarily based on the brands it provides (Baumeister et al., 2015). This highlights the importance of introducing brand-related factors to reveal the behavioral mechanism behind CSS usage.

Nowadays, many CSSs are cooperating with famous incumbent brands to promote consumers' adoption. For example, the fashion-sharing service Bagborroworsteal's homepage once read "Borrow Louis Vuitton Handbags" with a large image of a Louis Vuitton handbag, which consumers could click

on to borrow a Louis Vuitton handbag. The similar cooperation can be found in car-sharing, such as the brand alliance between the car-sharing service Car2go and Mercedes-Benz. Although CSSs may reap a positive consumer attitude from providing prestigious brands (Baumeister et al., 2015), the literature suggests that this brand cooperation strategy may be a "double-edged sword" for the sharing system. Based on Belk's (1988, 2010) theory of extended self, possessions are part of our extended self, and individuals are less likely to share items they are highly attached to with strangers (Belk, 2010; Hellwig, Morhart, Girardin, & Hauser, 2015). If consumers have developed a strong attachment to an incumbent brand and view the brand as a part of their extended self, they would have preferred owning the branded product rather than sharing the product with others. The wrong choice of products and brands may easily lead to a sharing business failure. Thus, understanding the effect of brand attachment on consumers' intention to use the sharing service is essential for the success of the sharing services, yet few empirical studies have investigated this issue, indicating a research gap.

While brand attachment may impede consumers' sharing service usage, previous research provided limited insights into how its negative impact can be reduced. This study combined Chinese face (Jin & Kang, 2010; Kim & Nam, 1998; Wei & Jung, 2017; Zhang, Cao, & Grigoriou, 2011) and the extended self (Belk, 1988, 2010) concepts to explain how the brand attachment effect can be altered. The concept of face reflects an individual's public self-image in the Confucian culture (Brown & Levinson, 1987). Face-oriented consumers are highly concerned about their public social images (Jin & Kang, 2010; Kim & Nam, 1998; Wei & Jung, 2017; Zhang et al., 2011). They often seek to boost face via consumption of prestigious brands (Li, Zhang, & Sun, 2015; Liao & Wang, 2009; Sun, Chen, & Li, 2017; Zhang et al., 2011) and extremely care about the brand's symbolic meaning (Bao, Zhou, & Su, 2003; Sun et al., 2017). As the sharing system can provide consumers

with access to prestigious brands at a low price (Baumeister et al., 2015), face-oriented consumers may use it as a way of social image-building, thus brand attachment may less negatively influence their sharing service usage. In addition, the extant research showed that brand prestige may influence consumers' evaluation of the sharing service (Baumeister et al., 2015), providing prestigious brand may better serve face-oriented consumers. However, no study so far has investigated how brand attachment, face consciousness and brand prestige interact to determine consumers' sharing service usage, suggesting a research opportunity.

The extant literature also highlighted the importance of psychological ownership in facilitating CC usage (Demyttenaere, Dewit, & Jacoby, 2016). Psychological ownership is the individual's feeling of something is "mine", and individuals would include a target into the extended self by establishing psychological ownership of it (Belk, 1988, 2010). Consumers may evaluate the sharing service differently based on their psychological ownership level (Demyttenaere et al., 2016). In other words, when psychological ownership of the shared product is strong, consumers would treat the shared product as their own and tend to maintain the relationship with it (Belk, 2010; Demyttenaere et al., 2016), resultantly changing their preference for sharing service usage. Unfortunately, it has not been examined how psychological ownership may attenuate the negative effect of brand attachment in the CC context, making it difficult to apply relevant strategies into the practice. Thus, this study investigated the moderating role of psychological ownership in the relationship between brand attachment and sharing service usage, to provide both theoretical and practical implications.

Motivations and Objectives

Based on the analysis above, the current research was aimed at understanding the effect of brand attachment on consumers' intention to use the sharing

service, and the potential ways to mitigate its negative impact on sharing service usage. Specifically, several studies were designed to answer the following questions:

1. How does brand attachment affect consumers' likelihood of using a sharing system (i.e., sharing likelihood)?
2. How do face consciousness and brand prestige influence the relationship between brand attachment and sharing likelihood?
3. What role does psychological ownership play in the relationship between brand attachment and sharing likelihood?

Contributions

This study generated both academic and managerial implications. This study is one of the first attempts to investigate and empirically test the effect of brand attachment on consumers' intention to use the sharing system. Built on the theory of extended self, the study explains how consumers make the decision of using the sharing system from the brand perspective. Furthermore, it provides a comprehensive understanding of the brand attachment effect by testing a series of relevant moderators, namely face consciousness, brand prestige, and psychological ownership. Combing face theory and the extended self, the study adds to the literature that the social factor could be essential in determining sharing service usage. Besides, investigating the effect of psychological ownership may help scholars understand how consumers treat the shared product and form the preference for using the sharing services.

The findings of this study also benefit commercial sharing companies as well as the society. First, many sharing platforms, such as the fashion-item-renting platforms "Bagborroworsteal" and "Renttherunway," are providing rental services of products from various brands, and they often face the problems of selecting brands and products. The findings of this study would

help them design the appropriate product strategies to promote consumers' usage. Second, understanding the effect of face consciousness would be important when marketers try to communicate with Chinese consumers who are typically face-oriented (Jin & Kang, 2010; Kim & Nam, 1998; Wei & Jung, 2017; Zhang et al., 2011), assisting marketers to target this potential customer segment. Third, examining the effect of psychological ownership aids marketer to make the best of it to buffer the negative effect of brand attachment, formulating better promotion strategies. Last but not least, knowing how consumers make their decisions to use sharing systems can further help design the policies to facilitate the worldwide transformation to the CC model, and hopefully lead our world to a collaborative, efficient and sustainable future.

The organization of this thesis is as follows. Chapter 2 provides an in-depth literature review regarding the topic of CC, CSSs, brand attachment and the theory of extended self. In Chapter 3, a series of theoretical hypotheses will be developed based on literature review and the preliminary study results. The following chapters consist of three main studies. Chapter 4 will present and describe the methodology of Study 1 and its analysis results. And then Chapter 5 and Chapter 6 will report methodologies and results of Study 2 and Study 3 in detail, respectively. Finally, Chapter 7 summarizes findings of the three studies' results, gives a general discussion and provides managerial implications directions for future studies.

Chapter 2 Literature Review

2.1 Collaborative Consumption (CC)

2.1.1 Sharing

Before defining CC, this study first introduced an important relevant concept—sharing. Sharing is the most universal form of economic behavior (Price, 1975). It has a long history in human society but has not been well-studied as a kind of consumer behavior. Even today, when individuals tend to be more independent, sharing is becoming more popular and can never be called "merely a vestigial relic of times": just consider how much information and help we get from sharing via the Internet every day (Belk, 2010).

Benkler (2004) interprets sharing as "nonreciprocal pro-social behavior." Belk (2007) defines sharing as "the act and process of distributing what is ours to others for their use as well as the act and process of receiving something from others for our use" (p. 127). Belk himself commented that neither of these definitions is "sufficiently precise," but he also admits that further precision towards the definition of sharing is difficult (Belk, 2010). Thus, Belk (2010) uses another "prototype" approach in his study (e.g., see Rosch & Mervis, 1975). Instead of giving a precise definition, within this alternative approach, prototypes replace taxonomic definitions, and then it can be judged whether something belongs to sharing, gift-giving, or commodity exchange based on its resemblance to the prototype of each concept (i.e., sharing, gift giving, or commodity exchange). When judging which prototype the behavior belongs to, no particular characteristics are specified to determine similarity to a prototype. The resemblance is judged based on multiple characteristics (Belk, 2010).

In this way, Belk (2010) identifies prototypes for sharing, gift giving and

commodity exchange, which are summarized in Table 2 according to their respective characteristics. He suggests two key prototypes for sharing, i.e., mothering, and the pooling and allocation of resources within the family (Belk, 2007, 2010). The mother shares her body with the fetus, and after giving the birth, she gives her milk, care, and love to the infant. The mother gives her care freely, which is normal and natural. Besides, within the family, shared things are joint possessions. Sharing is more likely to be a communal act which links an individual to other people.

Table 1. Prototypes for sharing, gift giving and commodity exchange and their characteristics

	Sharing	Gift giving	Commodity exchange
Prototype	1. Mothering 2. Pooling and allocation of household resources	The perfect gift	Buying bread at a store for money
Characteristics	Nonreciprocal Social links to others De facto or de jure shared ownership or usufruct rights Money irrelevant Singular objects Networked inclusion Inalienable Personal Dependent Sharing context Social reproduction Nonceremonial Love, caring	Nonreciprocal in appearance; reciprocal exchange in practice Nonobligatory in appearance; obligatory in practice Transfer of ownership Thought that counts Sacrifice; luxury To please recipient Nonfungible Singularizes objects Wrappings; ceremony Lingering imbalance Networked inclusion Inalienable Personal; dependent Gift giving/alliance-formation context Qualitative relations between people Thank yous	Reciprocal Balanced exchange No lingering obligations Transfer of ownership Monetary Nonsingular Partible commodities Calculation Inspection Alienable Impersonal Independent Trade/barter context Quantitative relations between objects

Source: Belk, 2010.

As for commodity exchange, the prototype is buying bread from a store, which is an unconditional reciprocal act (Belk, 2010). The nature of commodity exchange is about the reproduction of rights to objects (i.e., ownership), rather than the reproduction of relationships between people. Therefore, ideally there is no tie formed to bind individuals to one another in commodity exchange. The prototype of gift-giving is the notion of the pure or perfect gift (Carrier, 1995; Derrida, 1992). The perfect gift is an ideal model of gifting, which is immaterial (i.e., the thought counts more than the material manifestation), priceless (i.e., precludes monetary considerations of commodity exchange), and imposes no obligation of a return gift. Although these ideals are seldom fulfilled, they have salient influence on gift selection and exchange rituals (Belk, 2010). For example, a gift-giver would carefully pay attention to selecting a gift, and remove any evidence of its marketplace origins which make it related to commodity exchange, e.g., the price tag; after that, the gift itself is covered by gift wrapping and is delivered with a particular befitting ceremony—through these rituals, commodities are transformed into gifts. These rituals help distinguish gift-giving from sharing.

Although the distinctions among commodity exchange in the marketplace, gift giving, and sharing appear to be quite explicit, ambiguities still arise in some cases and the judgment of prototype to a given transaction is sometimes very fuzzy (Belk, 2010). An example is that a gift can be too far from the characteristics of the perfect gift, and it is possible that the gift will not be perceived as a gift by the recipient at all. Also, in common practice, we restrict our gift-giving to those who may give us gifts as well. These cases blur the lines between commodity exchange and gift-giving. On the other hand, there is a potential overlap between gift-giving and sharing since both acts bind individuals together (e.g., a person in debt may not consider selling

a gift from a beloved relative or friend, even it is highly valuable in price, reflecting a relationship between the two individuals). However, sharing expects no return gift from the recipient, whereas, as mentioned above, it is common practice that we expect a return gift in gift-giving, which shows reciprocity. It should also be noted that the return gift may not be equivalent in terms of monetary value, which distinguishes gift-giving from commodity exchange where the exchange should be balanced.

2.1.2 Conceptualizing Collaborative Consumption (CC)

Although the term "sharing" (e.g., sharing economy) is often used as a synonym of CC (Puschmann & Alt, 2016), it is necessary to distinguish between them. Felson and Speath (1978) first defined acts of CC as "those events in which one or more persons consume economic goods or services in the process of engaging in joint activities with one or more others" (p. 614). They argue that consumption of the same goods or services can take place at different times and in different places depending on products. For example, consumers should be at the same place and at the same time to take part in ride-sharing, but they can be at different places and at different times to share cell-phone minutes. They also note variations in degrees of collaboration in consumption (Felson & Speath, 1978). For example, car-ride sharers have to be highly cooperative, such as agreeing on a meeting time and place beforehand, and negotiating and planning the route, while bike-sharers need to cooperate much less because they ride a bike individually and are responsible only for the time they are using the bike.

However, Felson and Speath's (1978) definition of CC seems unclear and not specific enough in that it includes almost everything that is done in collaboration (Belk, 2014a). Belk (2014a) criticizes that the definition by Felson and Speath (1978) "is too broad and is not sufficiently focused on the acquisition and distribution of the resource" (p. 1597). According to Belk

(2014a), the key should be how the access to products or services is acquired and distributed. For example, if a group of people drink beer together and each one pays for their own beers, this consumption behavior belongs to marketplace exchange. By contrast, suppose that there are only two persons at the table. If they neither want an entire pitcher of beer, nor want to pay the high price of buying beer by the glass, they might ask someone else at another table to split a pitcher of beer with them, pay half the cost and receive half the beer. Belk (2014a) regarded the latter case as CC, because both the acquisition and distribution of the product (i.e., beer) are jointly arranged by the consumers, while Felson and Speath's (1978) definition includes both marketplace exchange and CC.

Botsman and Rogers (2010) explain that CC includes traditional sharing, bartering, lending, trading, renting, gifting, and swapping. However, Belk (2014a) criticized the definition by Botsman and Rogers (2010) as being "too broad and mixes marketplace exchange, gift giving, and sharing" (p. 1597). Thus, Belk (2014a) defined CC as "people coordinating the acquisition and distribution of a resource for a fee or other compensation" (p. 1597). Other compensation involves giving and receiving non-monetary compensation, thus Belk's (2014a) definition encompasses bartering, trading, and swapping, but excludes sharing without any fee or compensation and gift-giving activities (e.g., sharing a pitcher of beer with your friends without asking them for any payment).

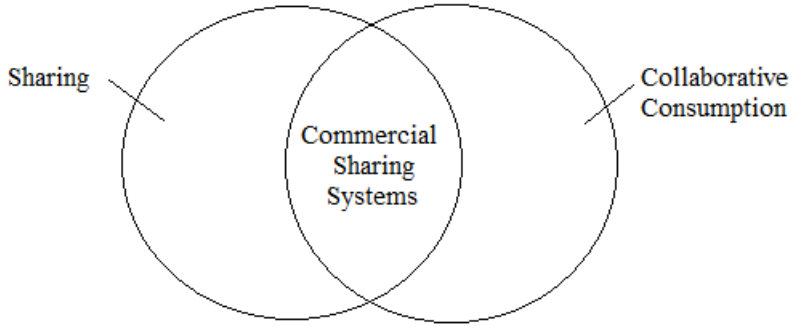
Following Belk's (2014a) definition, CC is not "sharing for free." Although many companies in "sharing economy" use the term "sharing" in their name, such as "ride-sharing," "car-sharing," "bike-sharing," "house-sharing", more accurately, they are providing short-term renting services, which requires a fee or other compensation. Therefore, transactions within these commercial companies are also called "pseudo-sharing" by Belk (2014b), and the term "CC" is thus preferable to the misleading word "sharing"

(Aster & Pundit, 2012; Eckhardt & Bardhi, 2015). This study adopts the definition of CC by Belk (2014a), and therefore uses the term CC throughout.

2.1.3 Commercial Sharing Systems (CSSs)

After conceptualizing sharing and CC, CSSs can be clearly defined. The relationship between sharing and CC is depicted below in Figure 1. As shown in Figure 1, the overlap between sharing and CC represents CSSs. CSSs are defined as "marketer-managed systems that provide customers with the opportunity to enjoy product benefits without ownership" (Lamberton & Rose, 2012, p. 109), which are based on "sharing for a fee or other compensation". Thus, in this study, the term "sharing" in CSSs refers to "sharing for a fee or other compensation" but not "sharing for free".

Figure 1. Relationship between sharing and CC



It is worth noting that not all sharing systems are commercially oriented. The typology of sharing systems can be found in Table 2, which is based on their levels of rivalry and exclusivity (Lambertone & Rose, 2012). According to Lamberton & Rose (2012), most CSSs belong to Quadrants 3 and 4 in Table 2, which show higher levels of rivalry for the shared resource. Some typical CSSs are the bike-sharing companies Mobike and Ofo, the car-sharing company Zipcar, and the fashion-sharing companies Bagborroworsteal and Renttherunway. Several features of CSSs can be summarized as follows. First,

in a CSS, the resource is shared for a fee or other compensation, as CSSs are cases of CC. Second, the resource shared in CSSs should be rare (e.g., a high-priced product, a product of limited edition). If the resource can be easily obtained by consumers, the need to use a high-rivalry CSS will dramatically decrease. Third, the utility model of CSSs involves not only cost-benefit from a sharing option, but also consumers' perceptions of other consumers' usage (Coase, 1960; Lamberton & Rose, 2012). For example, consumers of Mobike, one of the commercial bike-sharing systems in China, usually encounter difficulties in locating a bike when they need one. This study would focus on CSSs in Quadrant 3 and 4.

Table 2. Typology of sharing systems

	Lower Exclusivity	Higher Exclusivity
Lower Rivalry	Quadrant 1: Public Goods Sharing Examples: Public parks World Wide Web Open-source software	Quadrant 2: Access/Club Goods Sharing Examples: Private clubs or restaurants Book clubs
Higher Rivalry	Quadrant 3: Open Commercial Goods Sharing Examples: Bike-sharing Car-sharing	Quadrant 4: Closed Commercial Goods Sharing Examples: Cell phone sharing plans Frequent-flyer-mile sharing plans

Source: Lamberton & Rose, 2012.

2.1.4 Drivers and Inhibitors of Using the CC Model

Drivers

Many studies discuss what motivates CC, as well as how this model can satisfy consumers' value expectations. Several empirical studies (Bucher, Fieseler, & Lutz 2016; Hamari, Sjöklint, & Ukkonen, 2016; Johnson, Mun,

& Chae, 2016; Roos & Hahn, 2017) successfully apply TRA/TPB (theory of reasoned action/theory of planned behavior; Ajzen, 1991, Ajzen & Fishbein, 1969) to explain consumers' behavioral intention towards CC. The TRA assumes that behavioral intention towards an objective is formed by attitudes towards that objective and subjective norms regarding the behavior. As an extension of TRA, TPB adds perceived behavioral control (i.e., an individual's perception of resources and opportunities available to achieve the behavior; Ajzen, 1991) to predict behavioral intention. Some studies found that consumers' satisfaction towards the use of CC is a significant determinant (Möhlmann, 2015; Tussyadiah, 2016). It was also found that economic benefits such as saving money (Bucher et al., 2016; Hamari et al., 2016; Möhlmann, 2015; Tussyadiah, 2016), enjoyment (Hamari et al., 2016; Tussyadiah, 2016), social benefit such as meeting people and helping others (Bucher et al., 2016; Tussyadiah, 2016), subjective norms (Johnson et al., 2016; Roos & Hahn, 2017), and altruistic value (Roos & Hahn, 2017) were significant antecedents of CC usage.

It is interesting to note that environmental concerns are not always a factor in choosing CC. For example, Möhlmann (2015) found that the perceived environmental impact of CC did not influence consumers' satisfaction and likelihood of choosing CC options. Hamari et al. (2016) found an indirect effect of the sustainability-related belief in CC (i.e., CC benefits the environment) on CC intentions. In fact, Tussyadiah's (2016) study found a negative effect of sustainability-related beliefs on CC satisfaction, as well as an insignificant effect of these beliefs on intentions toward CC. Based on these inconsistent findings, although CC is deemed to be a sustainable model of consumption (Heinrichs, 2013), this study can conclude that consumers are not always driven by environmental concerns in using CC. Rather, a number of factors can lead consumers to engage in CC.

Inhibitors

Previous research found a number of barriers for consumers in adopting the CC model. First of all, consumers' perceptions of other consumers' usage hindered them from choosing a sharing option (Coase, 1960; Lamberton & Rose, 2012). In a CSS where the rivalry is higher, consumers perceive higher risk that they may not get access to what they need in time. For example, if a student relies on a shared bike to get to campus, he/she may find it difficult to locate one in the morning because many students would be riding bikes to campus at that time. Thus, Lamberton and Rose (2012) came up with an analytic framework which incorporates perceived risk of scarcity (i.e., "the likelihood that a product or product-related resource will be unavailable when a consumer desires access," p. 110) into the utility model of CC. They found that perceived risk of scarcity indeed decreases consumers' sharing propensity.

Perceived transaction cost was also identified as a barrier to CC. However, Tsui (2016) argued that information technology enables CC platforms to reduce transaction costs (e.g., search costs and monitoring costs) which once impeded the feasibility of a CC systems. For example, in the ride-sharing industry, searching costs can be significantly decreased by using the convenient global positioning system (GPS) to locate cars and real-time pricing systems to balance supply and demand. Besides, the driver-rating system can reduce monitoring costs which are barriers to improving service quality. These technologies have made ride-sharing companies strong enough to compete with the traditional taxi industry. If consumers have difficulty in matching their demand with supply (e.g., can't locate the real-time car positions or have to worry about the service quality of car drivers), the resultant transaction costs will inhibit their use of services within the CC model (Lamberton & Rose, 2012).

2.2 The Extended Self

Since many CC activities, especially those within CSSs, require no ownership

for the shared products (Belk, 2014a), the relationship between consumers and possessions is essential for researchers to understand many phenomena in CC, including which products and with whom consumers would like to share (Hellwig et al., 2015). Therefore, Belk's theory of extended self (1988), which explains how consumers regard their possessions, was used to address these questions.

2.2.1 Possessions and Extended Self

Belk (1988) proposed the concept of "extended self" to explain the meanings consumers attach to their possessions. In his seminal work, Belk (1988) posited that, "knowingly or unknowingly, intentionally or unintentionally, we regard our possessions as part of ourselves" (p. 139). William James (1890) laid the foundation for modern conceptions of the self:

> "a man's Self is the sum total of all that he CAN call his not only his body and his psychic powers, but his clothes and his house, his wife and children, his ancestors and friends his reputation and works, his lands, and yacht and bank-account. All these things give him the same emotions. If they wax and prosper, he feels triumphant; if they dwindle and die away, he feels cast down,—not necessarily in the same degree for each thing, but in much the same way for all." (James, 1890, p. 291-292)

James' conception indicates that if our possessions are defined as what we call ours, we are the sum of our possessions, which underpins the premise of the theory of extended self (Belk, 1988). According to this theory, the "extended self" is defined as self-plus-possessions. Although at first glance, it seems as though the extended self is more related to external objects and personal possessions, it should not be limited to those things. In fact, the extended self also includes persons, places, group possessions, and even body

parts and vital organs (Belk, 1988).

McClelland (1951) suggested that external objects can be treated as part of the self when individuals are able to control them. The greater the control that individuals have over the object, the more closely attached to the self. Thus, control is an important determinant as to what extent an object can be integrated into the self. Based on this principle, McClelland hypothesizes a hierarchy of most to least closely self-allied object categories. The first (the most closely self-allied) should be me, my "free will," followed by my body and my conscience. The third level is my belongings, the fourth level is my friends, and the fifth level is strangers and the physical universe. From this hierarchy, it is found that lack of “free will” (i.e., my belongings) is ranked higher (i.e., more closely self-allied) than someone with “free will” (i.e., my friends), since the latter one is more difficult to control. Prelinger (1959) further tested the premise that possessions are viewed as parts of the self and the validity of McClelland's hypothesized hierarchy. As a result, body parts were most strongly linked to the self. Possessions and productions (e.g., watch, perspiration) and abstract ideas (e.g., the morals of society, the law) were found to be intermediate in linking to the self, while the distant physical environment (e.g., the adjoining room, the moon) had a lower level of linkage.

As shown above, items are linked to the self on different levels. Even in the realm of personal possessions, some are more central to one’s self-concept than others, and the levels differ based on individuals and contexts. However, Belk (1988) pointed out that there is another way that individuals arrange their self-concept according to a hierarchical structure, due to the fact that we exist not only as individuals but also as collectives. Through various objects of consumption, individuals define their family, group, subculture, nation, and human selves. Belk (1988) identifies four levels of self in his discussion, namely individual, family, community, and group. A major distinction between levels of self lies in the comparison between an individual self and a

collective self. For example, clothing, accent, jewelry and automobile can make an individual distinguishable from others, revealing "an individual sense of being" (Belk, 1988, p. 153). These things can also showcase group identity and foster a sense of belonging to that group. For example, a uniform formally reflects a group identity, and some "informal uniforms" may exist for social groups such as the fashion styles of punks and yuppies.

It is worth noting that a group symbol of identity need not be individually owned products—things such as landmarks (whether natural scenes or man-made buildings), media stars, and sport teams, can become the shared symbol of a group. Recognizing that a part of the extended self can be (or at least perceived to be) shared with others, extended self in the context of sharing is reviewed next.

2.2.2 Sharing and Extended Self

Sharing can take place outside of the sharer's immediate family. For example, it can often be observed that individuals share food with neighbors, relatives, and even strangers. Sharing, in this case, is not *sharing out* between givers and receivers but a *sharing in*, because it allows more people to enjoy the benefits of the shared resource (Widlok, 2004). Sharing out involves giving to someone who is beyond the boundaries separating the "self" and "other"—the receiver will not be integrated into one's self, similar to gift-giving and commodity exchange, which is identified as pseudo-sharing (i.e., sharing for a fee or other compensation; Belk, 2014a, 2014b). On the contrary, "sharing in" much more closely resembles the prototype of sharing within the family (i.e., the true sharing, sharing without fee or compensation, and with care and love; Belk, 2010, 2014a), so that the receiver of sharing in is included within the aggregate extended self (Belk, 2010). Those who are invited to share food with us are treated as our quasi-family members, which means that we extend ourselves through other people, just like individuals can extend themselves

through possessions (Belk, 1988).

The key difference between sharing in and sharing out is that the latter "expands the sphere of extended self by expanding the domain of common property" while the former one does not (Belk, 2010, p. 726). Sharing a car within a couple or family is generally considered as a case of sharing in, while sharing cars within a large commercial car-sharing organization (i.e., a CSS) is more likely to be a case of sharing out. The latter instance is also identified as a case of CC in this study. Sharing behavior in CSSs is more likely to be sharing out. With sharing out, sharers in CSSs are less likely to expand their extended self to other people within the same sharing system. That is, users in a CSS may not integrate others who are using the same product or service into their extended self, preserving a clear self/other boundary (Belk, 2010), just like doing commodity exchange in the marketplace.

2.3 Brand Attachment

Built on the theory of extended self, this study proposed that brand attachment would be an essential factor for understanding CSS usage. Consumers were found to integrate product brands into their extended selves (Fedorikhin, Park, & Thomson, 2008; Malär, Krohmer, Hoyer, & Nyffenegger, 2011; Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010; Thomson, MacInnis, & Park, 2005). Following Belk's (1988) extended self-concept, this study operationalized brand attachment as the extent to which consumers integrate a specific brand into their selves. Attachment is viewed as a relationship-based construct, which reflects the emotional bond connecting an individual with a specific target object (Bowlby, 1979; Fedorikhin et al., 2008; Peng, Chen, & Wen, 2014). Thus, brand attachment is emotion-based, including feelings of affection, passion, and connection with a specific brand (Fedorikhin et al., 2008; Jiménez & Voss, 2014; Malär et al., 2011; Thomson et al., 2005). However, Park et al. (2010) argued that although brand

attachment is inherently accompanied by strong emotions, attachment is more than emotions, stating that "it is reflected by mental representations (rich cognitive schemata) that include brand-self cognitions, thoughts, and autobiographical brand memories" (p. 3), and they define brand attachment as "the strength of the bond connecting the brand with the self" (p. 2).

Due to the emotion-based nature of brand attachment, this construct may potentially overlap with other affective constructs such as attitude. Fedorikhin et al. (2008) argued that attitude is derived from evaluation and is relatively less potent (Cohen & Areni, 1991), whereas attachment is more potent (Mikulincer & Shaver, 2007). In addition, attitude is not always attached to the self, but the attachment construct is inherently linked to the self (Fedorikhin et al., 2008). For example, consumers can have a very favorable attitude towards a brand, but the brand may not be integrated into the self. Another similar term, mood, is also a mild form of affective state (Gardner, 1985), which is ambient rather than stimulus-induced, but attachment is a stimulus-induced affect (Fedorikhin et al., 2008).

Previous studies have conceptualized brand attachment according to two sub-dimensions, namely brand-self connection and brand prominence. Brand-self connection (Escalas 2004; Escalas & Bettman 2003) is the cognitive and emotional connection between the brand and the self. Consumers can develop their connection to a brand because the brand represents who they are (e.g., to show their identity) or is meaningful to them in other aspects (Park et al., 2010). Brand prominence "reflects the salience of the cognitive and affective bond that connects the brand to the self" (Park et al., p.2), in which the salience is reflected by how easily and frequently brand-related thoughts and feelings come to mind.

When it comes to "strength", it is important to distinguish brand attachment strength from a similar strength-related construct, called brand attitude strength. Brand attitude strength is the positive or negative valence

(i.e., the degree of positivity or negativity) of an attitude weighted by the confidence or certainty, but brand attachment has strong motivational and behavioral implications (Fedorikhin et al., 2008; Park et al., 2010). In other words, brand attachment measures the strength of the extent to which a brand is integrated into one's self, but brand attitude strength measures the certainty of a person's judgement of a brand (Park et al., 2010). It means that brand attitude strength works as a function of how confident the judgment is rendered, rather than how the brand is integrated into the self. Moreover, brand attachment tends to develop over time, whereas brand attitude strength does not. For example, consumers who read some brand information carefully can form their brand attitude strength in a limited time, but to form brand attachment, consumers should accumulate memories with the brand and integrate the brand into the extended self (Belk, 1988). This integration takes time and reflects a higher stage of relationship development (Park et al., 2010). Park et al. (2010) also found concrete statistical evidence for the discriminant validity between brand attitude strength and brand attachment, and attested that brand attachment has stronger predictive power with respect to brand-related behaviors (e.g., purchasing and remaining loyal). From these findings, it is concluded that the two constructs are theoretically and empirically distinct.

2.4 Influential Factors in the Relationship between Brand Attachment and CC Usage

According to the level of brand attachment, a number of factors may play important roles in determining consumers' usage of CSSs. Three influential factors that may be related to the theoretical framework of this study were identified, namely consumers' face consciousness (i.e., a consumer characteristic), brand prestige (i.e., a brand characteristic), and psychological ownership (i.e., ownership perception). In the following sections, these

factors are introduced and explained in detail.

2.4.1 Face Consciousness

Face consciousness is an important factor that may change consumers' perceptions towards CSSs. The concept of "face" has been recognized by cultural studies as a concept that is especially relevant in collectivist Confucian cultures (Ho, 1976; Hu, 1944), where social norms are powerful factors in determining consumers' behavior (Cho, Thyroff, Rapert, Park, & Lee, 2013; Jin & Kang, 2010; Wei & Jung, 2017), and face is one of the most pervasive concepts in Confucian culture. This study posited face consciousness as an important consumer characteristic to consider in investigating consumers' intention to use CSSs in a typical Confucian cultural context, such as the Chinese market.

Face reflects an individual's place in the social network. Brown and Levinson (1987) defined face as an individual's public self-image. The concept of face results from and exists within social interactions. The social aspect of face is a function of one's social status, the prestige and honor that accrues for a person as a result of success and possibly also involves displaying ostentatious behaviors in front of others (Ho, 1976; Zhang, et al., 2011). Face has been recognized as an essential factor for marketers to understand Chinese consumers' behavior (Jin & Kang, 2010; Wei & Jung, 2017; Zhang et al., 2011). For example, Jin and Kang (2010) uncovered that face was positively related to both attitude and purchase intention toward foreign jeans brands among Chinese students. Wei and Jung (2017) also found that face had a significantly positive effect on Chinese consumers' purchase intention towards sustainable fashion products. However, the face effect was not found in Indian consumer samples (Son, Jin, & George, 2013). These results imply that face has a more powerful effect on consumer behavior in Confucian cultures.

Face can be gained or lost in social interactions (Fombelle, Bone, & Lemon, 2016; Kim & Nam, 1998). People can gain face through displaying behavior that meets social expectations and social roles, and by being respected and admired by others, while they can lose face by deviating from his/her social roles, or by being treated disrespectfully (Ho, 1976; Zhang et al., 2011). In this study, social face consciousness is defined as "people's need to enhance, as well as to avoid, losing their social face with significant others in social encounters" (Zhang, et al., 2011, p. 131), which has two sub-dimensions, namely the desire to gain face and the fear of losing face (Ho, 1976; Zhang et al., 2011). Gaining face and losing face result in two distinct feelings, which involve different social and psychological processes, thus they should not be treated as bi-polar outcomes in a social encounter (Zhang et al., 2011). For example, if a student achieved great success on a very difficult test, he may gain face, but even if he failed, he may not necessarily lose face since the result is acceptable in terms of the social expectations placed upon him.

Face consciousness may be a factor affecting Chinese consumers' adoption of CSSs, especially when the shared product is "publicly consumed" (see Bearden & Etzel, 1982), that is, related to consumers' public self-image. For example, it has been shown that face is related to Chinese consumers' fashion consumption behaviors (Jin & Kang, 2010; Wei & Jung, 2017). In addition, face-oriented consumers would tend to behave decently, thus they are more willing to adopt sustainable consumption behaviors (Chan, 2001; Cho, et al., 2013; Wei & Jung, 2017), and CSSs exemplify a sustainable consumption model (Edbring, Lehner, & Mont, 2016; Heinrichs, 2013). Thus, face consciousness may be a crucial factor to understand the likelihood that consumers choose a sharing option. It may change the relationship between brand attachment and consumers' intention to use CSSs.

2.4.2 Brand Prestige

Another factor that may influence consumers' use of CSSs is brand prestige, and commercial sharing platforms may benefit from partnering with a prestigious brand (Baumeister et al., 2015). The term "brand prestige" was introduced by Aaker (1996), who argued that "…value and perceived quality represent different dimensions. Perceived quality has a higher association with the prestige and respect that a brand holds, while value relates more to functional benefits and the practical utility of buying and using the brand" (p.112). In this vein, prestige is represented by perceived brand quality, and is the respect that a brand holds. The relationship between brand prestige and brand quality is manifested in several empirical studies. Compared to brand quality, brand prestige reflects a more hedonic and social aspect of value (Baek, Kim, and Yu, 2010; Steenkamp, Batra, and Alden 2003). For example, Steenkamp et al. (2003) found that brand perceived quality and brand prestige are two distinctive constructs, and they modeled the two constructs without a direct relationship between them. Baek et al.'s (2010) study reveals brand prestige as the driver of perceived quality, and thus the discriminant validity between the two constructs was confirmed.

Alden, Steenkamp, and Batra (1999) pointed out that the consumption of prestigious brands is likely to be perceived as a signal of social status, wealth, or power in that these brands are purchased infrequently and strongly related to self-concept and social image. Thus, they operationalized brand prestige as the high status of a brand's product positioning (Steenkamp et al., 2003), a concept which was also adopted by Baek et al. (2010). Vigneron, and Johnson (1999) proposed that prestigious brands should consist of a perceived conspicuous value, unique value, social value, hedonic value and quality value. In this study, brand prestige is defined as the high status of a brand's products or services, which provides consumers with higher levels of social image and performance. A similar concept to brand prestige is brand luxury.

Miller and Mills (2012) defined brand luxury as “a consumer assessment that a brand symbolizes prestige, lavishness and opulence” (p. 1474). Despite an obvious similarity between brand prestige and brand luxury, brand prestige can be found at three levels—in upmarket, premium, and luxury brands, meaning that luxury is one of the levels of prestige (Hwang & Han, 2014; Vigneron, & Johnson, 1999). Additionally, based on Miller and Mills’ (2012) definition, brand luxury emphasizes the conspicuous and symbolic (social) value of brand prestige, whereas brand prestige provides more types of value such as performance and quality. Another similar concept to brand prestige is brand leadership. As Miller and Mills (2012) suggested, brand leadership is related to success, vision and adhering to the latest trends. However, brand prestige does not necessarily imply reflection of the latest trends.

As revealed by Baumeister et al. (2015), brand prestige is essential for fashion product commercial sharing in that brand prestige enhances positive attitudes toward the sharing platform. However, it is still not clear whether brand prestige may change the relationship between consumers’ brand attachment and intention to use a sharing option, and what target consumers can be better reached via the co-brand strategy of the commercial sharing platform with prestigious brands. Thus, this study included brand prestige as an important factor when investigating brand attachment’s effect on consumers’ use of CSSs.

2.4.3 Psychological Ownership

Psychological ownership is the link connecting possession and self, which may also influence the brand attachment effect. Psychological ownership is defined as the state in which individuals feel like the target is “theirs”, that is, closely connected to the self (Kirk, Peck, & Swain, 2018; Peck & Shu, 2009; Pierce, Kostova, & Dirks, 2003). Individuals may perceive ownership of a target without actually owning it. For example, employees in an organization

may think that the organization belongs to them (Van Dyne & Pierce, 2004), and consumers in a café would mark "their" seats using their belongings when leaving for a short while (Griffiths & Gilly, 2012). These facts show that psychological ownership is distinct from legal ownership.

Previous research suggested that individuals develop psychological ownership towards a target by any of three routes: controlling a target, investing the self into a target, and coming to know a target intimately (Kirk et al., 2018; Pierce et al., 2003). Having control over a target is a defining feature of a possession. If individuals feel that they can control a target, they will also develop psychological ownership of it. Touching or even imagining touching a target can enhance the feeling of controlling it, and thus increase psychological ownership (Peck, Barger, & Webb, 2013; Peck & Shu, 2009). Investing the self refers to an investment of time, effort, energy, or labor into a target (Pierce et al., 2003). These "psychic energy" inputs generate a sense of ownership of a target because we are likely to feel we own what we "create, shape, or produce" (Pierce et al., 2003, p. 93). For example, customizing a product can increase psychological ownership of it (Franke, Schreier, & Kaiser, 2010; Kirk et al., 2018). Coming to know a target intimately also enhance a sense of ownership. By using a product or brand, we develop an intimate relationship with it, and when we become more familiar with a target over time, we establish psychological ownership of it (Pierce et al., 2003). For example, having intimate knowledge of a product enhance consumers' psychological ownership of it (Kirk et al., 2018).

When consumers establish psychological ownership of a target, they integrate the target into their extended selves as well (Belk, 1988; Kirk et al., 2018; Pierce et al., 2003); they would treat the target with intimacy, reflecting an emotional relationship (Belk, 1988, 2010; Demyttenaere et al., 2016). That is, if consumers perceive the product as "theirs", they would attach their emotions to it even though they do not legally own it. This perception would

increase their intention to purchase or continuously use the product (Demyttenaere et al., 2016; Kirk et al., 2018; Peck & Shu, 2009). Thus, marketers may use appropriate strategies to elicit consumers' psychological ownership of the shared product, facilitating their usage of CSSs (Demyttenaere et al., 2016).

Chapter 3 Hypothesis Development

3.1 Overview of Research Hypotheses

This study proposed four hypotheses. It posited that brand attachment is an important independent variable explaining consumer sharing likelihood. Sharing likelihood was operationalized as the intention to choose a product provided by a CSS rather than purchase the same product when the two options were available. In accordance with Belk's (1988, 2010) extended self, the study hypothesized that brand attachment has a negative effect on sharing likelihood (H1). To mitigate the negative effect of brand attachment, the study relied on theories on face consciousness (Jin & Kang, 2010; Kim & Nam, 1998; Wei & Jung, 2017; Zhang et al., 2011) and psychological ownership (Kirk et al., 2018; Peck & Shu, 2009; Pierce et al., 2003). It hypothesized that consumers' desire to gain face, brand prestige and psychological ownership might be moderators altering the relationship between brand attachment and sharing likelihood (H2, H3 and H4). In the following sections, the four hypotheses are discussed in detail.

3.2 The Effect of Brand Attachment on Sharing Likelihood

In this study, brand attachment was regarded as a key factor to determine sharing likelihood. As Belk (1988, 2010) noted, individuals integrate possessions, people and other entities into their selves as the extended self. Through sharing products with others, people expand their extended self to include others. In CSSs, however, the users are less likely to integrate others into their selves (Belk, 2010). The users of a CSS tend to keep a very clear boundary between their selves and others. In particular, the more closely the belongings are related to the self, the less likely they will be shared with others in a CSS because sharing with others is regarded as a loss or a lessening of

self (Belk, 1988, 2010; Hellwig et al., 2015). People often fear of the loss, damage, or contagion of their beloved belongings as these items bear the precious memories of the past (Belk, 1988).

Previous research (Fedorikhin et al., 2008; Malär et al., 2011; Park et al., 2010; Thomson et al., 2005) showed that consumers can establish attachments to their beloved brands. The strength of consumers' connection to a brand was captured by the construct "brand attachment" in this study. A brand may contain an individual's precious and pleasant memories which would construct and strengthen the connection between the brand and the self. The branded product is the "carrier" and embodiment of the brand. Having ownership of the branded product is a safe way for consumers to keep and stabilize the connection to the beloved brand, while sharing the product with others in a CSS may weaken the connection and cause the sense of loss or lessening of self. Based on the theory of extended self (Belk, 1988, 2010), as people are attached to the brand, they are more strongly motivated to keep the branded product they really like, thus less likely to participate in a sharing system for the same product. Hence, H1 was hypothesized.

H1. Brand attachment decreases sharing likelihood.

3.3 The Role of Face Consciousness and Brand Prestige

This study posited two moderators which affect the relationship between brand attachment and sharing likelihood: face consciousness (consumer characteristic) and brand prestige (brand characteristic). First, Chinese consumers' face consciousness was found to closely related to their consumption patterns. For example, Chinese consumers preferred goods from foreign fashion brands because foreign brands could bring them good social image and thus save their faces (Jin & Kang, 2010). Face consciousness was related to Chinese consumers' status consumption because consumers with

higher level of face consciousness would like to show a wealthy image before others, purchasing products from luxury and prestigious brands could fulfill such need (Li et al., 2015; Sun et al., 2017). It was argued that face consciousness motivated consumers value the extrinsic product attributes (e.g., brand) more than the intrinsic attributes (e.g., quality) (Bao et al., 2003; Sun et al., 2017). Face was also found to promote sustainable fashion consumption because face-oriented consumers would like to behave decently, and purchasing green products conformed to this social norm (Wei & Jung, 2017). However, face-oriented consumers cared more about whether the product can save their faces by containing green attributes, rather than the product value per se (Wei & Jung, 2017). Taken together, it is the "symbolic meaning" of brand consumption, rather than the product per se, that the face-oriented consumers would treasure. That is, the face-oriented consumers would integrate the symbolic meaning of the brand, rather than the branded product itself, into their extended selves.

CSSs could help Chinese consumers fulfill social expectation and showcase a good social image by providing short-term rental services of luxury products (e.g., renting a luxury suit to attend a ceremonious meeting, renting a classy car to pick up an important customer). For a face-oriented person, the symbolic meaning of a brand is more important than the brand product itself (Bao et al., 2003; Sun et al., 2017; Wei & Jung, 2017). That is, the more consumers desire to gain face, the more they place importance on the symbolic meaning of the brand and less on the product per se; as long as their need for face can be satisfied by the CSS, their brand attachment would less strongly lead to the desire for product ownership. Consumers' desire to gain face would thus reduce the negative effect of brand attachment on sharing likelihood. H2 was then proposed.

H2. The negative effect of brand attachment on sharing likelihood becomes weaker with consumers' desire to gain face increasing.

The perceived brand prestige level may affect the moderating effect of desire to gain face, because brands' abilities to boost face differ by the brand prestige levels. High brand prestige is related to high social image and excellent performance (Alden et al., 1999; Vigneron & Johnson, 1999), while low brand prestige is related to value-for-money (Baumeister et al., 2015). As face-oriented consumers are more concerned about their social images (Ho, 1976; Wei & Jung, 2017; Zhang, et al., 2011), providing a high-prestige brand can better fulfill their need for face. If consumers mainly pursue the need for face, their brand attachment would less negatively affect sharing likelihood, as hypothesized in H2. However, consumers would not consider using a low-prestige brand to establish higher social image, they use a low-prestige brand primarily for its value-for-money (Baumeister et al., 2015; Park, Milberg, & Lawson, 1991). Therefore, if the CSS provides a low-prestige brand, consumers' desire for face may not be satisfied and they would not consider using the CSS to improve their social images, resulting in a less salient moderating effect of desire to gain face. Thus, this study proposed that when a high-prestige brand is provided, the moderating effect of desire to gain face would be stronger.

H3. The moderating effect of desire to gain face on the relationship between brand attachment and sharing likelihood is stronger when the brand prestige is higher.

3.4 The Role of Psychological Ownership

Individuals integrate a target into their extended selves when they develop psychological ownership of it (Belk, 1988, 2010; Kirk et al., 2018; Pierce et al., 2003), such that consumers establish emotional bounds with their possessions (Belk, 1988, 2010; Demyttenaere et al., 2016). The major reason

of consumers' aversion to using sharing services for their attached brands is that they could not claim ownership of the brands' products (Belk, 1988, 2010; Hellwig et al., 2015). Consumers pour emotions onto their attached brands' products, perceiving it as a way to maintain their intimate relationships with the brands (Park et al., 2010). However, sharing in CC is like commodity exchange among strangers (Belk, 2010). If the product is to be shared by strangers, consumers would reject or reduce emotional attachment to it because their pleasant and precious memories with the brands may be contaminated by strangers. Thus, the shared product cannot be the connection between the self and the brand.

If marketers manage to augment consumers' psychological ownership of the shared product, it is possible that consumers would incorporate the shared product as a part of the extended self. Research showed that consumers' touching or customizing a product by themselves created psychological ownership of it, and they would integrate the product into the extended self even they do not own it (Franke et al., 2010; Kirk et al., 2018; Peck & Shu, 2009). Similarly, the shared product may become a part of consumers' extended selves if consumers' psychological ownership of it is elicited. In this vein, the shared product can be the connection between the self and the attached brand, and consumers would use it in the same way as they own it. Thereby, the negative effect of brand attachment would be attenuated by psychological ownership. The following hypothesis was then proposed.

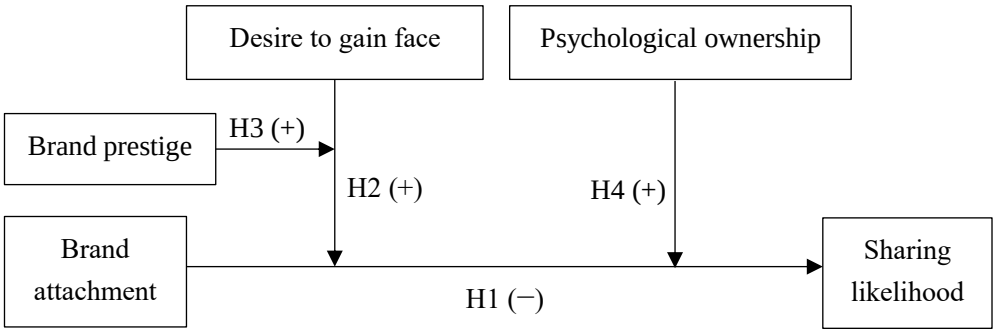
H4. The negative effect of brand attachment on sharing likelihood becomes weaker when the psychological ownership level of the shared product is higher.

3.5 The Theoretical Model and Preview of Empirical Studies

Figure 2 postulates the conceptual framework of this study. Following Belk's

(1988, 2010) conceptualization of extended self, this study hypothesized that consumers' brand attachment decreases their intention to use the sharing service to rent products of their attached brands (H1). This study also proposed that the relationship between brand attachment and sharing likelihood could be altered. The theory of face (Jin & Kang, 2010; Kim & Nam, 1998; Wei & Jung, 2017; Zhang, Cao, & Grigoriou, 2011) was employed to elucidate how brand attachment, face consciousness (i.e., a consumer characteristic) and brand prestige (i.e., a brand characteristic) may interact to determine sharing likelihood (H2 and H3). Finally, the concept of psychological ownership (Kirk et al., 2018; Peck & Shu, 2009) was hypothesized as a moderator attenuating the negative effect of brand attachment on sharing likelihood (H4).

Figure 2. The conceptual framework



Similar to the previous studies (Baumeister et al., 2015; Lamberton & Rose, 2012), the current research used three empirical studies to test the proposed theoretical model. Before the three main studies, a preliminary interview was conducted for the design of research scenarios. According to the interview results, fashion and car product categories were chosen, as interviewees agreed that product brand was important to them when they considered using the sharing service for car and fashion. The empirical studies were thus based on fashion item-sharing and car-sharing contexts.

In Study 1, the main effect of brand attachment (H1) was tested in two different categories, namely the fashion clothes-sharing (Study 1a) and the car-sharing (Study 1b) contexts. Study 1 used the convenience sampling approach, and participants were recruited from mainland China via an online survey platform. One brand for each category was selected to develop the research scenario.

In Study 2, the moderating effects of face consciousness (H2) and brand prestige (H3) were tested in the fashion bag-sharing (Study 2a) and the car-sharing (Study 2b) contexts. Study 2 used a general consumer sample from Beijing and Shanghai to overcome the limitation of convenience sample in Study 1[1]. It employed a two-level (brand prestige: low/high) single-factor randomized experimental design. Two brands for each category were selected to manipulate the brand prestige level.

In Study 3, the moderating effect of psychological ownership (H4) was tested in the fashion bag-sharing context, as Studies 1 and 2 did not find any substantial difference between the fashion product-sharing and the car-sharing contexts. Study 3 employed a 2 (brand prestige: low/high) × 2 (psychological ownership: low/high) between-subject experimental design. It also used a general consumer sample recruited from Beijing and Shanghai. Two brands were used to manipulate the brand prestige level, and two different contexts were used to manipulate the psychological ownership level.

Table 3 summarizes the major information of the empirical studies.

[1]As the early stage of this research, the use of convenience sample in Study 1 is deemed acceptable (Fricker & Schonlau, 2002). However, in the later stage (i.e., Studies 2 and 3), the stratified sampling method was used to obtain the representative consumer samples in Beijing and Shanghai. To achieve this, the sampling quotas of age, gender, and income level was set based on the most recent census data.

Table 3. Summary of empirical studies

Study	Sharing context	Independent variable	Dependent variable	Moderator	Sample size
Study 1a	Fashion clothes	BA	SL	-	279
Study 1b	Car	BA	SL	-	277
Study 2a	Fashion bag	BA	SL	DG, BP	541
Study 2b	Car	BA	SL	DG, BP	551
Study 3	Fashion bag	BA	SL	DG, BP, PO	482

Note: BA=brand attachment, SL= sharing likelihood, DG=desire to gain face, BP=brand prestige, PO=psychological ownership.

Chapter 4 Study 1: The Effect of Brand Attachment on Sharing Likelihood

4.1 Overview of Study 1

In Study 1, the main effect of brand attachment was tested for H1 through a consumer survey. Before the survey, a preliminary interview was conducted to help the research scenario design. According to the interview results, the fashion product-sharing and the car-sharing contexts were selected in which interviewees considered product brand to be important. H1 was tested in the two different contexts to enhance robustness of the results, namely fashion clothes-sharing (Study 1a) and car-sharing (Study 1b). In the relationship between brand attachment and sharing likelihood, this study included control variables as below.

Consumer Perceived Risk of Using the CSS

Previous study showed that perceived risk of scarcity and perceived transaction cost were major inhibitors of CSS usage (Edbring et al., 2016; Lamberton & Rose, 2012; Tsui, 2016). Consistent with this view, this study used consumer perceived risk to capture the belief about the possibility that using the service and/or product of the CSS may cause negative consequences (Bauer, 1960; Grewal, Iyer, Gotlieb, & Levy, 2007), which is reflected by the financial, performance, physical, psychological, social, and time loss risks (Jacoby & Kaplan, 1972; Roselius, 1971). As consumers' perceived risk of using the CSS may have a negative effect on sharing likelihood (Edbring et al., 2016; Lamberton & Rose, 2012; Tsui, 2016), this study controlled its effect in the analysis.

Sharing Experience

Consumers' prior experience of using sharing services may influence their sharing likelihood. Lamberton & Rose (2012) found that consumers' familiarity with sharing services increased the likelihood of choosing a sharing option. On the contrary, lacking the knowledge or experience was the major reason why consumers rejected sharing services (Edbring et al., 2016). Thus, this study measured consumer experience of using CSSs in the past six months as a control variable.

Consumer Demographics

This study included gender, age, and household income as control variables. Female consumers were often considered to be more enthusiastic about fashion than male consumers (Kim & Hong, 2011), thus they may respond differently to fashion product-sharing. Besides, prior research found that major users of CSSs tended to be younger consumers who were under 35 years old (Möhlmann, 2015). Consumer income level was found to influence their purchasing power and motivations to participate in the CSS (Tussyadiah, 2015), and it was controlled in the analysis as well.

4.2 Preliminary Study

This study first conducted a preliminary interview to help design the study scenario, which is described exhaustively in the following sections.

4.2.1 Purpose and Design

A preliminary interview was conducted before the main studies. The interview was designed to answer two questions: (1) in what contexts and for what reasons consumers would consider a sharing service; (2) when using CSSs, for what product categories consumers would consider the brand. The interview results could better help us design the study scenario and context.

An in-depth interview study was conducted using the sequential

interviewing method (Small, 2009; Yin, 2002). The purpose of sequential interviewing was for "a more grounded foundation to make empirical statements relevant to the cases not observed" (Small, 2009, p. 24). First of all, a semi-structured interview questionnaire was developed with questions, such as "when and why would you use a sharing service?", "what product(s) have you ever rented from CSSs?", and "when using CSSs, do you think the brand name is an important factor?" After one interview was done, the question list was updated and given to the next respondents. That is, the interview process was "sequential". This process was replicated until the last interview where saturation was attained. The initial interview questionnaire can be found in Appendix A.

There were six respondents who had experience of using CSSs, including bike-sharing, ride-sharing, car-sharing, and accommodation-sharing systems. All respondents were young consumers aged from 24 to 30 and resided in big cities of mainland China (i.e., Beijing, Shanghai, and Guangzhou). The demographic details are summarized in Table 4.

Table 4. Summary of interviewee demographics

Interviewee	Age	Gender	Occupation	Monthly Income	City of Residence
1	26	Female	Designer	CNY 5,500	Shanghai
2	30	Female	Postgraduate Student	CNY 4,000	Shanghai
3	24	Female	Canteen Staff	CNY 5,500	Beijing
4	29	Male	Hotel Manager	CNY 15,000	Beijing
5	24	Male	Postgraduate Student	CNY 2,500	Shanghai
6	27	Female	Business Manager	CNY 25,000	Guangzhou

4.2.2 Findings

The Usage Context

All the subjects mentioned that they used commercial system primarily for convenience and money saving. For example, one interviewee recalled the first time when he used ride-sharing; “When I went to a small town with no taxi passing by, I simply turned to the ride-sharing service. I opened the App downloaded before and quickly found a sharer nearby. That’s it!” As for money saving, one mentioned that “If I have to go somewhere quite near but it takes more than 15 minutes to walk, I would use bike-sharing. I don’t want to pay the expensive taxi starting fare.” Some agreed that “paying for use” is worthier than “paying for ownership”, especially in the case of car-sharing. Most interviewees agreed that they would rent some products they can’t afford if they need to use them publicly, for example, renting suits from luxury brands to attend an important business meeting. “This could save a big amount of money,” one said.

Many respondents also mentioned “excitement”, “pleasure”, and “new experience”, such as using bike-sharing system to cycle around the city to have fun. Many of them emphasized trying new things and experiencing something different through the use of sharing services. “I would like to buy the products of my beloved brands, but if I would like to try something new and do not want the ‘burden of ownership’, I would definitely consider sharing services,” one interviewee said.

The Product Category

The interviewees reported that they considered brand as an important factor when using the CSS especially for fashion products. For example, a respondent answered, “When purchasing handbag, I would consider the brand first, and if I really like the style and design, I would like to buy it.” Also, she said, “try some brands that I’m not familiar with but really get a trendy shape via sharing options, that’s the case”. The second category the interviewee mentioned was car. One interviewee said, “I would consider renting a famous

branded car if possible. It would represent better performance and a good image."

4.2.3 Discussion

The results showed that convenience, saving money, and trying new things were the major reasons for choosing a sharing option. The findings suggested that the study scenario should be designed to meet participants' expectations of saving money, convenience and trying new things via sharing services. Besides, brand was an important factor when consumers consider a sharing option, especially for fashion products and cars. These two categories are often publicly consumed and associated with consumers' public image (Bearden & Etzel, 1982). Thus, the fashion product and car categories were considered appropriate for the research scenario development.

4.3 Study 1a: The Fashion Clothes-Sharing Context

4.3.1 Participants and Procedure

A consumer survey was conducted to collect data. Chinese consumers were selected in that CSSs (like bike-sharing companies "Mobike" and "Ofo") are popular in mainland China. A convenience sampling method was used. During the early November 2017, participants were recruited by an online survey company in mainland China. Initially, 406 participants entered the survey. After the incomplete and inadequate responses were deleted, the final sample size was 279.

The research scenario was developed in which a mock fashion sharing program was advertised. To deliver a sense of reality of the advertisement page, a real fashion brand name was employed, Metersbonwe. This brand was chosen in consideration of popularity and price range based on sales volume and price range data (Taobao.com). A screening question asked if they had

ever heard the brand name before and only consumers who knew the brand name could continue. Participants then responded to items measuring their brand attachment to Metersbonwe. After that, a short description of a new sharing platform providing short-term fashion-clothes renting service was presented to them. The rental price information was based on the real market practice.

Now a commercial sharing platform is providing service of renting fashion clothes of Metersbonwe. The platform provides many new-released trendy designs of this brand. You only need to pay a CNY 1,000 security deposit, then you can use the sharing plans.

For example, there are two basic sharing plans:

(1) renting a piece of clothes of Metersbonwe for one day charges CNY 10;

(2) renting a piece of clothes of Metersbonwe for one week or more charges CNY 8 per day, getting a 20% discount per day.

Instructional manipulation checking questions (Oppenheimer, Meyvis, & Davidenko, 2009) were asked right after the scenario to ensure the participants did read the description, such as "what is the discount rate you would get if you would rent the clothes for one week or more?" Participants who failed to answer these questions correctly were excluded from the final sample. Next, to measure the extent of sharing likelihood, following question was provided.

Assume that you just found a fashionable Metersbonwe coat you really like when browsing websites. It costs CNY 500, which is under your budget. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this coat for rent.

If you choose to buy, it would cost you CNY 500. If you rent it, you would only need to pay the rental fees. With CNY 500 you could rent it for 62 days (about two months) at maximum. How would you make your decision?

Then they responded to the perceived risk and sharing experience items. In the last section, their demographic variables such as gender, age, and household income were recorded. The complete survey questionnaire can be found in Appendix B.

4.3.2 Measures

The survey included measurement items for brand attachment, perceived risk, sharing likelihood, sharing experience and demographic variables. All items for the theoretical constructs were learned and modified from the literature and have been well established. As original measurement items were developed in English, the survey was first developed in English, and then it was translated into Chinese and were translated back into English again by several native speakers majoring in marketing to ensure translation equivalence (Craig & Douglas, 2005).

The study used a 7-point scale. For *Brand attachment*, four items were borrowed and modified from Park et al.'s (2010) study. The scale consists of two dimensions, namely *Brand-self connection* and *Brand prominence*. Exemplary items are "To what extent is Metersbonwe part of you and who you are?", and "To what extent are your thoughts and feelings toward Metersbonwe often automatic, coming to mind seemingly on their own?" (1= not at all, 7= extremely). *Perceived risk* was measured by a 6-item scale (Girard & Dion, 2010; Jacoby & Kaplan, 1972), which reflects six types of perceived risk, including social, psychological, financial, performance, physical, and time risk. Exemplary items are "How likely do you feel renting Metersbonwe clothes from the sharing platform would lead to a loss because of the financial risk involved?" (1= very unlikely, 7= very likely). The *sharing*

likelihood was measured by a three-item scale (Lamberton & Rose, 2012). It is noteworthy that this construct measured preference between sharing and purchasing. Respondents were asked to rate the level of likelihood of using the CSS such as "How likely would you make the decision?" (1= definitely purchase it, 7= definitely rent it). To measure sharing experience, this study asked the respondents how often they used the sharing options in the last six months on a 7-point Likert scale (1= not at all, 7= very often). All measurement items used in Study 1a are provided in Table 5.

Table 5. Measurement items (Study 1a).

Construct	Item	Source
Brand attachment (4 items)	•BSC1. To what extent is Metersbonwe part of you and who you are? •BSC2. To what extent do you feel personally connected to Metersbonwe? •BPR1. To what extent are your thoughts and feelings toward Metersbonwe often automatic, coming to mind seemingly on their own? •BPR2. To what extent do your thoughts and feelings toward Metersbonwe come to you naturally and instantly? (not at all – extremely)	Park et al., 2010.
Sharing likelihood (3 items)	SL1. How likely would you make the decision? (definitely purchase it – definitely rent it) SL2. You would prefer to: SL3. You would be more likely to choose to: (purchase the product – use renting service)	Lamberton & Rose, 2012
Perceived risk (6 items)	How likely do you feel renting clothes of Metersbonwe from the sharing platform would lead to a loss because of: •SR. your significant others think less highly of you; •PSR. a mismatch between the sharing service and your self-image; •FR. the financial risk involved; •PER. the risk of product/service performance failure; •PYR. the risk of the product/service being	Girard & Dion, 2010; Jacoby & Kaplan, 1972.

	unsafe; •TR. the time involved in solving problems with any of the product/service features. (very unlikely – very likely)	
Sharing experience	•SE. How often did you use sharing systems (e.g., Airbnb, Didi Chuxing, Ofo bikes) in the last 6 months? (not at all – very often)	Developed by the author

Note: all items were measured on a 7-point scale; BSC= brand-self connection, BPR=brand prominence, SL=sharing likelihood, SR=social risk, PSR=psychological risk, FR= financial risk, PER=performance risk, PYR=physical risk, TR=time risk, SE=sharing experience.

4.3.3 Results

Sample Characteristics and Nonresponse Bias Tests

Among the 279 participants, almost equal numbers of respondents were male (47.7%) and female (52.3%), the average age was 31.72, and the average monthly household income was CNY 13,852.68 (approximately USD 2,051.70) which was slightly higher than the average level of mainland China in 2017. Table 6 summarizes the sample characteristics.

Table 6. Sample characteristics (Study 1a)

Demographic				Total
Age	18-34	35-69		
	199 (71.3%)	80 (28.7%)		279 (100%)
Gender	Male	Female		
	133 (47.7%)	146 (52.3%)		279 (100%)
Household income	≤9000	9001-15000	≥15001	
	84 (30.1%)	116 (41.6%)	79 (28.3%)	279 (100%)

Note: The percentages are shown in parentheses.

Given that 279 respondents completed the survey out of 406 who initially entered it, a nonresponse bias may exist. That is, if the participants who

respond are different from those who do not, the survey results may be biased (Armstrong & Overton, 1977). The study tested the potential response bias by two steps. First, the study compared the demographics (i.e., age, gender, income) between the participants who completed the survey and those who did not (Armstrong & Overton, 1977). After converting the age and income into categorical data, the demographics were compared using the crosstab χ^2 tests via SPSS 21.0. Results showed that all the χ^2 statistics were not significant (p>.05), suggesting no response bias. In the second step, the study divided the 279 respondents into the early (the first week, 80%) and late (the second week, 20%) respondents and compared their demographics (Armstrong & Overton, 1977). No significant difference (p>.05) was found in the χ^2 tests, either. These results indicated that the nonresponses occurred at random and thus the nonresponse bias was not a concern in Study 1a.

Measurement Validity

With the use of AMOS 18.0, Confirmatory Factor Analysis (CFA) via Covariance-based Structural Equation Modeling (CB-SEM) was performed to examine the measurement validity of the survey items (Anderson & Gerbing, 1988). Since the data was acceptable in terms of multivariate normality (i.e., skewness ranging from -0.51 to 1.17, kurtosis from -0.91 to 0.74), the Maximum Likelihood Estimate (MLE) approach would be used for the CFA (Muthén & Kaplan, 1985).

Four constructs, including two dimensions of brand attachment (i.e., brand-self connection and brand prominence), perceived risk, and sharing likelihood, were analyzed and the measurement model fitted the data well (χ^2(df=59)=155.92, χ^2/df =2.64, CFI=0.96, TLI=0.95, RMSEA=0.08, SRMR=0.06). Table 7 shows the psychometric properties of constructs derived from CFA.

Table 7. CFA Results of Study 1a

Construct	Loading	Standard error	Critical ratio
Brand-self connection (Cronbach's α=.91, AVE=.84 CR=.91)			
BSC1	.93	-	-
BSC2	.90	.05	21.43***
Brand prominence (Cronbach's α=.90, AVE=.82, CR=.90)			
BPR1	.87	-	-
BPR2	.94	.05	20.42***
Sharing likelihood (Cronbach's α=.93, AVE=.82, CR=.93)			
SL1	.87	-	-
SL2	.92	.05	21.26***
SL3	.92	.05	21.43***
Perceived risk (Cronbach's α=.87, AVE=.53, CR=.87,)			
FR	.66	-	-
PER	.75	.10	10.52***
PYR	.76	.11	10.59***
SR	.78	.10	10.80***
PSR	.72	.10	10.17***
TR	.67	.10	9.57***

Note: AVE = average variance extracted, CR = composite reliability, SR=social risk, PSR=psychological risk, FR= financial risk, PER=performance risk, PYR=physical risk, TR=time risk, ***p<.001.

According to Table 7, all the constructs had satisfactory values of AVE (Average Variance Extracted) and CR (Composite Reliability), exceeding the recommended thresholds of 0.5 and 0.6, respectively (Bagozzi & Yi, 1988). Beyond that, all items had significant loadings on their respective constructs, indicating good convergent validity (Anderson & Gerbing, 1988). As shown in Table 8, the discriminant validity of the research constructs was examined by checking the construct correlation matrix. The diagonal values representing the square root of construct AVE all exceeded the corresponding correlations with other constructs, which showed good discriminant validity (Fornell & Larcker, 1981). The results of CFA confirmed that the

measurement validity was achieved.

Table 8. Construct correlation matrix (Study 1a)

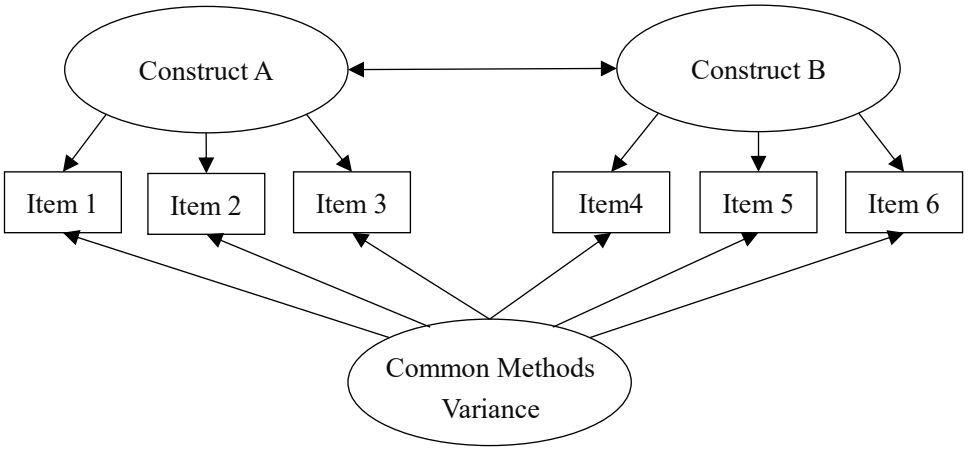
	BSC	BPR	SL	PR
BSC	0.92			
BPR	0.84	0.91		
SL	-0.15	0.17	0.91	
PR	-0.09	-0.20	-0.11	0.73

Note: BSC=brand-self connection, BPR=brand prominence, SL= sharing likelihood, PR=perceived risk; the diagonal values represent the square root of average variance extracted of constructs.

Assessment of Common Method Biases

Common method bias can be a severe concern for behavioral research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). If many constructs are measured with the same method (e.g., the same questionnaire, or the same scale format), the correlations among them may be partially attributed to the measurement method, undermining the hypothesis testing results. This study used the latent variable approach advocated by Podsakoff et al. (2003) to assess the influence of common method biases, which modeled the common methods variance (CMV) as a latent method factor and allowed the items of all the constructs to load on the method factor (Figue 3).

Figure 3. The CFA model with the latent method factor



Source: Podsakoff et al., 2003.

This approach does not require the researcher to identify the sources of CMV, thus it has been widely applied in marketing research (e.g., Fombelle et al., 2016; Korschun, Bhattacharya, & Swain, 2014; Woisetschläger, Backhaus, & Cornwell, 2017). The impact of CMV on measurement items can be quantitatively assessed by estimating the loadings on the method factor. The model was estimated by CFA via AMOS 18.0. Results showed that, after the method factor was included, all the loadings on the theoretical constructs remained significant while none of the loadings on the method factor were significant (p>.05), which means that the method factor did not significantly affect the measures of theoretical constructs (Podsakoff et al., 2003). Additionally, on average, the CMV factor only explained 11% of the variance of the items[2], which is considered to be very small (Fombelle et al., 2016). These results implied that CMV was not a major concern for Study 1a.

Hypothesis Testing

The ordinary least squares (OLS) linear regression analysis was carried out in SPSS 21.0 to test H1. Measurement items were averaged to form the variable scores as the previous studies did (Baumeister et al., 2014; Kirk et al., 2018; Lamberton & Rose, 2012; Peck & Shu, 2009). Brand attachment served as the independent variable and sharing likelihood as the dependent variable. Beyond that, perceived risk of using the CSS, sharing experience, age, gender, and household income were included as covariates. Gender was dummy coded (1=male, 0=female). The regression results are shown in Table 9.

According to Table 9, brand attachment (β=-.22, p<.01) had a negative effect on sharing likelihood, directly decreasing consumers' intention to

[2]The squared factor loading equals the variance that can be explained by the corresponding latent variable.

choose a sharing option, H1 was supported. Besides, perceived risk (β=-.15, p<.05) also exerted a negative effect on sharing likelihood. None of the other control variables were significant.

Table 9. OLS regression on sharing likelihood (Study 1a)

Variable	Unstandardized coefficient	Standardized coefficient	T-value
Independent variable			
Brand attachment	-.22	-.20	-3.05**
Control variable			
Perceived risk	-.15	-.13	-2.14*
Sharing experience	.03	.03	.53
Gender (1=male)	.04	.01	.22
Age	.02	.08	1.25
Household income	.000009	.05	.85
Model fit	F(6,272)=2.28*		
	R^2=.05		

Note: *p<.05, **p<.01.

4.3.4 Discussion

The results of Study 1a supported H1. The findings revealed that consumers who were highly attached to the brand were more likely to purchase the coat rather than join the sharing plan. As sharing their beloved brands with others may lead to a sense of loss or lessening of self, consumers would like to keep ownership of the branded products. Besides, consumers who perceived using the CSS to be risky were less willingly to participate in the CSS. This is consistent with the findings of previous studies (Lamberton & Rose, 2012; Edbring et al., 2016).

4.4 Study 1b: The Car-Sharing Context

4.4.1 Participants and Procedure

Consistent with Study 1a, Study 1b surveyed Chinese consumers for data

collection, using a convenience sampling method. Initially, 378 participants entered the survey, and then 291 passed the screening question and instructional manipulation check. After the incomplete and inadequate responses were excluded, the final sample size was 277.

To develop the proper research scenario, references were made to the "car brand ranking board" from Baidu.com (a famous search engine in mainland China) and the brand name BYD was selected, which was ranked at a top place, indicating that it was searched by many consumers recently. Also, its pricing deemed accessible to most Chinese car consumers. During the early November 2017, the survey company recruited consumers to participate in the survey.

As in Study 1a, only consumers who knew the brand name could participate in the survey. Participants responded to items measuring their brand attachment to BYD, and then a short description of a new sharing platform providing short-term car renting service was presented as follows:

Now a commercial sharing platform is providing service of renting cars of BYD. The platform provides many new-designed cars which would bring you unique driving pleasure. You only need to pay a CNY 3,000 security deposit, then you can use the sharing plans.

For example, there are two basic sharing plans:

(1) renting a car of BYD for one day charges CNY 120 (you can pay by hour, CNY 5/hour);

(2) renting a car of BYD for one week or more charges CNY 96 per day, getting a 20% discount per day.

The rental price information was from the real market. The instructional manipulation check questions (Oppenheimer et al., 2009) were included to screen out participants who failed to answer these items. To measure sharing

likelihood, a decision-making scenario was presented.

Assume that you just found a new-designed BYD car you really like when browsing websites. It costs CNY 120,000, which is under your budget. It happens that recently you just want to experience this type of new-designed car for driving pleasure. The sharing platform mentioned above also provides this car for rent.

If you choose to buy, it would cost you CNY 120,000. If you rent it, you would only need to pay the rental fees. With CNY 120,000 you could rent it for 178 weeks (about three and a half years) at maximum. How would you make your decision?

After that, the perceived risk and sharing experience items with demographic information were recorded. The complete survey questionnaire can be found in Appendix C.

4.4.2 Measures

The survey included the same measurement items as the ones used in Study 1a, with the only change of brand name. For example, one brand attachment item is "To what extent is BYD part of you and who you are?"

4.4.3 Results

Sample Characteristics and Nonresponse Bias Tests

Table 10 shows the sample characteristics of Study 1b. Out of the 277 eligible participants, 49.1% were male and 50.9% were female. The average age was 34.02, and the average monthly household income was CNY 14,450.67 (approximately USD 2,140.27).

Table 10. Sample characteristics (Study 1b)

Demographic				Total
Age	18-34	35-69		
	167 (60.3%)	110 (39.7%)		277 (100%)
Gender	Male	Female		
	136 (49.1%)	141 (50.9%)		277 (100%)
Household income	≤9800	9801-17000	≥17001	
	82 (29.6%)	114 (41.2%)	81 (29.2%)	277 (100%)

Note: The percentages are shown in parentheses.

The nonresponse bias tests were conducted by comparing the demographics of the participants who completed the survey and those who did not, and the demographics of the early (the first week, 82%) and late (the second week, 18%) respondents in the final sample. The χ^2 tests revealed that there was no significant difference. Thus, the nonresponse bias was not a concern.

Measurement Validity

Confirmatory Factor Analysis (CFA) via AMOS 18.0 was conducted to examine the measurement validity. The data were found to be acceptable in terms of multivariate normality (skewness ranging from -0.52 to 1.13, kurtosis from -1.13 to 0.82) thus the Maximum Likelihood Estimate (MLE) approach was used again (Muthén & Kaplan, 1985). The model yielded acceptable fit indices (χ^2(df=59)=272.44, χ^2/df =4.62, CFI=0.92, TLI=0.89, RMSEA = 0.11, SRMR = 0.08). Table 11 shows the psychometric properties of constructs derived from CFA.

Table 11. CFA Results of Study 1b

Construct	Loading	Standard error	Critical ratio
Brand-self connection (Cronbach's α=.93, AVE=.87 CR=.93)			
BSC1	.93	-	-
BSC2	.94	.04	25.92***

Brand prominence (Cronbach's α=.94, AVE=.89, CR=.94)			
BPR1	.94	-	-
BPR2	.95	.04	27.90***
Sharing likelihood (Cronbach's α=.90, AVE=.75, CR=.90)			
SL1	.83	-	-
SL2	.92	.06	17.83***
SL3	.84	.07	16.62***
Perceived risk (Cronbach's α=.87, AVE=.52, CR=.86,)			
FR	.76	-	-
PER	.90	.08	15.67***
PYR	.89	.08	15.56***
SR	.49	.08	8.01***
PSR	.45	.08	7.33***
TR	.72	.08	12.21***

Note: AVE = average variance extracted, CR = composite reliability, SR=social risk, PSR=psychological risk, FR= financial risk, PER=performance risk, PYR=physical risk, TR=time risk, ***p<.001.

Table 11 shows that all the constructs had satisfactory values of AVE (Average Variance Extracted) and CR (Composite Reliability), exceeding the recommended thresholds of 0.5 and 0.6, respectively (Bagozzi & Yi, 1988). All items had significant loadings on their respective constructs, showing good convergent validity (Anderson & Gerbing, 1988). Using the Fornell and Larcker's (1981) criterion, Table 12 indicated that the discriminant validity of constructs was achieved as the diagonal values exceeded the corresponding correlations with other constructs. The measurement validity of Study 1b was established.

Table 12. Construct correlation matrix (Study 1b)

	BSC	BPR	SL	PR
BSC	0.93			
BPR	0.88	0.94		

SL	-0.24	-0.27	0.87	
PR	-0.16	-0.18	-0.08	0.72

Note: BSC=brand-self connection, BPR=brand prominence, SL= sharing likelihood, PR=perceived risk; the diagonal values represent the square root of average variance extracted of constructs.

Assessment of Common Method Biases

This study examined the impact of CMV by testing the same model used in Study 1a, in which CMV was included as a latent method factor. The results showed that none of the loadings on the method factor were significant (p>.05), which means that CMV did not significantly affect the measures (Podsakoff et al., 2003). On average, the method factor only accounted for 10% of the variance, which is a very small proportion (Fombelle et al., 2016). The test results confirmed that the CMV factor was unlikely to be a serious concern for Study 1b.

Hypothesis Testing

OLS linear regression analysis was carried out in SPSS 21.0 to test H1. Measurement items were averaged to form the variable scores. Brand attachment served as the independent variable and sharing likelihood as the dependent variable. Beyond that, perceived risk of using the CSS, sharing experience, age, gender, and household income were included as covariates. Gender was dummy coded (1=male, 0=female). The regression results are shown in Table 13.

According to Table 13, the statistical analysis supported that brand attachment (β=-.19, p<.01) had a negative effect on sharing likelihood, decreasing consumers' likelihood to choose a sharing option. Therefore, H1 was supported again. Consistent with Study 1a, among the control variables, only perceived risk (β=-.14, p<.05) had a significant negative effect on sharing likelihood.

Table 13. OLS regression on sharing likelihood (Study 1b)

Variable	Unstandardized coefficient	Standardized coefficient	T-value
Independent variable			
Brand attachment	-.19	-.21	-3.22**
Control variable			
Perceived risk	-.14	-.12	-2.01*
Sharing experience	-.03	-.03	-.50
Gender (1=male)	-.01	-.004	-.07
Age	.01	.07	1.10
Household income	-.000017	-.10	-1.58
Model fit	F(6,270)=4.09***		
	R^2=.08		

Note: *p<.05, **p<.01, ***p<.001.

4.4.4 Discussion

The results of Study 1b supported H1 as well. As in the fashion context, when consumers felt themselves highly attached to the car brand, they would be more likely to buy the car, rather than share it with others. Perceived risk also significantly decreased sharing likelihood in the car-sharing context.

The findings of Study 1 suggested that brand attachment decreased consumer sharing likelihood in both the fashion product-sharing and the car-sharing contexts. In the next chapter, Study 2 further examined the moderating roles of face consciousness and brand prestige.

Chapter 5 Study 2: The Moderating Role of Face Consciousness and Brand Prestige

5.1 Overview of Study 2

Study 2 examined the relationship of brand attachment and sharing likelihood, as well as moderating effects of consumers' desire to gain face and brand prestige in this relationship. For this, a two-level (brand prestige: low/high) single-factor randomized between-subjects experiment was designed in both fashion (Study 2a) and car categories (Study 2b).

5.2 Study 2a: The Fashion Bag-Sharing Context

5.2.1 Participants and Procedure

As Chinese consumer behavior is largely affected by face consciousness, Study 2a surveyed Chinese consumers to test H2 and H3. Specifically, participants were recruited from the two biggest cities in mainland China, Beijing and Shanghai, which are called the first-tier cities, indicating consumer purchase power. Likewise, consumers in Beijing and Shanghai were more likely to know about the prestigious fashion brands. To minimize bias in sampling, this study set age and household income level as sampling quotas, based on census data retrieved from the 2016 statistical yearbooks of Shanghai and Beijing. Respondents were also balanced in terms of gender (i.e., male and female) and cities (i.e., Beijing and Shanghai). During the late January and early February 2018, consumers from Beijing and Shanghai were invited by an online survey company to participate in the experiment. Initially, 795 participants entered the survey, the final sample size was 541 after incomplete responses were deleted. The material used in Study 2a and the

complete survey questionnaire can be found in Appendix D.

For the successful manipulation of brand prestige, a pretest was conducted with consumers from mainland China. Four fashion brands were selected from the top places at "search ranking board" of Baidu.com, which means they were searched by many consumers recently. Forty-seven respondents were asked to rate their brand awareness and perceived brand prestige levels to each brand. The brand awareness scale was adopted from Yoo and Donthu's (2001) study, and the brand prestige scale from Baek at al.'s (2010) study, respectively. They were measured on a 7-point Likert scale anchored by 1=strongly disagree and 7=strongly agree. The exemplary items are "I can recognize this brand among other competing brands" (brand awareness) and "This brand is very prestigious" (brand prestige). The brand names Coach (low prestige) and Louis Vuitton (high prestige) were selected to manipulate brand prestige levels, as Louis Vuitton was rated significantly higher than Coach (brand prestige: $M_{\text{Louis Vuitton}}$=6.25 vs. M_{Coach}=5.51, t(92)=3.93, p<.001). Besides, the two brands were well-known among consumers (brand awareness: M_{Coach}=5.07; $M_{\text{Louis Vuitton}}$=5.86), which could help the participants understand the research scenario.

The survey began with a short text introducing the research topic and respondents could voluntarily participate in. After agreeing to join, participants were randomly assigned to one of the two experimental conditions and a screening question excluded those who did not know the brand. They then responded to items measuring their brand attachment to Coach or Louis Vuitton. After that, an advertising poster of a new fashion-bag sharing platform was presented with the brand logo of Coach or Louis Vuitton. For example, in the Louis Vuitton (high prestige) condition, the poster presented:

Now a commercial sharing platform is providing service of renting

fashion bags of Louis Vuitton. The platform provides many new-released trendy designs of this brand. You only need to pay a CNY 5,000 security deposit, then you can use the sharing plans.

For example, there are two basic sharing plans:

(1) renting a bag of Louis Vuitton for one day charges CNY 50;

(2) renting a bag of Louis Vuitton for one week or more charges CNY 40 per day, getting a 20% discount per day.

※ A Louis Vuitton bag costs about CNY 15,000.

The rental price information came from the real market, and the security deposit rate was adapted based on the product price. After introducing the scenario, the instructional manipulation checking questions (Oppenheimer et al., 2009) were displayed on another page, such as "What is the security deposit rate mentioned on the previous page?" This was to check if participants read and understand the scenario. Participants who failed to pass the check stopped the survey immediately. To those who passed the check, a decision-making scenario was further shown. In the Louis Vuitton condition, the scenario read:

Assume that you just found a fashionable Louis Vuitton bag you really like when browsing websites. It costs CNY 15,000, which is under your budget. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, it would cost you CNY 15,000. If you rent it, you would only need to pay the rental fees. With CNY 15,000 you could rent it for 374 days (about a year) at maximum. How would you make your decision?

Participants rated the likelihood that they would choose a sharing or ownership option. Then they responded to items measuring their perceived

risk, desire to gain face, sharing experience, and demographics.

5.2.2 Measures

The questionnaire development process was consistent to that of Study 1. The survey contained the same measurement items used in Study 1, including brand attachment, perceived risk, consumers' desire to gain face, sharing likelihood, sharing experience, and demographics (age, gender, monthly household income, etc.). In addition, *brand prestige* scale (Baek et al., 2010) was included for manipulation check. *Brand awareness* scale (Yoo & Donthu, 2001) and *brand attitude* scale (Baumeister et al., 2015; Boisvert, 2012) were also added to the survey to check if the brands were well-known and if consumers did not evaluate the brand negatively. *Desire to gain face* was measured by a 6-item scale from Zhang et al.'s (2011) study, including items like "I hope people think that I can do better than most others", and "I hope that I have a better life than most others in others' view" (1= strongly disagree, 7= strongly agree). The additional measurement items of Study 2a are presented in Table 14.

Table 14. Additional measurement items of Study 2a.

Construct	Item	Source
Desire to gain face (6 items)	•DG1. I hope people think that I can do better than most others. •DG2. I hope that I can talk about things that most others do not know. •DG3. I hope that I can possess things that most others thirst for. •DG4. It is important for me to get praise and admiration. •DG5. I hope to let people know that I have association with some big names. •DG6. I hope that I have a better life than most others in others' view. (strongly disagree – strongly agree)	Zhang et al., 2011
Brand prestige (3	•BP1. This brand is very prestigious.	Baek et al., 2010

items)	•BP2. This brand has high status. •BP3. This brand is very upscale. (strongly disagree – strongly agree)	
Brand awareness (5 items)	•BAW1. I can recognize (the brand name) among other competing brands. •BAW2. I am aware of (the brand name). •BAW3. Some characteristics of (the brand name) come to my mind quickly. •BAW4. I can quickly recall the symbol or logo of (the brand name). •BAW5. I have difficulty in imagining (the brand name) in my mind. (strongly disagree – strongly agree)	Yoo & Donthu, 2001
Brand attitude (2 items)	How is your general attitude towards (the brand name)? BA1. not favorable at all – very favorable BA2. dislike very much – like very much	Baumeister et al., 2015; Boisvert, 2012

Note: all items were measured on a 7-point scale.

5.2.3 Results

Sample Characteristics and Nonresponse Bias Tests

Among the 541 eligible responses, 272 were assigned to the low-prestige (Coach) condition and 269 to the high-prestige (Louis Vuitton) condition. The mean age of the participants was 37.83 years old, with gender (male 48.9%, female 51.1%) and cities (Shanghai 50.5%, Beijing 49.5%) balanced, and an average monthly household income CNY 14673.92 (approximately USD 2173.33). Table 15 shows the sample demographic distribution in Study 2.

Table 15. Sample demographic distribution (Study 2a)

City	Demographic			Total
	Age	18-34	35-69	541 (100%)
Beijing		110 (41.0%)	158 (59.0%)	268 (49.5%)
Shanghai		104 (38.1%)	169 (61.9%)	273 (50.5%)
	Gender	Male	Female	541 (100%)
Beijing		134 (50.0%)	134 (50.0%)	268 (49.5%)
Shanghai		125 (45.8%)	148 (54.2%)	273 (50.5%)

	Household income				541 (100%)
Beijing		≤8500	8501-13000	≥13001	
		79 (29.5%)	110 (41.0%)	79 (29.5%)	268 (49.5%)
Shanghai		≤8500	8501-14000	≥14001	
		85 (31.1%)	107 (39.2%)	81 (29.7%)	273 (50.5%)

Note: The percentages are shown in parentheses.

The nonresponse bias was tested by comparing the sample characteristics with the census data as well as comparing the demographics of the early (the first week, 72%) and late (the second week, 28%) respondents (Armstrong & Overton, 1977). The sample characteristics closely followed the census information of Beijing and Shanghai in terms of gender and age; the average monthly household income (CNY 14673.92) was very close to the mean values of Beijing (CNY 14041.35) and Shanghai (CNY 14031.94) in 2017. Furthermore, the χ^2 tests confirmed that there was no difference between the early and late respondents in the demographics. Therefore, the nonresponse bias was not a problem for Study 2a.

Measurement Validity

CFA via AMOS 18.0 was conducted to examine the measurement validity of the survey items (Anderson & Gerbing, 1988). Five research constructs, brand attachment (2 sub-dimensions: brand-self connection and brand prominence), perceived risk, desire to gain face and sharing likelihood were evaluated. The multivariate normality was satisfactory (i.e., the skewness and kurtosis values ranged from -1.21 to 0.76), thus the MLE approach was robust and could be employed (Muthén & Kaplan, 1985). The measurement model appeared to have a good fit (χ^2(df=142)=653.72, CFI=.95, TLI=.94, RMSEA=.08, SRMR=.04). All the constructs had satisfactory psychometric properties including AVE (ranging from 0.67 to 0.91) and CR (ranging from 0.92 to 0.96), exceeding the recommended thresholds of 0.5 and 0.6, respectively (Bagozzi & Yi, 1988). All item loadings were significant,

indicating good convergent validity (Anderson & Gerbing, 1988). As shown in Table 16, in the correlation matrix, the square root of construct AVE (diagonal values) exceeded the corresponding correlations, indicating good discriminant validity (Fornell & Larcker, 1981). The measurement validity of Study 2a was achieved.

Table 16. Construct correlation matrix (Study 2a)

	BSC	BPR	SL	DG	PR
BSC	0.95				
BPR	0.80	0.96			
SL	0.04	-0.03	0.94		
DG	0.48	0.54	0.22	0.83	
PR	-0.19	-0.24	-0.50	-0.22	0.86

Note: BSC=brand-self connection, BPR=brand prominence, SL= sharing likelihood, DG=desire to gain face, PR=perceived risk; the diagonal values represent the square root of average variance extracted of constructs.

Assessment of Common Method Biases

To account for the potential influence of CMV on the hypothesis testing, this study estimated the same model used in Study 1, in which the method factor was included as a latent variable. The CFA results revealed that most of the loadings on the method factor were not significant (p>.05), indicating that CMV did not significantly affect the construct measures (Podsakoff et al., 2003). Likewise, the CMV only explained 7% of the variance averagely, which is negligible (Fombelle et al., 2016). These results suggested that CMV was unlikely to be a pervasive concern for Study 2a.

Hypothesis Testing

Participants in the high-prestige condition rated the brand to be more prestigious than in the low-prestige condition ($M_{low\ prestige}$=5.69 vs. $M_{high\ prestige}$=5.94, t(539)=2.64, p<.01), indicating the successful manipulation of brand prestige levels. Besides, the two brands were not negatively evaluated

(brand attitude: M_{Coach}=5.67, $M_{Louis\ Vuitton}$=5.63) and were well known by the participants (brand awareness: M_{Coach}=5.65, $M_{Louis\ Vuitton}$=5.68).

The OLS regression was conducted via SPSS 21.0 to test the hypotheses. Brand attachment served as the independent variable and sharing likelihood as the dependent variable. Brand prestige and desire to gain face entered the model as moderators. Perceived risk, age, gender, household income, and sharing experience were included as covariates. Brand prestige (1=high, 0=low) and gender (1=male, 0=female) were dummy coded. The regression results are shown in Table 17. In Table 17, Model I estimated the main effects only. Consistent with Study 1, the main effects of brand attachment (β=-.14, p<.01) was statistically significant and negative. The study also found brand prestige increased sharing likelihood (β=.53, p<.001). Among the control variables, perceived risk (β=-.61, p<.001) and sharing experience (β=.26, p<.001) both had significant effect on sharing likelihood. Model II further estimated the two-way interactions. As was expected, desire to gain face and brand attachment generated a significant positive interaction effect (β=.06, p<.05), indicating that the brand attachment effect became less negative with desire to gain face increasing. H2 was supported. In Model III, the three-way interaction term was added but not significant (β=.003, p=.96), H3 was not supported.

To better help interpret the moderating effect, the simple slope test was conducted (Aiken & West, 1991). The simple slope test chooses two values of the moderating variable and tests the slopes of the independent variable at the two chosen values. By comparing the two slopes, the simple slope test reveals how the moderator may strengthen or weaken the independent variable's effect. The study chose the values of desire to gain face at −1 and +1 standard deviation from the mean value to test how the slope of brand attachment may change (Aiken & West, 1991). When the value of desire to gain face increased from −1 to +1 standard deviation, the coefficient of brand

attachment was attenuated from β=-.22 (p<.01) to β=-.07 (p=.29). This test provided additional evidence for H2.

Table 17. OLS regression on sharing likelihood (Study 2a)

Variable	Model I	Model II	Model III
Independent variable			
BA	-.14 (-2.59)**	-.46 (-2.60)***	-.45 (-1.77)
Moderating variable			
BP (1=high)	.53 (3.63)***	.03 (.05)	.10 (.07)
DG	-.11 (-1.56)	-.41 (-2.52)*	-.40 (-1.86)
Control variable			
Perceived risk	-.61 (-12.67)***	-.60 (-12.39)***	-.60 (-12.38)***
Sharing experience	.26 (4.59)***	.25 (4.55)***	.25 (4.54)***
Age	.01 (1.21)	.01 (1.04)	.01 (1.04)
Household income	.0000002 (.04)	-.0000004 (-.06)	-.0000004 (-.07)
Gender (1=male)	.15 (1.02)	.14 (.92)	.14 (.92)
Interaction term			
BA × DG	-	.06 (2.04)*	.06 (1.31)
BP × BA	-	-.002 (-.02)	-.02 (-.05)
BP × DG	-	.10 (.69)	.08 (.30)
BA × DG × BP	-	-	.003 (.05)
Model fit	F(8,532)=26.79***	F(11,529)=19.95***	F(12,528)=18.25***
R^2	.29	.29	.29

Note: BA=brand attachment, DG=desire to gain face, BP=brand prestige; *p<.05, **p<.01, ***p<.001; only the unstandardized coefficients were shown, the numbers in parentheses indicate t-values.

5.2.4 Discussion

Study 2a found that brand attachment exerted a negative effect on sharing likelihood. In this relationship, the significant moderating role of desire to gain face was found. Regarding the desire to gain face effect, the higher the level of desire to gain face, the weaker the effect of brand attachment on sharing likelihood. That is, the consumers who were highly concerned about their need for face were less likely to integrate the branded product into their extended selves, making them easier to accept the CSS.

However, the moderating effect of desire to gain face did not vary in the low-prestige (Coach) and high-prestige (Louis Vuitton) conditions. This is contradictory to the view that only a high-prestige brand can better satisfy consumers' need for face (Li et al., 2015; Liao & Wang, 2009; Sun et al., 2017; Zhang et al., 2011). Instead, renting a product from a relatively low-prestige brand could also save one's face somehow.

5.3 Study 2b: The Car-Sharing Context

5.3.1 Participants and Procedure

Study 2b surveyed consumers from Beijing and Shanghai, because first-tier city consumers were major purchaser of famous car brands and CSSs were popular in the first-tier cities. Consumers in Beijing and Shanghai could better understand the research scenario. The study set age and household income level as sampling quotas, and balanced the sample in terms of gender (i.e., male and female) and cities (i.e., Beijing and Shanghai). During the late January and early February 2018, an online survey company recruited participants from Beijing and Shanghai. Initially, 873 participants entered the survey, but only 581 participants passed the screening question and instructional manipulation check. After incomplete responses were deleted, the final sample size was 551. The material used in Study 2b and the complete survey questionnaire can be found in Appendix E.

To select car brands for mock advertisement of car-sharing program, four car brands were selected from the top places of the Baidu ranking board. In a pretest, 47 respondents rated the brand awareness and perceived brand prestige levels of each brand. The brand names Volkswagen (low prestige) and BMW (high prestige) were selected. BMW was rated significantly higher than Volkswagen in terms of brand prestige (M_{BMW}=6.22 vs. $M_{Volkswagen}$=5.60, t(92)=3.49, p<.001). The two brands were well-known among the participants

(brand awareness: M_{BMW}=6.3; $M_{Volkswagen}$=6.15).

Study 2b used the same procedure as in Study 2a, only changing the products and brands. Participants were randomly assigned to the low-prestige (Volkswagen) or high-prestige (BMW) condition. Only those who knew the brand could continue the survey. Participants then responded to items measuring their brand attachment to BMW or Volkswagen. After that, an advertising poster of a new car-sharing platform was presented with the brand logo of BMW and Volkswagen. For example, in the BMW (high prestige) condition, the poster showed:

Now a commercial sharing platform is providing service of renting cars of BMW. The platform provides many new-designed cars which would bring you unique driving pleasure. You only need to pay a CNY 5,000 security deposit, then you can use the sharing plans.

For example, there are two basic sharing plans:

(1) renting a car of BMW 3-series for one day charges CNY 750 (you can pay by hour, CNY 31.25/hour);

(2) renting a car of BMW 3-series for one week or more charges CNY 600 per day, getting a 20% discount per day.

※ A car of BMW 3-series costs about CNY 350,000.

The rental price information was based on the real market, and the security deposit rate was adapted based on the product price. The instructional manipulation checking questions (Oppenheimer et al., 2009) were also displayed and only participants who passed the check could continue the survey. Then the decision-making scenario was shown. In the BMW condition, the scenario read:

Assume that you just found a new-designed car of BMW 3-series you

really like when browsing websites. It costs CNY 350,000, which is under your budget. It happens that recently you just want to experience this type of new-designed car for driving pleasure. The sharing platform mentioned above also provides this car for rent.

If you choose to buy, it would cost you CNY 350,000. If you rent it, you would only need to pay the rental fees. With CNY 350,000 you could rent it for 582 days (about one year and seven months) at maximum. How would you make your decision?

Participants rated the likelihood of their choice and then responded to items measuring perceived risk, desire to gain face, sharing experience, and demographics.

5.3.2 Measures

Study 2b used the same questionnaire as the one used in Study 2a, with the only change of brand names. For example, a brand attachment item in the BMW condition is "To what extent is BMW part of you and who you are?" The survey contained the measurement items of brand attachment, brand prestige, brand awareness, perceived risk, consumers' desire to gain face, sharing likelihood, sharing experience, and demographics (age, gender, monthly household income, etc.).

5.2.3 Results

Sample Characteristics and Nonresponse Bias Tests

Of the 551 eligible responses, 275 were assigned to the low-prestige (Volkswagen) condition and 276 to the high-prestige (BMW) condition. The mean age of the participants was 37.64 years old, with gender (male 49.5%, female 50.5%) and cities (Shanghai 50.6%, Beijing 49.4%) balanced, and an average monthly household income CNY 14539.95 (approximately USD

2153.49). Table 18 shows the sample demographic distribution in Study 2b.

Table 18. Sample demographic distribution (Study 2b)

City	Demographic				Total
	Age	18-34	35-69		551 (100%)
Beijing		113 (41.5%)	159 (58.5%)		272 (49.4%)
Shanghai		105 (37.6%)	174 (62.4%)		279 (50.6%)
	Gender	Male	Female		551 (100%)
Beijing		136 (50.0%)	136 (50.0%)		272 (49.4%)
Shanghai		137 (49.1%)	142 (50.9%)		279 (50.6%)
	Household income				551 (100%)
Beijing		≤8500	8501-13000	≥13001	
		78 (28.7%)	108 (39.7%)	86 (31.6)	272 (49.4%)
Shanghai		≤8500	8501-14000	≥14001	
		85 (31.1%)	107 (39.2%)	81 (29.7%)	273 (50.6%)

Note: The percentages are shown in parentheses.

The nonresponse bias in Study 2b was tested by contrasting the sample characteristics with the census data, and by comparing the demographics of the early (the first week, 71%) and late (the second week, 29%) respondents (Armstrong & Overton, 1977). The sample characteristics were very similar to the census information of Beijing and Shanghai, and the average monthly household income (CNY 14539.95) was very close to the mean values of Beijing (CNY 14041.35) and Shanghai (CNY 14031.94) in 2017. Moreover, the χ^2 tests found no difference between the early and late respondents in all the recorded demographics. Hence, the nonresponse bias was not a concern for Study 2b.

Measurement Validity

CFA via AMOS 18.0 was performed to examine the measurement validity. The items had satisfactory skewness and kurtosis values (ranging from -1.34 to 0.71) which were considered acceptable in terms of multivariate normality (Muthén & Kaplan, 1985), thus the MLE approach could be used. The

measurement model fitted the data well (χ^2(df=142)=665.01, CFI=.95, TLI=.94, RMSEA=.08, SRMR=.04). All the constructs had satisfactory psychometric properties and all item loadings were significant, indicating good convergent validity (Anderson & Gerbing, 1988). As is shown in Table 19, the square root of construct AVE exceeded the corresponding correlations, indicating good discriminant validity (Fornell & Larcker, 1981). The measurement validity of Study 2b was achieved.

Table 19. Construct correlation matrix (Study 2b)

	BSC	BPR	SL	DG	PR
BSC	0.94				
BPR	0.77	0.94			
SL	0.03	0.01	0.95		
DG	0.37	0.49	0.07	0.86	
PR	-0.02	-0.10	-0.49	-0.06	0.87

Note: BSC=brand-self connection, BPR=brand prominence, SL= sharing likelihood, DG=desire to gain face, PR=perceived risk; the diagonal values represent the square root of average variance extracted of constructs.

Assessment of Common Method Biases

This study conducted CFA to test the same model used in Study 1 to directly measure the influence of CMV on the construct measures. The method factor was modeled as a latent factor. The results showed that none of the loadings on the method factor were significant (p>.05), implying that CMV did not contaminate the construct measures (Podsakoff et al., 2003). Besides, on average, the CMV only explained 4% of the variance of the items, which is a very small proportion (Fombelle et al., 2016). Thus, CMV was not a major concern for Study 2b.

Hypothesis Testing

The manipulation of brand prestige was successful. Participants in the high-prestige condition rated the brands to be more prestigious than in the low-

prestige condition ($M_{low\ prestige}$=5.31 vs. $M_{high\ prestige}$=6.08, t(549)=7.78, p<.001). The two brands were not negatively evaluated (brand attitude: M_{BMW}=5.90, $M_{Volkswagen}$=5.57) and were well known (brand awareness: M_{BMW}=6.06, $M_{Volkswagen}$=5.79).

The OLS regression analysis was conducted via SPSS 21.0 for hypothesis testing. The regression models were the same as those of Study 2a, and results are shown in Table 20. In Model I where only the main effects were estimated only, there was a negative and statistically significant main effect of brand attachment (β=-.12, p<.05). Consistent with Study 2a, perceived risk (β=-.57, p<.001) and sharing experience (β=.30, p<.001) both had significant effect on sharing likelihood. Age (β=.02, p<.05) and gender (β=.35, p<.05) slightly increased sharing likelihood. In Model II, the two-way interactions were added. In support of H2, the interaction between desire to gain face and brand attachment was significant and positive, indicating that desire to gain face mitigate the negative effect of brand attachment. In Model III, the three-way interaction term was still not significant (β=.004, p=.95), H3 was not supported.

The simple slope test was conducted again (Aiken & West, 1991). This study chose the values of desire to gain face at −1 and +1 standard deviation from the mean value (Aiken & West, 1991). The test showed that, when the value of desire to gain face increased from −1 to +1 standard deviation, the effect of brand attachment declined from β=-.20 (p<.01) to β=-.05 (p=.46), which means that desire to gain face weakened the negative effect of brand attachment on sharing likelihood. This provided extra evidence for H2.

Table 20. OLS regression on sharing likelihood (Study 2b)

Variable	Model I	Model II	Model III
Independent variable			
BA	-.12 (-2.24)*	-.48 (-2.99)**	-.47 (-2.48)*
Moderating variable			
BP (1=high)	.20 (1.34)	.55 (.87)	.63 (.46)

DG	.05 (.78)	-.12 (-.86)	-.12 (-.70)
Control variable			
Perceived risk	-.57 (-12.16)***	-.57 (-12.07)***	-.57 (-12.00)***
Sharing experience	.30 (5.43)***	.29 (5.25)***	.29 (5.24)***
Age	.02 (2.61)**	.02 (3.33)*	.02 (2.32)*
Household income	-0.000009 (-1.58)	-.0000004 (-1.64)	-0.000009 (-1.64)
Gender (1=male)	.35 (2.37)*	.133(2.26)*	.33 (2.26)*
Interaction term			
BA × DG	-	.06 (2.08)*	.06 (1.65)
BP × BA	-	.13 (1.25)	.11 (.34)
BP × DG	-	-.19 (-1.49)	-.21 (-.72)
BA × DG × BP	-	-	.004 (.07)
Model fit	F(8,542)=28.47***	F(11,539)=21.47***	F(12,538)=19.65***
R^2	.30	.31	.31

Note: BA=brand attachment, DG=desire to gain face, BP=brand prestige; *p<.05, **p<.01, ***p<.001; only the unstandardized coefficients were shown, the numbers in parentheses indicate t-values.

5.2.4 Discussion

The results of Study 2b were consistent with those in Study 2a. With a negative main effect of brand attachment on sharing likelihood in the car-sharing context, consumers' high levels of brand attachment to Volkswagen (or BMW) predicted their preference for owning the branded cars. Besides, the moderating effect of desire to gain face existed in the car-sharing context as well. The face-oriented consumers would consider renting a car to promote their images, thus the brand attachment effect was weaker amongst them. The study again found that renting a car from a famous brand such as Volkswagen may have already satisfied consumers' need for face, even it was relatively low-prestige. This could be the reason why H3 was not supported.

Study 2 concluded that consumers' desire to gain face could mitigate the negative effect of brand attachment, and the moderating effect of desire to gain face was statistically significant in both the fashion bag-sharing and the car-sharing contexts. It is worth noting that neither Study 1 nor Study 2 found substantial differences between the fashion product-sharing and the car-

sharing contexts. This may be because the two product categories have similar consumption patterns; both fashion and car products are often publicly consumed and thus are related to consumers' public image (Bearden & Etzel, 1982; Wei & Jung, 2017). In the next chapter, Study 3 tested whether psychological ownership could mitigate the negative effect of brand attachment on sharing likelihood.

Chapter 6 Study 3: The Role of Psychological Ownership

6.1 Overview of Study 3

Study 3 tested the moderating effect of psychological ownership on the relationship between brand attachment and sharing likelihood in the fashion bag-sharing context. It employed a 2 (brand prestige: low/high) × 2 (psychological ownership: low/high) between-subjects design. Brand attachment served as the independent variable and sharing likelihood as the dependent variable. Brand prestige, desire to gain face and psychological ownership were moderators. Consumer perceived risk of using the CSS, sharing experience, age, gender, and household income were used as control variables in the analysis.

6.2 Methodology

6.2.1 Participants and Procedure

Study 3 surveyed consumers from Beijing and Shanghai, and sampling quotas were set for age and household income level, based on census data retrieved from the 2017 statistical yearbooks of Shanghai and Beijing. Respondents were balanced in terms of gender (i.e., male and female) and cities (i.e., Beijing and Shanghai). During the late December 2018, Beijing and Shanghai consumers were recruited by an online survey company to participate in the experiment. Initially, 1878 participants entered the survey, but only 513 participants passed the screening question and instructional manipulation check. After incomplete and inadequate responses were deleted, the final sample size was 482. The material used in Study 3 and the complete survey

questionnaire can be found in Appendix F.

To manipulate brand prestige levels (i.e., low/high), Study 3 relied on the same brand names used in Study 2a to develop the scenario, that is, Coach for the low-prestige condition and Louis Vuitton for the high-prestige condition, because the two brands have been successfully applied in Study 2a to manipulate the brand prestige levels. To manipulate the psychological ownership level (i.e., low/high), a pretest was conducted with 76 Chinese consumers. They were randomly assigned to high or low psychological level condition. Participants in the high-psychological ownership condition were told that the commercial sharing platform uses a reservation system and some popular bags need booking. At the beginning of every month, consumers should log onto the system to book the bag they would rent. The booking quotas are limited so that they have to *invest their time and effort* to get the booking quota. Now they successfully booked a bag they would like to rent. In the low-psychological ownership condition, consumers were told that the new commercial sharing platform uses a reservation system and consumers can easily book the bag they would rent. Now they easily booked a bag they would like to rent. As in the high-psychological ownership condition participants had to invest time and effort (i.e., invest the self) to book the bag, their psychological ownership level of the bag would be higher than those in the low-psychological ownership condition (Kirk et al., 2018; Pierce et al., 2003). In both conditions, participants were asked to rate their psychological ownership of the bag they would like to rent from the platform, using a 5-item, 7-point Likert scale from Kirk et al.'s (2018) study. An exemplary item is "Although I do not legally own this bag, I feel like this is 'my' bag" (1= strongly disagree, 7= strongly agree). Results showed that the manipulation was successful ($M_{\text{high psychological ownership}}$=4.46 vs. $M_{\text{low psychological ownership}}$=3.71, t(74)=2.79, p<.01).

In the main study, participants were randomly assigned to one of the four

experimental conditions and a screening question excluded those who did not know the brand. They then responded to items measuring their brand attachment to Coach or Louis Vuitton, and then the same mock advertising posters used in Study 2a were presented to introduce the new fashion-bag sharing platform. The instructional manipulation check questions (Oppenheimer et al., 2009) were displayed on the next page right after the poster. Participants who failed to pass this check stopped the survey immediately. After passing the check, participants read the text for psychological ownership manipulation. In high-psychological ownership condition, it said:

The new commercial sharing platform uses a reservation system. As many bags are very popular, at the beginning of every month, consumers are encouraged to log onto the system to book the bag. The booking quotas are limited so you have to invest your time and effort to book the bag.

Assume that you invested your time and effort to have successfully booked the bag you would like to rent.

In the low-psychological ownership condition, the text was:

The new commercial sharing platform uses a reservation system and consumers can easily book the bag they would rent.

Assume that you have easily booked the bag you would like to rent.

Then participants were asked to rate their psychological ownership of the bag they would like to rent from the platform, using the same scale adapted in the pretest. Then the decision-making scenario was further shown. The scenario was similar to that of Study 2a, except that a short text was added in the high-psychological ownership condition. For example, in the Louis

Vuitton high-psychological ownership condition, the scenario was:

Assume that you just found a fashionable Louis Vuitton bag you really like when browsing websites. It costs CNY 15,000, which is under your budget. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, the bag would cost you CNY 15,000. If you rent it, you would only need to pay the rental fees. With CNY 15,000 you could rent it for 374 days (about a year) at maximum.

Now you have invested a lot of effort and time to have successfully booked the bag. You can choose to rent it now. You may also give up the booking and choose to buy. This would not cause any penalty and your booking will be transferred to the next eligible user. How would you make your decision?

Participants then rated the likelihood that they would choose a sharing or ownership option. Then their perceived risk, desire to gain face, sharing experience, and demographics were measured.

6.2.2 Measures

The questionnaire development process and measurement items used were consistent with those of Studies 1 and 2, including brand attachment, perceived risk, consumers' desire to gain face, sharing likelihood, sharing experience, brand prestige, and demographics (age, gender, monthly household income, etc.). In addition, the 5-item *psychological ownership* scale from Kirk et al.'s (2018) study was also added for manipulation check. The measurement items of *psychological ownership* are presented in Table 21.

Table 21. Additional measurement items of Study 3

Construct	Item	Source
Psychological ownership (5 items)	•PO1. Although I do not legally own this bag, I feel like this is "my" bag. •PO2. I feel a very high degree of personal ownership of this bag. •PO3. I feel like this bag belongs to me. •PO4. I feel a strong sense of closeness with this bag. •PO5. This bag incorporates a part of myself. (strongly disagree – strongly agree)	Kirk et al., 2018

Note: items were measured on a 7-point scale.

6.3 Results

6.3.1 Sample Characteristics and Nonresponse Bias Tests

Out of the 482 eligible responses, 245 were assigned to the low-prestige (Coach) condition and 237 to the high-prestige (Louis Vuitton) condition; 237 were in the low-psychological ownership condition and 245 in the high-psychological ownership condition. The mean age of the participants was 33.22 years old, with gender (male 48.1%, female 51.9%) and city (Shanghai 49.6%, Beijing 50.4%) balanced, and an average monthly household income CNY 13,680.02 (approximately USD 2026.13). Table 22 shows the sample demographic distribution in Study 3.

Table 22. Sample demographic distribution (Study 3)

City	Demographic				Total
	Age	18-30	31-69		482 (100%)
Beijing		101 (41.6%)	142 (58.4%)		243 (50.4%)
Shanghai		76 (31.8%)	163 (68.2%)		239 (49.6%)
	Gender	Male	Female		482 (100%)
Beijing		112 (46.1%)	131 (53.9%)		243 (50.4%)
Shanghai		120 (50.2%)	119 (49.8%)		239 (49.6%)
	Household income				482 (100%)
Beijing		≤8900	8901-14700	≥14701	

	72 (29.6%)	109 (44.9%)	62 (25.5%)	243 (50.4%)
Shanghai	≤9000	9001-14500	≥14501	
	66 (27.6%)	97 (40.6%)	76 (31.8%)	239 (49.6%)

Note: The percentages are shown in parentheses.

This study assessed the nonresponse bias by comparing the sample characteristics with census information, and also by comparing the early (the first week, 71%) and late (the second week, 29%) respondents (Armstrong & Overton, 1977). The sample characteristics, and the average monthly household income (CNY 13,680.02) was very close to the average level of Beijing (CNY 14041.35) and Shanghai (CNY 14031.94) in 2017. The $\chi 2$ tests found no significant difference between the early and late respondents. Thus, the nonresponse bias was not a problem for Study 3.

6.3.2 Measurement Validity

CFA via AMOS 18.0 was first performed for the measurement validity test (Anderson & Gerbing, 1988). The skewness and kurtosis did not exceed |±1.00|, thus the multivariate normality assumption was deemed satisfactory (Muthén & Kaplan, 1985), the MLE approach could be used. The measurement model appeared to have a fair fit (χ^2(df=142)=578.03, CFI=.91, TLI=.89, RMSEA=.08, SRMR=.07). All item loadings were significant, indicating good convergent validity (Anderson & Gerbing, 1988). The square root of construct AVE (diagonal values) exceeded the corresponding correlations in the correlation matrix (see Table 23), indicating good discriminant validity (Fornell & Larcker, 1981). The measurement validity of Study 3 was established.

Table 23. Construct correlation matrix (Study 3)

	BSC	BPR	SL	DG	PR
BSC	.91				
BPR	.66	.88			

SL	-.07	.02	.92		
DG	.46	.46	.06	.66	
PR	-.25	-.27	-.26	-.10	.66

Note: BSC=brand-self connection, BPR=brand prominence, SL= sharing likelihood, DG=desire to gain face, PR=perceived risk; the diagonal values represent the square root of average variance extracted of constructs.

6.3.3 Assessment of Common Method Biases

Study 3 used the same model applied in Studies1 and 2 to directly assess the impact of CMV on construct measures. The method factor was included into the CFA model as a latent variable, and all the items were allowed to load on the method factor as well as their respective constructs. The results revealed that, on average, only 11% of the variance of items could be explained by the method factor, which is a very small proportion (Fombelle et al., 2016). Thus, common method bias was unlikely to threat the hypothesis testing results of Study 3.

6.3.4 Hypothesis Testing

The manipulation checks showed that consumers' psychological ownership was successfully elicited ($M_{high\ level}$=4.90 vs. $M_{low\ level}$=4.47, F(1,478)=14.31, p<.001) and it did not vary between the two brand prestige conditions (F(1,478)=0.19, p=.67). Participants in the high-brand prestige condition rated the brand to be more prestigious than in the low-brand prestige condition ($M_{low\ prestige}$=5.29 vs. $M_{high\ prestige}$=6.11, F(1,478)=88.32, p<.001), and this was independent of the psychological ownership conditions (F(1,478)=.23, p=.63). The manipulation of experimental conditions was successful.

The OLS regression was conducted via SPSS 21.0 for hypothesis testing. Brand attachment was the independent variable and sharing likelihood the dependent variable. Brand prestige (1=high, 0=low), desire to gain face, psychological ownership (1=high, 0=low) were the moderating variables.

Perceived risk, age, gender (1=male, 0=female), household income and sharing experience were control variables. The regression results are shown in Table 24. As expected, in Model I, brand attachment had a significant negative effect (β=-.23, p<.01) on sharing likelihood. Additionally, brand prestige increased sharing likelihood (β=.63, p<.001). In Model II, the two-way interactions were added. The interaction between brand attachment and desire to gain face was significant and positive (β=.11, p<.05), which means that brand attachment's effect was weaker when desire to gain face was higher. The interaction between brand attachment and psychological ownership was significant and positive (β=.31, p<.05), indicating that the high psychological ownership level mitigated the negative effect of brand attachment. H4 was supported. In Model III, the three-way interaction was added, and it was statistically insignificant (β=-.16, p=.15). Among the control variables, only perceived risk had significant effects (β=-.38, p<.001) after the interaction terms entered the model, decreasing sharing likelihood.

Table 24. OLS regression on sharing likelihood (Study 3)

Variable	Model I	Model II	Model III
Independent variable			
BA	-.23 (-2.94)**	-.98 (-3.36)***	-1.34 (-3.51)***
Moderating variable			
BP (1=high)	.63 (3.82)***	-.42 (-.49)	-3.56 (-1.54)
PO (1=high)	.22 (1.33)	-1.16 (-1.89)	-1.24 (-2.01)*
DG	.17 (1.95)	-.36 (-1.28)	-.70 (-1.92)
Control variable			
Perceived risk	-.40 (-6.03)***	-.38 (-5.78)***	-.38 (-5.76)***
Sharing experience	.12 (2.09)*	.10 (1.87)	.10 (1.74)
Age	.02 (2.09)*	.02 (1.89)	.02 (1.84)
Household income	-0.000005 (-.62)	-0.000002 (-.29)	-0.000002 (-.31)
Gender (1=male)	-.17 (-1.04)	-.21 (-1.27)	-.19 (-1.16)
Interaction term			
BA × PO	-	.31 (2.31)*	.32 (2.44)*
BA × DG	-	.11 (2.01)*	.19 (2.46)*
BP × BA	-	.14 (.92)	.91 (1.65)

BP × DG	-	.09 (.53)	.78 (1.55)
BA × DG × BP	-	-	-.16 (-1.46)
Model fit	$F(9,472)=7.51^{***}$	$F(13,468)=6.00^{***}$	$F(14,467)=5.73^{***}$
R^2	.13	.14	.15

Note: BA=brand attachment, DG=desire to gain face, BP=brand prestige, PO= psychological ownership; *p<.05, **p<.01, ***p<.001; only the unstandardized coefficients were shown, the numbers in parentheses indicate t-values.

The simple slope tests were conducted for a better understanding of the moderating effects (Aiken & West, 1991). The study chose the values of desire to gain face at −1 and +1 standard deviation from the mean value and tested the corresponding coefficients of brand attachment. When the value of desire to gain face increased from −1 to +1 standard deviation, the coefficient of brand attachment declined from β=-.31 (p<.001) to β=-.10 (p=.36). The coefficients of brand attachment under the two experimental conditions of psychological ownership (i.e., high vs. low psychological ownership) were also tested. Results showed that the effect of brand attachment was stronger under the low-psychological ownership condition (β=-.35, p<.001), but weaker under the high-psychological ownership condition (β=-.12, p=.23). The tests provided additional evidence for H2 and H4.

6.4 Discussion

The results of Study 3 replicated those of Studies 1 and 2. Study 3 found that brand attachment significantly decreased consumers' sharing likelihood, and this effect was moderated by consumers' desire to gain face. With consumers' desire to gain face increasing, the negative effect of brand attachment was attenuated and even became statistically insignificant. However, the moderating effect of desire to gain face was not strengthened by brand prestige.

In addition, psychological ownership also moderated the effect of brand attachment. In the low-psychological condition, brand attachment had a stronger negative effect on sharing likelihood; while in the high-psychological condition, the effect of brand attachment became weaker and insignificant. Consumers with a high level of psychological ownership would incorporate the shared bag into their extended selves and consider using sharing services as a way to maintain relationships with their attached brands. Thereby, Study 3 testified that high psychological ownership level could mitigate the negative impact of brand attachment.

Chapter 7 Discussion and Conclusions

7.1 Summary of Hypothesis Testing

Studies 1, 2, and 3 systematically tested the four hypotheses proposed in Chapter 3. Table 25 summarizes the hypothesis testing results. In all three studies, brand attachment consistently had significant negative effect on sharing likelihood, decreasing consumers' intention to participate in the CSS. In both Studies 2 and 3, the moderating effect of desire to gain face was attested. Consumers' desire to gain face could mitigate the negative effect of brand attachment on sharing likelihood. However, this moderating effect was not influenced by brand prestige. Additionally, psychological ownership also moderated the effect of brand attachment on sharing likelihood, attenuating its negative impact. Finally, 3 of the 4 hypotheses were supported by the studies. The findings confirmed the essential roles of brand attachment, desire to gain face, and psychological ownership in determining the use of CSSs.

Table 25. Hypothesis testing results

Hypothesis	Relevant study	Result
H1	Studies 1, 2 & 3	Supported
H2	Studies 2 & 3	Supported
H3	Studies 2 & 3	Not Supported
H4	Study 3	Supported

7.2 General Discussion

This study pointed out three research gaps in the CC literature. First, although many CSSs are using famous incumbent brands to catch consumers' attention and to promote adoption of the sharing systems, the theory of extended self

suggests that the more the consumers attach to the brand, the less likely they would use CSSs to rent the brand's products (Belk, 2010; Hellwig et al., 2015). The wrong choice of brand may cause business failure to commercial sharing companies. Therefore, understanding the effect of brand attachment on sharing likelihood is crucial for CSSs' success, yet no study so far has discussed this issue.

Second, while the extant literature implied that brand attachment may decrease sharing likelihood (Belk, 2010; Hellwig et al., 2015), there is no discussion on how to mitigate its negative effect on sharing likelihood. To address the issue, this study combined theories on face consciousness (Jin & Kang, 2010; Kim & Nam, 1998; Wei & Jung, 2017; Zhang, Cao, & Grigoriou, 2011) and extended self (Belk 1988, 2010) to explain how face consciousness may affect the relationship between brand attachment and sharing likelihood.

Third, previous research posited that psychological ownership played an important role in facilitating CC usage (Demyttenaere et al., 2016), but there is a dearth of studies empirically examined how it works. The study followed the theory of psychological ownership (Kirk et al., 2018; Peck & Shu, 2009; Pierce et al., 2003) and tested if psychological ownership could attenuate the negative effect of brand attachment on sharing likelihood.

Based on the three research gaps mentioned above, three research questions were proposed in Chapter 1; after analyzing the empirical results, this study is able to answer the research questions proposed in Chapter 1, which are discussed in detail next.

1. How does brand attachment affect consumers' likelihood of using a sharing system (i.e., sharing likelihood)?

Based on the theory of extended self (Belk, 1988, 2010), this study hypothesized a negative relationship between brand attachment and sharing likelihood (H1). In a series of empirical tests, the study consistently found

that brand attachment decreased consumers' sharing likelihood as the coefficients of brand attachment were statistically significant and negative (Study 1a: β=-.22, p<.01; Study 1b: β=-.19, p<.01; Study 2a: β=-.14, p<.01; Study 2b: β=-.12, p<.05; Study 3: β=-.23, p<.01), supporting H1. That is, if consumers are highly attached to the brand, they would be less likely to share the brand's product with others via the CSS. This is because consumers would integrate their attached brands into the extended self (Belk, 1988, 2010; Fedorikhin et al., 2008; Malär et al., 2011; Park et al., 2010; Thomson et al., 2005), and keeping ownership of the brand's products would be a safer way to construct, experience, and maintain the relationship between the self and the brand (Belk, 1988, 2010). Therefore, compared to sharing, purchasing products of their attached brands would be more preferable, leading to the negative effect of brand attachment on sharing likelihood.

This finding suggested that brand attachment is an essential factor in determining consumers' use of CSSs. Collaborating with a famous incumbent brand may not attract its loyal consumers to use the CSS because they prefer purchasing rather than sharing. CSS managers should choose the brand based on their targeted customer groups carefully to avoid the negative effect of brand attachment.

2. How do face consciousness and brand prestige influence the relationship between brand attachment and sharing likelihood?

This study posited that consumers' desire to gain face and brand prestige may alter the relationship between brand attachment and sharing likelihood. H2 hypothesized that consumers' desire to gain face could mitigate the negative effect of brand attachment. The test results supported H2 as the two-way interactions between brand attachment and desire to gain face were statistically significant and positive (Study 2a: β=.06, p<.05; Study 2b: β=.06, p<.05; Study 3: β=.11, p<.05), indicating that desire to gain face significantly

moderated the relationship between brand attachment and sharing likelihood. That is, the effect of brand attachment declined with increased desire to gain face, because face-oriented individuals may value the symbolism of the brand (i.e., extrinsic attribute) more than the brand's product per se (i.e., intrinsic attribute) (Bao et al., 2003; Sun et al., 2017). As long as their need for face can be satisfied, they care less about product ownership. Consequently, their brand attachment would decrease sharing likelihood less strongly. This finding is consistent with previous studies on consumers' face (Bao et al., 2003; Sun et al., 2017; Wei & Jung, 2017).

H3 hypothesized that a higher brand prestige level could strengthen the moderating effect of desire to gain face. The rationale behind H3 was that providing high-prestige brands could better satisfy consumers' need for face as high brand prestige stands for higher social image (Alden et al., 1999; Vigneron & Johnson, 1999); and if face-oriented consumers' need for face is satisfied, they would care less about product ownership (Bao et al., 2003; Sun et al., 2017; Wei & Jung, 2017). Surprisingly, the study results showed that the moderating effect of desire to gain face did not vary between the high and low brand prestige condition as the three-way interactions among brand attachment, desire to gain face and brand prestige were statistically insignificant (Study 2a: β=.003, p=.96; Study 2b: β=.004, p=.95; Study 3: β=-.16, p=.15). This finding means that low-prestige brands (Studies 2a & 3: Coach; Study 2b: Volkswagen) could also satisfy consumers' need for face and activate the moderating effect of desire to gain face.

The test results of H3 challenge the widely accepted view that only high-prestige brands could satisfy consumers' face need (Li et al., 2015; Liao & Wang, 2009; Sun et al., 2017; Zhang et al., 2011). This could be attributed to potential reasons. First, the study used famous brands in the manipulation of brand prestige level and thus it was likely that a famous brand might satisfy consumers' need for face (Bao et al., 2003; Cardon, 2009). Especially, these

brands are from the developed western countries (Coach from USA, Louis Vuitton from France, Volkswagen and BMW from Germany). Previous research showed that Chinese consumers thought purchasing foreign brands from the developed countries could save their face because these brands stood for economic success and international lifestyle, etc. (Jin & Kang, 2010). Second, face is a concept defined within an individual's social network (Brown & Levinson, 1987; Kim & Nam, 1998; Zhang et al., 2011). A low-prestige brand may be able to save face if it is popular in the social group (e.g., Coach is popular among some Chinese female consumers, even it was relatively low in prestige level in this study).

Taken together, the study cautiously concluded that Chinese consumers' face consciousness could mitigate the negative effect of brand attachment, but the role of brand prestige needs further inspection. Providing prestigious brands may not be the only solution to satisfy Chinese consumers' need for face. Nonetheless, a brand's decent and good social image is still important to attract face-oriented consumers.

3. What role does psychological ownership play in the relationship between brand attachment and sharing likelihood?

Also following Belk's (1988, 2010, 2014a) view of extended self and sharing, this study hypothesized that psychological ownership of the shared product could attenuate the negative effect of brand attachment on sharing likelihood (H4). Results of Study 3 supported H4 as the two-way interaction between brand attachment and psychological ownership was statistically significant and positive (β=.31, p<.05), indicating that psychological ownership significantly moderated the relationship between brand attachment and sharing likelihood. That is, when consumers' psychological ownership of the shared product was high, the negative effect of brand attachment on sharing likelihood became weaker. In the high-psychological ownership condition,

consumers would incorporate the shared product as a part of the extended self, thus they would use the product in the same way as they own it. Consequently, they would think using the shared product is also a way to reinforce the link between the self and the brand.

This finding implies that psychological ownership could act as a buffer against brand attachment's negative impact on sharing likelihood. CSS managers may consider enhancing consumers' psychological ownership of the shared product to dispel their resistance to use the CSS for renting products of their beloved brands.

7.3 Implications

The findings of this study confirmed that brand attachment was a significant factor in determining sharing likelihood (i.e., CSS usage), and that face consciousness and psychological ownership moderated the effect of brand attachment on sharing likelihood while brand prestige did not. These findings lead to a number of theoretical and managerial implications which are discussed in the following sections.

7.3.1 Theoretical Implications

The current study contributes to the academic literature in several ways. First, the study successfully applied the theory of extended self (Belk, 1988, 2010) to the brand level in the CC context. Previous research mostly focused on the product level when applying the concept of extended self in the CC context (Hellwig et al., 2015). However, this study found scientifically sound evidence that brands can be a part of the extended self, and consumers' brand attachment (i.e., to what extent the brand becomes a part of the extended self) negatively influences their intentions to use the shared products of the brand. The results also explain how product brands may influence consumers' adoption of an innovative business model. This can facilitate further

investigation on the CC topics from the brand level, as well as expand the research scope of extended self.

Second, the study results revealed that the social factor, face consciousness, is essential to the CSS usage in that it altered the relationship between brand attachment and sharing likelihood. Chinese consumers' consumption patterns are largely affected by their face consciousness, and they would lay great stress on how others would evaluate their consumption of goods and services (Chan, 2001; Cho, et al., 2013; Jin & Kang, 2010; Wei & Jung, 2017). In this cultural setting, face consciousness also interferes in the CSS usage decision-making. However, the brand characteristic, namely brand prestige, did not strengthen the moderating effect of face consciousness. Regardless of the brand prestige level, the moderating role of face consciousness remained significant. This finding implies that the roles of social factors such as face consciousness may be more salient than brand characteristics, which enriches the body of knowledge of CC studies, and encourages future studies to integrate social factors into the analysis and consider the role of culture.

Third, the study successfully applied the concept of psychological ownership into the CC context. As consumers do not legally own the shared products in the CC context, the role of psychological ownership would be more prominent (Belk, 2010, 2014a; Demyttenaere et al., 2016). However, no prior study explained and/or examined how psychological ownership might influence consumers' CC usage. As a first attempt, this study found that enhancing consumers' psychological ownership of the shared products could decrease their resistance to use the CSS caused by brand attachment, bridging the research gap. This finding may facilitate the application of psychological ownership to other CC research topics for a better understanding of CC phenomena.

7.3.2 Marketing Implications

The study provides managerial implications for the marketing practice. First, the study results suggest that CSS marketers should carefully choose the brands they would provide in the CSS based on their targeted customer segments, as brand attachment could negatively influence consumers' CSS usage. To minimize brand attachment effects, firms may collaborate with new designer-brands which are capable of providing innovative and unique designs, such that they can attract fashion-forward consumers.

Second, the study results suggested that face-oriented Chinese consumers would be an important market segment for CSSs because they are more likely to select a sharing option than those who are less concerned about face. To target this customer group, CSSs may provide brands with unique design to fulfill face-oriented consumers' need (Sun et al., 2017). Besides, contrary to the notion that a high-prestige brand can better satisfy face-oriented consumers' need, this study found that a low-prestige could also achieve so. Thus, collaboration with high-prestige brands may not be necessary because products from high-prestige brands are often expensive and difficult to store, which increases operations cost.

Third, CSS managers should make the best of the buffering effect of psychological ownership to promote CSS usage. As the study results showed, augmenting consumers' psychological ownership could dispel their resistance to use the CSS due to brand attachment. Managers can prevent the adverse effect of brand attachment by eliciting consumers' psychological ownership of the shared product, this can be done in several ways. One way is to increase consumers' investment on the shared products. For example, in this study consumers need to invest their effort and time to book the bag. Likewise, customizing the product could be another solution to elicit psychological ownership (Kirk et al., 2018), such as encouraging consumers to choose accessories to match the bag or clothes they would like to rent. Enhancing

consumers' feeling of controlling the product is also feasible, this could be realized by giving consumers' opportunities to touch the product (Peck & Shu, 2009). CSSs may consider opening off-line centers that showcase their products and create opportunities that consumers can touch and experience the products.

7.4 Limitations and Future Research Directions

This study inevitably has its limitations, suggesting future avenues. First, contrary to the hypothesis, the study did not find evidence that brand prestige could strengthen the moderating effect of desire to gain face. This may be due to the fact that the brands used in Studies 2 and 3 are from the developed western countries. Chinese consumers may think that using the brands from the developed western countries can save face (Jin & Kang, 2010). In addition, consumers' face concept may depend on their social reference groups (Bearden & Etzel, 1982; Brown & Levinson, 1987; Kim & Nam, 1998; Zhang et al., 2011). That is, a brand may boost face in one group but may not in another group. Thus, to clarify the role of brand prestige in face-saving, future studies may test the hypothesis with consumers from different countries and social groups for further insights.

Second, this study surveyed Chinese consumers to test the moderating effect of desire to gain face. China is a typical Confucian culture where collectivism is pervasive; whereas, in an individualistic culture such as the USA, the role of face consciousness may not be prominent (Jin & Kang, 2010; Son et al., 2013). Future studies should replicate the tests with consumers from a different cultural setting to explore the cultural differences and enhance the generalizability of the findings.

Third, the study results also suggest directions for innovation adoption research. The extant literature on consumers' innovation adoption deemed perceived risk as a primary inhibitor (Arts, Frambach, & Bijmolt, 2011;

Cowart, Fox, & Wilson, 2008; Pavlou, 2003), and perceived risk was found to decrease consumers' adoption of CC usage (e.g., Edbring et al., 2016; Lamberton & Rose, 2012). Nevertheless, this study found that brand attachment is also a suppressor of CSS usage. Perceived risk is the innovation characteristic associated with cognitive aspects of beliefs (i.e., how likely the bad consequences would happen), while brand attachment consists of more emotional aspects of beliefs (Fedorikhin et al., 2008; Jiménez & Voss, 2014; Malär et al., 2011; Thomson et al., 2005). Future studies should consider both perceived risk and brand factors when investigating the adoption of CC models and examine the findings in different CC contexts such as peer-to-peer renting and product swapping.

Finally, the aim of this study is to promote the adoption of CC models and facilitate the societal transition to a sustainable future (Heinrichs, 2013; Blättel-Mink, 2014; Nica, Potcovaru, 2015). However, the environmental and social impacts of CC are not well addressed in the extant literature. Future research should examine the environmental and social impacts of CC as a new sustainable consumption model (Botsman & Rogers, 2010). Thus far, the social and environmental impacts of CC have not been clearly examined and concerns about its future still exists (Barnes & Mattsson's, 2016; Martin, 2016; Martin, Upham, & Budd, 2015). This dissertation, which investigates consumer behavior in the CSS, can serve as a good start to establish the sustainable business model of CC.

Appendices

Appendix A: Questionnaire of the Preliminary Interview

Instruction:

This interview is about collaborative consumption. I would like to know your opinions and usage behaviors regarding it. First, I would explain some keywords used in this interview. “Collaborative consumption” is the phenomenon that people collaboratively use a resource, and users must pay a fee or other compensation, for example, the “sharing economy”. Commercial sharing systems are typical models of collaborative consumption, such as the bike-sharing companies Mobike and Ofo, the car-sharing services car2go and Zipcar, and the ride-sharing platform Didichuxing.

•Have you ever used CC models? What service(s) have you tried? What product(s) have you ever rented from CSSs?

•When and why would you use a sharing service?

•Have you ever used the CSS for a specific purpose/situation, or for a specific product? How do you make you decision of using the CSS in this situation?

• What is important to you when using CSSs? When using CSSs, do you think the brand name is an important factor?

The information below will be kept confidential and anonymous.

•What is your age? ___ years

•What is the highest level of education you have completed or are studying for?

A. High school or lower

B. Some college

C. Bachelor

D. Masters/some graduate school

E. Doctorate

•What is your occupation? _____

•What is your monthly personal income? _____ (In CNY)

•What is your marital status?

A. Married

B. Unmarried

•How often did you use CC in the last 6 months? On average, _____ times per month.

Thank you for sharing your opinions with me!

Appendix B: Survey Questionnaire of Study 1a

We are conducting a research study investigating your consumption behavior regarding sharing economy. We would like to request that you take a 10-minute survey. You are free to stop or withdraw your participation at any time without penalty or prejudice. Your participation is entirely voluntary with no risks. Your privacy will be protected as all of the information will be kept strictly anonymous. All participants must be 18 years of age or older.

Continuing to answer the questionnaire is an indication of your willingness to participate, and that you are at least 18 years old. We hope that you will be interested in taking part in this interview.

Thank you.

•Have you ever heard of Metersbonwe?

A. Yes

B. No

•Metersbonwe is a:

A. Car brand

B. Fashion brand

C. I'm not sure.

For each question below, please answer by selecting the number that best describes your opinions.

	not at all			----------			extremely
•1. To what extent is Metersbonwe part of you and who you are?	1	2	3	4	5	6	7
•2. To what extent do you feel personally connected to Metersbonwe?	1	2	3	4	5	6	7
•3. To what extent are your thoughts and feelings toward Metersbonwe	1	2	3	4	5	6	7

often automatic, coming to mind seemingly on their own?	
•4. To what extent do your thoughts and feelings toward Metersbonwe come to you naturally and instantly?	1 2 3 4 5 6 7

Instruction:

Now a commercial sharing platform is providing service of renting fashion clothes of Metersbonwe. The platform provides many new-released trendy designs of this brand. You only need to pay a CNY 1,000 security deposit, then you can use the sharing plans.

For example, there are two basic sharing plans:

(1) renting a piece of clothes of Metersbonwe for one day charges CNY 10;

(2) renting a piece of clothes of Metersbonwe for one week or more charges CNY 8 per day, getting a 20% discount per day.

(Another Page)

•How much is the security deposit mentioned in the instruction? (CNY)

A. 800

B. 1000

C. 500

D. 1200

•What is the discount rate for renting the product for a week?

A. 10%

B. 15%

C. 20%

D. 30%

Assume that you just found a fashionable Metersbonwe coat you really like when browsing websites. It costs CNY 500, which is under your budget. It happens that recently you just want to try something new like this. The

sharing platform mentioned above also provides this coat for rent.

If you choose to buy, it would cost you CNY 500. If you rent it, you would only need to pay the rental fees. With CNY 500 you could rent it for 62 days (about two months) at maximum. How would you make your decision?

	definitely purchase it						definitely rent it
•1. How likely would you make the decision of renting/purchasing?	1	2	3	4	5	6	7
	purchase the product						use renting service
•2. You would prefer to:	1	2	3	4	5	6	7
•3. You would be more likely to choose to:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

How likely do you feel renting clothes Metersbonwe from the sharing platform would lead to a loss because of:

	very unlikely						very likely
•1. your significant others think less highly of you;	1	2	3	4	5	6	7
•2. a mismatch between the sharing service and your self-image;	1	2	3	4	5	6	7
•3. financial risk involved;	1	2	3	4	5	6	7
•4. the risk of product/service performance failure;	1	2	3	4	5	6	7
•5. the risk of the product/service being unsafe;	1	2	3	4	5	6	7
•6. the time involved in solving problems with any of the product/service features.	1	2	3	4	5	6	7

Please select the number that best describes your experience.

	not at all						very often
•1. How often did you use sharing	1	2	3	4	5	6	7

systems (e.g., Airbnb, Didi Chuxing, Ofo bikes) in the last 6 months?

The information below will be kept confidential, and only be used for statistical analysis.

•What is your age? ___ years

•What is your marital status?

A. Married

B. Unmarried

•What is the highest level of education you have completed or are studying for?

A. High school or lower

B. Some college

C. Bachelor

D. Masters/some graduate school

E. Doctorate

•What is your monthly household income? _____

Appendix C: Survey Questionnaire of Study 1b

We are conducting a research study investigating your consumption behavior regarding sharing economy. We would like to request that you take a 10-minute survey. You are free to stop or withdraw your participation at any time without penalty or prejudice. Your participation is entirely voluntary with no risks. Your privacy will be protected as all of the information will be kept strictly anonymous. All participants must be 18 years of age or older.

Continuing to answer the questionnaire is an indication of your willingness to participate, and that you are at least 18 years old. We hope that you will be interested in taking part in this interview.

Thank you.

•Have you ever heard of BYD?

A. Yes

B. No

•BYD is a:

A. Car brand

B. Fashion brand

C. I'm not sure.

For each question below, please answer by selecting the number that best describes your opinions.

	not at all	----------					extremely
•1. To what extent is BYD part of you and who you are?	1	2	3	4	5	6	7
•2. To what extent do you feel personally connected to BYD?	1	2	3	4	5	6	7
•3. To what extent are your thoughts and feelings toward BYD often	1	2	3	4	5	6	7

automatic, coming to mind seemingly on their own?							
•4. To what extent do your thoughts and feelings toward BYD come to you naturally and instantly?	1	2	3	4	5	6	7

Instruction:

Now a commercial sharing platform is providing service of renting cars of BYD. The platform provides many new-designed cars which would bring you unique driving pleasure. You only need to pay a CNY 3,000 security deposit, then you can use the sharing plans.

For example, there are two basic sharing plans:

(1) renting a car of BYD for one day charges CNY 120 (you can pay by hour, CNY 5/hour);

(2) renting a car of BYD for one week or more charges CNY 96 per day, getting a 20% discount per day.

(Another Page)

•How much is the security deposit mentioned in the instruction? (CNY)

A. 2000

B. 3000

C. 1000

D. 1500

•What is the discount rate for renting the product for a week?

A. 10%

B. 15%

C. 20%

D. 30%

Assume that you just found a new-designed BYD car you really like when browsing websites. It costs CNY 120,000, which is **under your budget**.

It happens that recently you just want to experience this type of new-designed car for driving pleasure. The sharing platform mentioned above also provides this car for rent.

If you choose to buy, it would cost you CNY 120,000. If you rent it, you would only need to pay the rental fees. With CNY 120,000 you could rent it for 178 weeks (about three and a half years) at maximum. How would you make your decision?

	definitely purchase it						definitely rent it
•1. How likely would you make the decision of renting/purchasing?	1	2	3	4	5	6	7
	purchase the product						use renting service
•2. You would prefer to:	1	2	3	4	5	6	7
•3. You would be more likely to choose to:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

How likely do you feel renting cars of BYD from the sharing platform would lead to a loss because of:

	very unlikely						very likely
•1. your significant others think less highly of you;	1	2	3	4	5	6	7
•2. a mismatch between the sharing service and your self-image;	1	2	3	4	5	6	7
•3. financial risk involved;	1	2	3	4	5	6	7
•4. the risk of product/service performance failure;	1	2	3	4	5	6	7
•5. the risk of the product/service being unsafe;	1	2	3	4	5	6	7
•6. the time involved in solving problems with any of the product/service features.	1	2	3	4	5	6	7

Please select the number that best describes your experience.

	not at all			----------			very often
•1. How often did you use sharing systems (e.g., Airbnb, Didi Chuxing, Ofo bikes) in the last 6 months?	1	2	3	4	5	6	7

The information below will be kept confidential, and only be used for statistical analysis.

•What is your age? ___ years

•What is your marital status?

A. Married

B. Unmarried

•What is the highest level of education you have completed or are studying for?

A. High school or lower

B. Some college

C. Bachelor

D. Masters/some graduate school

E. Doctorate

•What is your monthly household income? _____

Appendix D: Survey Questionnaire of Study 2a

We are conducting a research study investigating your consumption behavior regarding sharing economy. We would like to request that you take a 10-minute survey. You are free to stop or withdraw your participation at any time without penalty or prejudice. Your participation is entirely voluntary with no risks. Your privacy will be protected as all of the information will be kept strictly anonymous. All participants must be 18 years of age or older.

Continuing to answer the questionnaire is an indication of your willingness to participate, and that you are at least 18 years old. We hope that you will be interested in taking part in this interview.

Thank you.

•What is your city of residence?

A. Beijing

B. Shanghai

C. Others

•What is your gender?

A. Male

B. Female

•Which age group are you currently in?

A. Younger than 18 years

B. 18-34 years

C. 35-69 years

D. 70 years or older

•What is your monthly household income level? (in CNY)

A. 8500 or less

B. Shanghai: 8501-14000 / Beijing: 8501-13000

C. Shanghai: 14001 or more / Beijing: 13001 or more

•Have you ever heard of Coach/Louis Vuitton?

A. Yes

B. No

• Coach/Louis Vuitton is a:

A. Car brand

B. Luxury fashion brand

C. I'm not sure.

How would you evaluate the brand Coach/Louis Vuitton? Please answer by selecting the number that best describes your opinions.

	strongly disagree			----------			strongly agree
•1. This brand is very prestigious.	1	2	3	4	5	6	7
•2. This brand has high status.	1	2	3	4	5	6	7
•3. This brand is very upscale.	1	2	3	4	5	6	7

How is your general attitude towards Coach/Louis Vuitton?

	not favorable at all			----------			very favorable
•1. Your attitude:	1	2	3	4	5	6	7
	dislike very much			----------			like very much
•2. Your attitude:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

	not at all			----------			extremely
•1. To what extent is Coach/Louis Vuitton part of you and who you are?	1	2	3	4	5	6	7
•2. To what extent do you feel personally connected to Coach/Louis Vuitton?	1	2	3	4	5	6	7
•3. To what extent are your thoughts and feelings toward Coach/Louis Vuitton often automatic, coming to mind seemingly on their own?	1	2	3	4	5	6	7

•4. To what extent do your thoughts and feelings toward Coach/Louis Vuitton come to you naturally and instantly?	1	2	3	4	5	6	7

	strongly disagree						strongly agree
• 1. I can recognize Coach/Louis Vuitton among other competing brands.	1	2	3	4	5	6	7
•2. I am aware of Coach/Louis Vuitton.	1	2	3	4	5	6	7
•3. Some characteristics of Coach/ Louis Vuitton come to my mind quickly.	1	2	3	4	5	6	7
•4. I can quickly recall the symbol or logo of Coach/Louis Vuitton.	1	2	3	4	5	6	7
•5. I have difficulty in imagining Coach/Louis Vuitton in my mind.	1	2	3	4	5	6	7

Instruction:

Please read the below advertisement carefully, and answer questions on the next page.

(Low-prestige condition: Coach)

(High-prestige condition: Louis Vuitton)

(Another Page)

•What product is used as an example on the advertisement?

A. BMW 3 series car

B. Volkswagen Jetta car

C. Louis Vuitton bag

D. Coach bag

•How much is the security deposit mentioned on the advertisement? (in CNY)

A. 1000

B. 3000

C. 5000

D. 8000

•What is the discount rate for renting the product for a week?

A. 10%

B. 15%

C. 20%

D. 30%

(Low-prestige condition: Coach)

Assume that you just found a fashionable Coach bag you really like when browsing websites. It costs CNY 1,200, which is **under your budget**. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, it would cost you CNY 1,200. If you rent it, you would only need to pay the rental fees. With CNY 1,200 you could rent it for 74 days (about two and a half months) at maximum. How would you make your decision?

(High-prestige condition: Louis Vuitton)

Assume that you just found a fashionable Louis Vuitton bag you really like when browsing websites. It costs CNY 15,000, which is **under your budget**. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, it would cost you CNY 15,000. If you rent it, you would only need to pay the rental fees. With CNY 15,000 you could rent it for 374 days (about a year) at maximum. How would you make your decision?

	definitely purchase it			----------			definitely rent it
•1. How likely would you make the decision of renting/purchasing?	1	2	3	4	5	6	7
	purchase the product			----------			use renting service
•2. You would prefer to:	1	2	3	4	5	6	7
•3. You would be more likely to choose to:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

How likely do you feel renting items of Coach/Louis Vuitton from the sharing platform would lead to a loss because of:

	very unlikely						very likely
•1. your significant others think less highly of you;	1	2	3	4	5	6	7
•2. a mismatch between the sharing service and your self-image;	1	2	3	4	5	6	7
•3. financial risk involved;	1	2	3	4	5	6	7
•4. the risk of product/service performance failure;	1	2	3	4	5	6	7
•5. the risk of the product/service being unsafe;	1	2	3	4	5	6	7
•6. the time involved in solving problems with any of the product/service features.	1	2	3	4	5	6	7

For each statement below, please select the number that best describes to what extent you agree with it.

	strongly disagree						strongly agree
•FC1. I hope people think that I can do better than most others	1	2	3	4	5	6	7
•FC2. I hope that I can talk about things that most others do not know	1	2	3	4	5	6	7
•FC3. I hope that I can possess things that most others thirst for	1	2	3	4	5	6	7
•FC4. It is important for me to get praise and admiration	1	2	3	4	5	6	7
•FC5. I hope to let people know that I have association with some big names	1	2	3	4	5	6	7
•FC6. I hope that I have a better life than most others in others' view	1	2	3	4	5	6	7

Please select the number that best describes your experience.

	not at all			----------			very often
•1. How often did you use sharing systems (e.g., Airbnb, Didi Chuxing, Ofo bikes) in the last 6 months?	1	2	3	4	5	6	7

The information below will be kept confidential, and only be used for statistical analysis.

•What is your age? ___ years

•What is your marital status?

A. Married

B. Unmarried

•What is the highest level of education you have completed or are studying for?

A. High school or lower

B. Some college

C. Bachelor

D. Masters/some graduate school

E. Doctorate

•What is your monthly household income? _____

Appendix E: Survey Questionnaire of Study 2b

We are conducting a research study investigating your consumption behavior regarding sharing economy. We would like to request that you take a 10-minute survey. You are free to stop or withdraw your participation at any time without penalty or prejudice. Your participation is entirely voluntary with no risks. Your privacy will be protected as all of the information will be kept strictly anonymous. All participants must be 18 years of age or older.

Continuing to answer the questionnaire is an indication of your willingness to participate, and that you are at least 18 years old. We hope that you will be interested in taking part in this interview.

Thank you.

•What is your city of residence?

A. Beijing

B. Shanghai

C. Others

•What is your gender?

A. Male

B. Female

•Which age group are you currently in?

A. Younger than 18 years

B. 18-34 years

C. 35-69 years

D. 70 years or older

•What is your monthly household income level? (in CNY)

A. 8500 or less

B. Shanghai: 8501-14000 / Beijing: 8501-13000

C. Shanghai: 14001 or more / Beijing: 13001 or more

•Have you ever heard of Volkswagen/BMW?

A. Yes

B. No

• Volkswagen/BMW is a:

A. Car brand

B. Luxury fashion brand

C. I'm not sure.

How would you evaluate the brand Volkswagen/BMW? Please answer by selecting the number that best describes your opinions.

	strongly disagree						strongly agree
•1. This brand is very prestigious.	1	2	3	4	5	6	7
•2. This brand has high status.	1	2	3	4	5	6	7
•3. This brand is very upscale.	1	2	3	4	5	6	7

How is your general attitude towards Volkswagen/BMW?

	not favorable at all						very favorable
•1. Your attitude:	1	2	3	4	5	6	7
	dislike very much						like very much
•2. Your attitude:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

	not at all						extremely
•1. To what extent is Volkswagen/ BMW part of you and who you are?	1	2	3	4	5	6	7
•2. To what extent do you feel personally connected to Volkswagen/ BMW?	1	2	3	4	5	6	7
•3. To what extent are your thoughts and feelings toward Volkswagen/ BMW often automatic, coming to mind seemingly on their own?	1	2	3	4	5	6	7

•4. To what extent do your thoughts and feelings toward Volkswagen/ BMW come to you naturally and instantly?	1	2	3	4	5	6	7

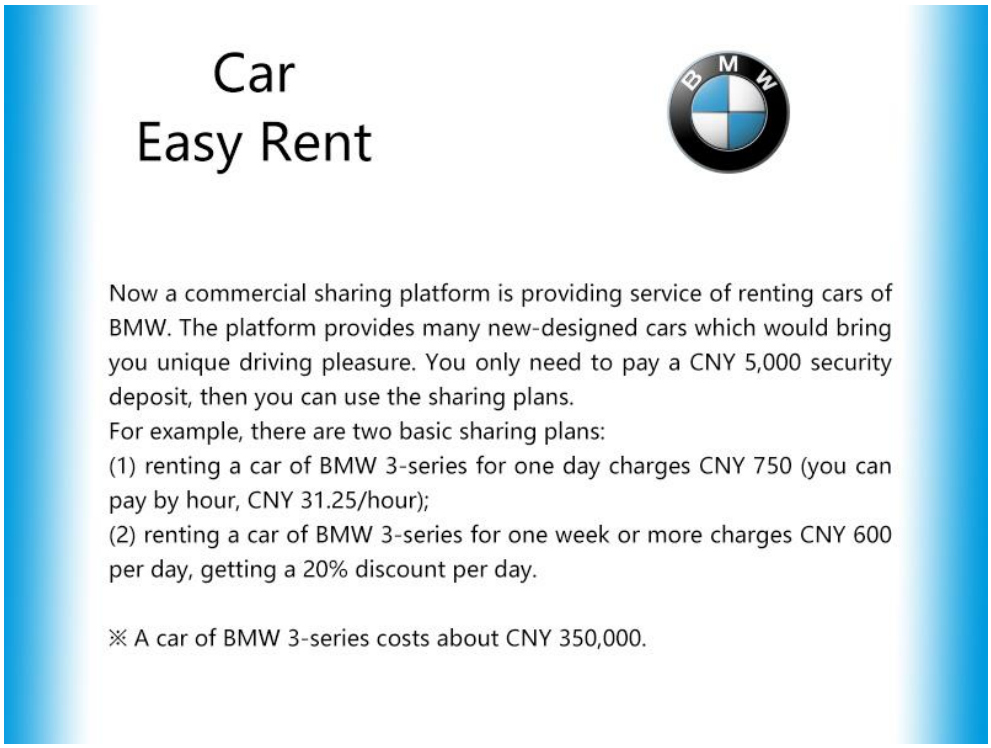
	strongly disagree			----------			strongly agree
• 1. I can recognize Volkswagen/ BMW among other competing brands.	1	2	3	4	5	6	7
•2. I am aware of Volkswagen/ BMW.	1	2	3	4	5	6	7
•3. Some characteristics of Volkswagen/BMW come to my mind quickly.	1	2	3	4	5	6	7
•4. I can quickly recall the symbol or logo of Volkswagen/BMW.	1	2	3	4	5	6	7
•5. I have difficulty in imagining Volkswagen/BMW in my mind.	1	2	3	4	5	6	7

Instruction:

Please read the below advertisement carefully, and answer questions on the next page.

(Low-prestige condition: Volkswagen)

(High-prestige condition: BMW)



(Another Page)

•What product is used as an example on the advertisement?

A. BMW 3 series car

B. Volkswagen Jetta car

C. Louis Vuitton bag

D. Coach bag

•How much is the security deposit mentioned on the advertisement? (in CNY)

A. 1000

B. 3000

C. 5000

D. 8000

•What is the discount rate for renting the product for a week?

A. 10%

B. 15%

C. 20%

D. 30%

(Low-prestige condition: Volkswagen)

Assume that you just found a new-designed Volkswagen Jetta you really like when browsing websites. It costs CNY 80,000, which is **under your budget**. It happens that recently you just want to experience this type of new-designed car for driving pleasure. The sharing platform mentioned above also provides this car for rent.

If you choose to buy, it would cost you CNY 80,000. If you rent it, you would only need to pay the rental fees. With CNY 80,000 you could rent it for 998 days (about two years and eight months) at maximum. How would you make your decision?

(High-prestige condition: BMW)

Assume that you just found a new-designed car of BMW 3-series you really like when browsing websites. It costs CNY 350,000, which is **under**

your budget. It happens that recently you just want to experience this type of new-designed car for driving pleasure. The sharing platform mentioned above also provides this car for rent.

If you choose to buy, it would cost you CNY 350,000. If you rent it, you would only need to pay the rental fees. With CNY 350,000 you could rent it for 582 days (about one year and seven months) at maximum. How would you make your decision?

	definitely purchase it			----------			definitely rent it
•1. How likely would you make the decision of renting/purchasing?	1	2	3	4	5	6	7
	purchase the product			----------			use renting service
•2. You would prefer to:	1	2	3	4	5	6	7
•3. You would be more likely to choose to:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

How likely do you feel renting cars of Volkswagen/BMW from the sharing platform would lead to a loss because of:

	very unlikely			----------			very likely
•1. your significant others think less highly of you;	1	2	3	4	5	6	7
•2. a mismatch between the sharing service and your self-image;	1	2	3	4	5	6	7
•3. financial risk involved;	1	2	3	4	5	6	7
•4. the risk of product/service performance failure;	1	2	3	4	5	6	7
•5. the risk of the product/service being unsafe;	1	2	3	4	5	6	7
•6. the time involved in solving problems with any of the product/service features.	1	2	3	4	5	6	7

For each statement below, please select the number that best describes to what extent you agree with it.

	strongly disagree			----------			strongly agree
•FC1. I hope people think that I can do better than most others	1	2	3	4	5	6	7
•FC2. I hope that I can talk about things that most others do not know	1	2	3	4	5	6	7
•FC3. I hope that I can possess things that most others thirst for	1	2	3	4	5	6	7
•FC4. It is important for me to get praise and admiration	1	2	3	4	5	6	7
•FC5. I hope to let people know that I have association with some big names	1	2	3	4	5	6	7
•FC6. I hope that I have a better life than most others in others' view	1	2	3	4	5	6	7

Please select the number that best describes your experience.

	not at all			----------			very often
•1. How often did you use sharing systems (e.g., Airbnb, Didi Chuxing, Ofo bikes) in the last 6 months?	1	2	3	4	5	6	7

The information below will be kept confidential, and only be used for statistical analysis.

•What is your age? ___ years

•What is your marital status?

A. Married

B. Unmarried

•What is the highest level of education you have completed or are studying for?

A. High school or lower

B. Some college

C. Bachelor

D. Masters/some graduate school

E. Doctorate

•What is your monthly household income? _____

Appendix F: Survey Questionnaire of Study 3

We are conducting a research study investigating your consumption behavior regarding sharing economy. We would like to request that you take a 10-minute survey. You are free to stop or withdraw your participation at any time without penalty or prejudice. Your participation is entirely voluntary with no risks. Your privacy will be protected as all of the information will be kept strictly anonymous. All participants must be 18 years of age or older.

Continuing to answer the questionnaire is an indication of your willingness to participate, and that you are at least 18 years old. We hope that you will be interested in taking part in this interview.

Thank you.

•What is your city of residence?

A. Beijing

B. Shanghai

C. Others

•What is your gender?

A. Male

B. Female

•Which age group are you currently in?

A. Younger than 18 years

B. 18-34 years

C. 35-69 years

D. 70 years or older

•What is your monthly household income level? (in CNY)

A. Shanghai: 8500 or less / Beijing: 8700 or less

B. Shanghai: 8501-14500 / Beijing: 8701-16000

C. Shanghai: 14501 or more / Beijing: 16001 or more

•Have you ever heard of Coach/Louis Vuitton?

A. Yes

B. No

• Coach/Louis Vuitton is a:

A. Car brand

B. Luxury fashion brand

C. I'm not sure.

How would you evaluate the brand Coach/Louis Vuitton? Please answer by selecting the number that best describes your opinions.

	strongly disagree			----------			strongly agree
•1. This brand is very prestigious.	1	2	3	4	5	6	7
•2. This brand has high status.	1	2	3	4	5	6	7
•3. This brand is very upscale.	1	2	3	4	5	6	7

How is your general attitude towards Coach/Louis Vuitton?

	not favorable at all			----------			very favorable
•1. Your attitude:	1	2	3	4	5	6	7
	dislike very much			----------			like very much
•2. Your attitude:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

	not at all			----------			extremely
•1. To what extent is Coach/Louis Vuitton part of you and who you are?	1	2	3	4	5	6	7
•2. To what extent do you feel personally connected to Coach/Louis Vuitton?	1	2	3	4	5	6	7
•3. To what extent are your thoughts and feelings toward Coach/Louis Vuitton often automatic, coming to mind seemingly on their own?	1	2	3	4	5	6	7

•4. To what extent do your thoughts and feelings toward Coach/Louis Vuitton come to you naturally and instantly?	1	2	3	4	5	6	7

	strongly disagree			----------			strongly agree
• 1. I can recognize Coach/Louis Vuitton among other competing brands.	1	2	3	4	5	6	7
•2. I am aware of Coach/Louis Vuitton.	1	2	3	4	5	6	7
•3. Some characteristics of Coach/ Louis Vuitton come to my mind quickly.	1	2	3	4	5	6	7
•4. I can quickly recall the symbol or logo of Coach/Louis Vuitton.	1	2	3	4	5	6	7
•5. I have difficulty in imagining Coach/Louis Vuitton in my mind.	1	2	3	4	5	6	7

Instruction:

Please read the below advertisement carefully, and answer questions on the next page.

(Low-prestige condition: Coach)

(High-prestige condition: Louis Vuitton)

(Another Page)

•What product is used as an example on the advertisement?

A. Nike bag

B. Giorgio Armani bag

C. Louis Vuitton bag

D. Coach bag

•How much is the security deposit mentioned on the advertisement? (in CNY)

A. 1000

B. 3000

C. 5000

D. 8000

•What is the discount rate for renting the product for a week?

A. 10%

B. 20%

C. 15%

D. 30%

(High-psychological ownership condition)

The new commercial sharing platform uses a reservation system. As many bags are very popular, at the beginning of every month, consumers are encouraged to log onto the system to book the bag. The booking quotas are limited so you have to invest your time and effort to book the bag.

Assume that you invested your time and effort to have successfully booked the bag you would like to rent.

(Low-psychological ownership condition)

The new commercial sharing platform uses a reservation system and consumers can easily book the bag they would rent.

Assume that you have easily booked the bag you would like to rent.

For this bag you rent from the platform, would you agree:

	strongly disagree						strongly agree
•1. Although I do not legally own this bag, I feel like this is "my" bag.	1	2	3	4	5	6	7
•2. I feel a very high degree of personal ownership of this bag.	1	2	3	4	5	6	7
•3. I feel like this bag belongs to me.	1	2	3	4	5	6	7
•4. I feel a strong sense of closeness with this bag.	1	2	3	4	5	6	7
•5. This bag incorporates a part of myself.	1	2	3	4	5	6	7

(Low-prestige condition: Coach)

1) Low-psychological condition

Assume that you just found a fashionable Coach bag you really like when browsing websites. It costs CNY 1,200, which is **under your budget**. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, it would cost you CNY 1,200. If you rent it, you would only need to pay the rental fees. With CNY 1,200 you could rent it for 74 days (about two and a half months) at maximum. How would you make your decision?

2) High-psychological condition

Assume that you just found a fashionable Coach bag you really like when browsing websites. It costs CNY 1,200, which is **under your budget**. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, it would cost you CNY 1,200. If you rent it, you would only need to pay the rental fees. With CNY 1,200 you could rent it for 74 days (about two and a half months) at maximum.

Now you have **invested a lot of effort and time** to have successfully

booked the bag. You can choose to rent it now. You may also give up the booking and choose to buy. This would not cause any penalty and your booking will be transferred to the next eligible user. How would you make your decision?

(High-prestige condition: Louis Vuitton)

1) Low-psychological ownership condition

Assume that you just found a fashionable Louis Vuitton bag you really like when browsing websites. It costs CNY 15,000, which is **under your budget**. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, it would cost you CNY 15,000. If you rent it, you would only need to pay the rental fees. With CNY 15,000 you could rent it for 374 days (about a year) at maximum. How would you make your decision?

2) High-psychological ownership condition

Assume that you just found a fashionable Louis Vuitton bag you really like when browsing websites. It costs CNY 15,000, which is **under your budget**. It happens that recently you just want to try something new like this. The sharing platform mentioned above also provides this bag for rent.

If you choose to buy, the bag would cost you CNY 15,000. If you rent it, you would only need to pay the rental fees. With CNY 15,000 you could rent it for 374 days (about a year) at maximum.

Now you have **invested a lot of effort and time** to have successfully booked the bag. You can choose to rent it now. You may also give up the booking and choose to buy. This would not cause any penalty and your booking will be transferred to the next eligible user. How would you make your decision?

	definitely purchase it			----------			definitely rent it
•1. How likely would you make the decision of renting/purchasing?	1	2	3	4	5	6	7
	purchase the product			----------			use renting service
•2. You would prefer to:	1	2	3	4	5	6	7
•3. You would be more likely to choose to:	1	2	3	4	5	6	7

For each question below, please answer by selecting the number that best describes your opinions.

How likely do you feel renting items of Coach/Louis Vuitton from the sharing platform would lead to a loss because of:

	very unlikely			----------			very likely
•1. your significant others think less highly of you;	1	2	3	4	5	6	7
•2. a mismatch between the sharing service and your self-image;	1	2	3	4	5	6	7
•3. financial risk involved;	1	2	3	4	5	6	7
•4. the risk of product/service performance failure;	1	2	3	4	5	6	7
•5. the risk of the product/service being unsafe;	1	2	3	4	5	6	7
•6. the time involved in solving problems with any of the product/service features.	1	2	3	4	5	6	7

For each statement below, please select the number that best describes to what extent you agree with it.

	strongly disagree			----------			strongly agree
•FC1. I hope people think that I can do better than most others	1	2	3	4	5	6	7
•FC2. I hope that I can talk about things that most others do not know	1	2	3	4	5	6	7
•FC3. I hope that I can possess things that most others thirst for	1	2	3	4	5	6	7
•FC4. It is important for me to get	1	2	3	4	5	6	7

praise and admiration							
•FC5. I hope to let people know that I have association with some big names	1	2	3	4	5	6	7
•FC6. I hope that I have a better life than most others in others' view	1	2	3	4	5	6	7

Please select the number that best describes your experience.

	not at all			----------			very often
•1. How often did you use sharing systems (e.g., Airbnb, Didi Chuxing, Ofo bikes) in the last 6 months?	1	2	3	4	5	6	7

The information below will be kept confidential, and only be used for statistical analysis.

•What is your age? ___ years

•What is your marital status?

A. Married

B. Unmarried

•What is the highest level of education you have completed or are studying for?

A. High school or lower

B. Some college

C. Bachelor

D. Masters/some graduate school

E. Doctorate

•What is your monthly household income? _____

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