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Sustaining the sharing economy

Relational and governance antecedents of sharing behaviors

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A black and white photograph of a garden path. The path is paved with bricks and leads into the distance. In the foreground, a dark, modern-style table with a curved top and a lattice-like base stands on the path. The background is filled with dense foliage and trees, creating a sense of depth and a quiet, natural atmosphere. The lighting is dramatic, with strong shadows and highlights.

**CONSUMERS' CHOICE
AMONG PEER-TO-PEER
SHARING PLATFORMS:
THE OTHER SIDE OF THE
COIN**

CHAPTER 2

ABSTRACT

Many peer-to-peer sharing platforms are transforming their business model from sharing for free to renting with or without in-person interactions. How will these changes affect consumers' participation in peer-to-peer sharing of personal items? The work studies consumers' choice among three business models that vary on two dimensions: 'free vs. renting' and 'with or without in-person interactions'. The novelty is to consider that consumers' choice can be driven by their perceptions of relationships among peers, which are shaped by the business models of sharing platforms. Perceptions of communal sharing relationships among peers are found to differ across business models and to predict consumers' choice among the platforms above and beyond the economic and social benefits that consumers seek. Interestingly, perceptions of communal sharing are not only found to explain the choice of a sharing for free business model over the two others, but also the choice of renting with in-person interactions over renting without in-person interactions. For managers of peer-to-peer sharing platforms, this means that renting does not make sharing completely similar to traditional market exchanges as long as in-person interactions are involved. For scholars, this calls for more work on the factors that bring about perceptions of communal sharing.

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2.1 INTRODUCTION

Peer-to-peer sharing refers to “consumers granting each other temporary access to under-utilized physical assets” (Frenken and Schor, 2017: 4-5). Peer-to-peer sharing is supported by online-based platforms (Wilhelms et al., 2017) that enable large-scale sharing among individuals who are either only weakly related along other social dimensions or complete strangers (Frenken and Schor, 2017; Schor, 2014). While a few platforms such as Airbnb have been tremendously successful, most peer-to-peer sharing platforms are still trying to figure out which business model will help them attract enough consumers to be viable in the long term.

The objective of this paper is to investigate systematically consumers' choice among three business models used by peer-to-peer sharing platforms – namely, (1) sharing for free and with in-person interactions among consumers, (2) renting with in-person interactions, and (3) renting without in-person interactions. While sharing for free with in-person interactions was the business model initially adopted by many peer-to-peer sharing platforms, quite a few platforms are now experimenting with business models that aim to increase the economic benefits as well as the convenience for consumers. First, some sharing platforms have moved from sharing for free to a rental scheme (i.e. sharing for a fee) because of a belief among managers of sharing platforms as well as scholars that sharing can only compete with traditional market exchanges if it is financially attractive to providers as well as users (Bardhi and Eckhardt, 2012; Eckhardt and Bardhi, 2015).¹ While for users accessing durable assets through peer-to-peer sharing platforms is generally less expensive than traditional market alternatives (i.e. buying and renting from a company), for providers sharing platforms can only offer an additional source of income when sharing takes the form of renting (Habibi et al., 2017; Schor, 2014). Second, some platforms have gone even further by adopting remote access technologies such as keyless entry into homes and cars and partnering with couriers for the pickup and delivery of household items. These remote access technologies aim to increase convenience for consumers as they allow transactions to take place without an in-person meeting of the provider and user of the personal item.

It is important to investigate whether consumers will choose platforms with business models that involve renting and no in-person interactions

because the sharing literature has argued that consumers are drawn to sharing in search of social as well as economic benefits and it has identified a tension in delivering both types of benefits (Belk, 2010, 2014a). This tension follows from the fact that the business models adopted in order to deliver economic benefits usually make peer-to-peer sharing more similar to traditional market exchanges and therefore could threaten the delivery of social benefits, such as the feeling to belong to a community and more social interactions, which have been found to be a common motivation to engage in peer-to-peer sharing (Belk, 2014a; Habibi et al., 2017; Schor, 2014).

To research what drives consumers' choice among the three business models, the paper starts with the social and economic benefits consumers seek in order to clarify the limits of what it already known in the literature. The paper focuses on these two types of benefits because they relate to the two dimensions along which the three business models differ from each other, namely (1) sharing for free vs. renting and (2) in-person interactions vs. no in-person interaction. The paper then goes on to examine the other side of the coin – namely, what the business models are perceived to offer – by building on Fiske's (1991, 1992) relational models theory. Relational models theory proposes that people have a set of four mental representations at their disposal to make sense of their relationships with others, of which three apply to peer-to-peer sharing (namely, communal sharing, equality matching, and market pricing), and the theory suggests that each mental representation signals the potential for different types of social benefits. On this basis, the three business models were hypothesized to lead to different mental representations of relationships among peers, which, in turn, were expected to help explain consumers' choice among the business models.

The hypotheses were tested with a joint evaluation design involving 601 respondents. In this within-subject design, respondents were asked to choose which online-based, peer-to-peer sharing platform they would prefer to participate in (either as provider or user) among three platforms whose descriptions match the three business models. In line with the literature, the social and economic benefits consumers seek were found to explain respondents' choice among the three business models. Furthermore, the three business models were found to differ in terms of the mental representations of peer-to-peer relationships: sharing for free scored highest on communal sharing, renting with in-person interactions highest on equality matching, and renting without in-person interactions highest on market pricing. Differences

in communal sharing perceptions helped explain consumers' choice between the three models. In contrast, differences in equality matching and market pricing perceptions had little to no explanatory power.

This work advances our knowledge of platform attractiveness in three ways. First, the study provides a new angle to approach platform attractiveness, namely consumers' mental representations of peer-to-peer relationships, that complements the existing findings on attractiveness based on the type of benefits that consumers seek. This new angle can help understand better the nature of the social benefits platforms can deliver. Second, the study shows that it is not making sharing more or less market-like that affects consumers' choice of platforms but rather making it more or less community-like. This is good news for managers of platforms who must find a way to both attract consumers and make money in order for their platform to survive. Third, looking at three business models that differ along two dimensions - free vs. renting and with vs. without in-person interactions - allows to contribute to the debate about which of the two dimensions matters in delivering social benefits: both dimensions turn out to matter.

2.2 THEORETICAL BACKGROUND

Peer-to-peer sharing platforms are intermediaries that connect online providers with users and facilitate peer-to-peer sharing (Hamari et al., 2016). What distinguishes these platforms from earlier market places such as eBay is that transactions do not involve a transfer of ownership: people borrow or rent someone else's personal items for a short period of time (Frenken and Schor, 2017). While many forecast an extraordinary future for the sharing economy, the truth is that, unlike Airbnb or Uber, many peer-to-peer sharing platforms are still in their infancy (Belk, 2014b) and will only be able to survive if they find a business model with which they can monetize the services they offer in facilitating peer-to-peer sharing. A business model reflects a "hypothesis about what customers want, and how an enterprise can best meet those needs, and get paid for doing so" (Teece, 2007: 1329). As they start up peer-to-peer sharing platforms often choose for a sharing for free model and, therefore, offer their intermediary services for free. However, sharing platforms can only survive in the longer term if they successfully switch to a business model with a value proposition that is not only attractive to participants but also enables the platform to capture enough value (Teece, 2010).

Some platforms have already transitioned to a new business model. An example is Peerby, a frontrunner when it comes to finding, borrowing or renting personal items, from power drills and barbecues to drones, from nearby neighbors (Morrissey, 2015). Founded in Amsterdam in 2012, Peerby.com is now active in 20 European cities, it counts over 500,000 members and \$ 1 billion worth of items in its database. Peerby initially adopted a sharing for free model and processed the lending-borrowing transactions among its participants free of charge, but in 2016 it launched a new business model, PeerbyGo, that facilitates renting transactions among participants from which the platform collects a commission. With PeerbyGo, the company also introduced the option of renting without in-person interactions by partnering with couriers for the pickup and delivery of household items, based on the belief that consumers value less in-person interactions than accessing others' personal items at a time that is convenient (Eilander, 2015).

Observing these changes in business model, the objective of this paper is to study consumers' choice among the two new business models involving renting (with and without in-person interactions) and the initial sharing for free business model. It is important to research the potential impact on these changes in business model on the attractiveness of platforms in consumers' eyes. First, it is known that e-businesses have often struggled to keep attracting customers when switching to a new business model in order to monetize their value proposition (Pauwels and Weiss, 2008). Second, removing in-person interactions to increase convenience has also shown to have an unexpected dark side. Turo, a U.S. based peer-to-peer car sharing platform (formerly known as RelayRides), has experienced the dangers of removing in-person interactions first hand. In 2012, seeking to increase convenience for its members, the sharing platform removed the need for members to meet in person by installing a tool that allows people to unlock cars via an app. Whilst this initiative seemed great on paper, the platform reverted in 2013 to owners and renters meeting face to face to hand over the car key on the argument that "Both owners and renters have shared their overwhelmingly positive experiences from meeting in person to exchange keys. It's one of the many aspects that makes the RelayRides experience really special and unique" (RelayRides, 2013).

This study researches consumers' choice among the three business models from two angles. First, it applies the existing arguments in the literature related to the economic and social benefits consumers seek. Second, it turns to a new,

complementary line of explanation based on relational models theory.

2.2.1 Sought benefits and choice among business models

With their difference in terms of sharing for free vs. renting and in-person interactions vs. no in-person interaction, the three business models are likely to be perceived as different in terms of the economic and social benefits they can deliver to consumers. The sharing literature has already convincingly argued that the search for social benefits, in addition to economic benefits, draws consumers to sharing. Social benefits include the psychological benefits of reinforcing the emotional bonds with others, of belonging to a community, and of having the possibility to do something good for others, while economic benefits relate to material utility and include cost savings, and additional income for providers (Hellwig et al. 2015; Henning-Thurau et al., 2007). There is a lot of anecdotal evidence that links sharing to social benefits. For example, Michael Green, founder of Sharehood, a platform on which members share their local resources for free, explained that the ability to make friends and be part of a community is the strongest motivation for people to sign-up and participate (Larkin, 2011). The promise of getting to know other people also drives participation in Couchsurfing, and even toy libraries (Belk, 2010; Ozanne and Ballantine, 2010). Whereas early scientific studies (Bardhi and Eckhardt, 2012; Lamberton and Rose, 2012) did not find social benefits to drive participation in sharing, later ones (Bucher et al., 2016; Habibi et al., 2016; Hamari et al., 2016) showed that social benefits matter to explain participation on sharing platforms.

Furthermore, Hellwig et al. (2015) found that consumers can be clustered according to the type of benefits they seek from sharing: whilst “sharing pragmatists” instead look for material benefits and convenience, “sharing idealists” are driven by social benefits “such as being part of a community or prosocial ideals linked to helping other” (Hellwig et al., 2015: 904). Hellwig et al. (2015), therefore, proposed, on the one hand, that “sharing pragmatists” should be attracted by business models emphasizing money and convenience. Translating this to the three business models studied here implies that consumers seeking economic benefits would be expected to choose renting without in-person interactions. On the other hand, Hellwig et al. (2015: 904) proposed that “sharing idealists” should be “attracted by business models that emphasize social and emotional benefits in their value proposition; for example, community-supported agriculture, neighborhood support such as

www.sharesomesugar.com, or the popular travel community CouchSurfing”. Among the three business models studied here, the sharing for free model is the one emphasizing most clearly social benefits. Consequently, the existing arguments in the literature lead to clear predictions regarding the relationships between the type of benefits consumers seek from participating in sharing and the choice among *two* of the three business models currently implemented by sharing platforms, namely the sharing for free model – the initial model of many peer-to-peer sharing platforms –, and the renting without in-person interactions model – described as desirable by managers of sharing platforms looking to offer more convenience to attract consumers:

H1a: The more consumers are driven by social benefits, the more likely they are to choose sharing for free over renting without in-person interactions.

H1b: The more consumers are driven by economic benefits, the more likely they are to choose renting without in-person interactions over sharing for free.

While it seems easy to draw hypotheses for sharing for free vs. renting without in-person interactions, to our knowledge, consumers’ perceptions of the benefits delivered by the different business models have not been researched as such. Furthermore, the existing literature is much less clear about the attractiveness of the third business model, which combines renting with in-person interactions. A number of authors have questioned whether monetized sharing transactions would have the desired effect of attracting more consumers on the ground that money crowds out social benefits. For example, Belk (2014a) argued that renting is not “true sharing” and Hellwig et al. (2015) wrote that emphasizing material utility and convenience could be less appealing or could even alienate “sharing idealists” (but they did not go as far as formulating a proposition about this relationship).

In contrast, other authors argued that it is possible to have attractive “dual-mode” business models that combine social and economic benefits in the mind of consumers (Habibi et al., 2017). Interestingly, recent research suggests that in-person interactions – rather than the absence of money – could be the key to reducing psychological distance and activating an emotional bond between peers involved in sharing and, therefore, the key to delivering

social benefits such as the feeling to belong to a community. In particular, Pera, Viglia, Grazzini and Dalli (2019) showed that, compared to larger-scale, more impersonal renting (Booking.com), more human connections between guests and hosts in peer-to-peer accommodation sharing (Airbnb) as well as in smaller-scale hotels (Booking.com) activate empathy in guests confronted with a poor experience, who are then less willing to provide a negative review. The importance of in-person interactions to foster a feeling to belong to a community is illustrated by Rosen, Lafontaine and Hendrickson (2011) who found that Couchsurfing's members who have not met face-to-face with other members have a lower sense of belonging to the community than those who have. In relation to distributed work -which, like peer-to-peer sharing, involves a high degree of technology mediated communication -, in-person interactions have been found to help establish an emotional bond (1) thanks to the engagement of the human body in the social interaction (not only physical appearance, body language, facial expressions, but also touching such as a handshake, sharing a drink, or "showing up" in person) and (2) thanks to informal conversation (jokes, gossip, how-are-the-kids questions) (Nardi and Whittaker, 2002). If in-person interactions are indeed the key to delivering social benefits, this could imply that, with respect to the social benefits, sharing for free is more similar to renting with in-person interactions than renting with in-person interactions is to renting without in-person interactions.

To sum up, the literature has offered an explanation of platform attractiveness in terms of fit between the nature of the benefits – social or economic – that consumers seek from participating in the sharing economy and the benefits that platforms deliver, but which benefits platforms with different business models can deliver, in consumers' eyes, has not been empirically investigated. Furthermore, there is reason to question whether delivering social benefits is primarily hampered by the introduction of money in peer-to-peer relationships or by the removal of in-person interactions. Therefore, to shed new light on consumers' preferences, the present work builds on Fiske's (1991, 1992) relational models theory. This theory offers a more complex understanding of human sociality than a simple social vs. economic dichotomy: it suggests putting the spotlight on perceptions of peer-to-peer relationships in order to grasp the benefits that consumers anticipate to get from sharing on a platform with a specific business model.

After an introduction to relational models theory, the arguments proceed in two steps. First, the three business models are argued to lead to three different views of relationships among peers. Second, these different perceptions of peer-to-peer relationships are expected to help explain consumers' choice among the peer-to-peer sharing platforms. Figure 2.1 depicts all the hypotheses.

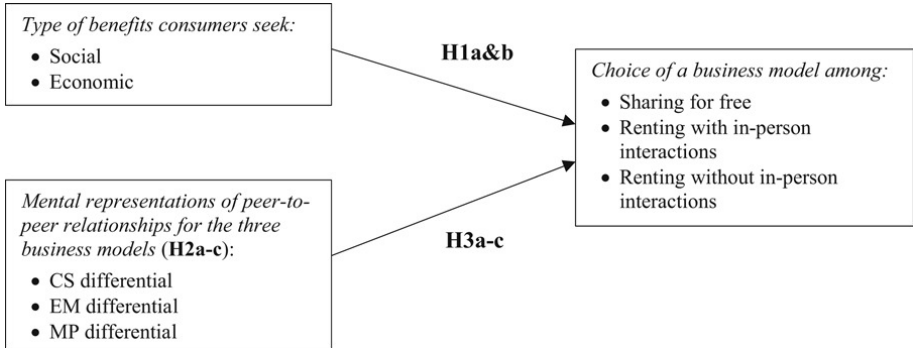


Figure 2.1 Hypothesized relationships

2.2.2 Business models and mental representations of peer-to-peer relationships

Whilst most research into the sharing economy opposes social and economic benefits, relational models theory suggests that humans use, not two but, four mental representations of relationships to make sense of all social relationships (Fiske, 1991, 1992, 2004; Fiske and Haslam, 2005; Rai and Fiske, 2011). Specifically, relational models theory posits that people (unconsciously) use four relational models “to plan and to generate their own action, to understand, remember and anticipate others’ action, to coordinate the production of collective action and institutions and to evaluate their own and others’ actions” (Fiske, 2004: 3). Each of these relational models conveys distinct expectations regarding who people are with respect to each other (“who am I?”), which in turn evoke distinct needs, motivations, and rules of behavior (“what is appropriate behavior for myself and my relational partner in this interaction?”) (Bridoux and Stoelhorst, 2016). Interacting individuals in a given context tend to converge on a single relational model to guide their interaction (Fiske, 1992).

Out of the four models, three are relevant for peer-to-peer sharing

relationships: communal sharing (CS), equality matching (EM), and market pricing (MP).² CS is the relational model that usually governs relationships among family members and close friends (Fiske, 1991). This model calls forward norms of care and responding to others' needs: no one keeps a tally on how much is given and received (Fiske, 1991). When CS is primed, individuals feel a sense of collective responsibility towards in-group members and are intrinsically motivated to contribute to the collective good to the best of their ability, irrespective of what they get out of the relationship (Fiske 1991; Lickel et al., 2006). In other words, altruism is the normatively appropriate behavior. This implies that bookkeeping regarding what is given and received undermines the relationship and self-interested behavior is totally taboo (Fiske, 1992; Fiske and Tetlock, 1997).

EM revolves around balancing what is given and received and, therefore, relationships governed by EM function according to norms of equality, balanced reciprocity, and tit-for-tat (Fiske, 1991, 1992). EM usually regulates relationships among people who see each other as peers such as neighbors, colleagues at the same hierarchical level, and more distant friends (Fiske, 1991). In relationships governed by EM, individuals are driven by a sense of obligation to reciprocate in-kind acts, much as we feel that we have to invite people around to our house, after we have been invited to theirs (Rai and Fiske, 2011; Sheppard and Sherman, 1998). Given the centrality of reciprocity, when EM is primed, self-interested behavior is inappropriate and generates negative emotions that regularly lead to an eye-for-an-eye form of revenge (Fiske, 1991; Rai and Fiske, 2011).

In the MP relational model, individuals are expected to be driven by a cost-benefit analysis whereby they contribute (money, effort, etc.) in direct proportion to the benefits they get out of the relationship (Fiske, 1991). Individuals' motivations to participate are a search for efficiency, the fulfillment of material needs, and equity. In relationships governed by MP, self-interest is therefore acceptable as long as it does not turn into cheating and opportunism (Bridoux and Stoelhorst, 2016). Contracts, prices, and systems to sanction opportunistic behaviors are usual features of relationships governed by MP (Bridoux and Stoelhorst, 2016).

Business models are expected to matter to explain how consumers perceive relationships on sharing platforms because consumers usually interact with strangers on these platforms, i.e. individuals with whom they have not interacted in the past and about whom they have limited, if any,

information (Schor, 2014). When interacting with strangers, contextual cues have a significant impact on people's perception of the nature of the interactions. Among others, this has been abundantly illustrated in social dilemma experiments where, when interactions are anonymous, changes in the rules and parameters of the game often affect substantially the levels of cooperative behavior (Haley and Fessler, 2005).

The three business models studied here are expected to lead to different perceptions of relationships among peers because each business model cues one relational model (CS, EM, or MP) more than the two other relational models, while the two other business models cue more another relational model. At the one end of the spectrum, a sharing for free business model is likely to more strongly cue CS than EM or MP. Given that providers make their personal items available for free and no tally is kept of what is given and received, sharing for free involves transactions that are for a large part driven by a social motivation. According to the sharing literature, the primary motivation for participation in sharing when for free is the opportunity to meet new people and learn about different cultures (Habibi et al., 2016). Belk (2014a: 16) classifies this form of sharing as 'sharing in' because actors incorporate those with whom they share as 'aggregate extended self', which is very close to the community identity that is central to CS. Furthermore, and in line with what is seen as inappropriate in a CS model, scholars have advised managers of platforms that have adopted this business model to avoid references to calculations as it could displace the communal aspect of sharing (e.g., Habibi et al., 2017).

At the other end of the spectrum, renting without in-person interactions is likely to more strongly cue MP than CS or EM. With this business model, sharing platforms offer a private experience to sharing, driven by pricing schemes (Eckhardt and Bhardi, 2012; Habibi et al., 2016). Peers can access others' personal items without coming into contact with the owner; removing therefore in-person interactions with other consumers. This is facilitated by remote access technologies, which enable access to cars and homes without the need to pick up the key, and by partnerships with service providers in mail and logistics, parcel pick up points and so forth. Whilst this increases convenience, it comes with increased anonymity and a focus on the individual material benefits from sharing: "customers calculate what they receive and their goal is to gain more utility in satisfying their needs (...) they would switch over to another competitor who offers better value for the

money and other cost saving benefits” (Habibi et al., 2017: 119; Van Glind, 2015). Customer reviews on Drivy Open, a French car sharing platform that operates using remote access technology, illustrate this point. Users comment, for example, that they found it “very cost effective”; to provide an excellent service “to anyone looking to hire a car at an affordable price”. Owners willing to share their car are recruited with the slogan “let your car work for you” (drivy.com). There is no mention of social benefits, either on the side of the users or the owners renting out their car. As one would expect if relationships are governed primarily by MP, complaints center around deposits and insurance. In short, this monetized business model is set up to appeal primarily to people’s material interests and transforms sharing into an impersonal exchange very similar to traditional market exchanges, with only one distinguishing feature: the asset that is shared belongs to a peer rather than to a company (The Economist, 2013).

A hybrid business model that combines renting with in-person interactions is likely to cue EM more strongly than MP or CS. On the one hand, scholars have found that consumers generally perceive renting with in-person interactions to be different from traditional market exchanges (Bucher et al., 2016; Habibi et al., 2016, 2017). Participants of sharing platforms with such a business model report to be driven by social benefits such as social connections as well as monetary benefits (Bucher et al., 2016). For example, while there is no denying that monetary incentives play a role, Airbnb put forwards ‘connections’ rather than ‘finance’ as the true reward (Airbnb, n.d.) and the exchange does not boil down to simply providing money for a bed. On the other hand, it is not so much a sense of community like in CS-based relationships but rather reciprocity that grounds transactions: hosts who go out of their way to make their guests feel at home expect good reviews and guest are expected to be dependable and treat their host’s home like it is a friend’s house. The arguments above lead to the following hypotheses:

H2a: A sharing for free model scores higher on CS than the other two business models.

H2b. A renting without in-person interactions model scores higher on MP than the other two business models.

H2c: A renting with in-person interactions model scores higher on EM than the other two business models.

2.2.3 Mental representations of peer-to-peer relationships and choice

The second step is to consider perceptions of peer-to-peer relationships as drivers of consumers' choice among the three business models. Platforms scoring higher on CS and EM are expected to be preferred over platforms scoring lower on these relational models, whereas platforms scoring higher on MP are expected to be chosen by fewer consumers than platforms scoring lower on MP. These expectations are based on the social benefits that consumers can anticipate to get on a platform given their perceptions of peer-to-peer relationships as scoring more or less high on CS, EM, and MP.

People regularly seek and maintain CS and EM relationships for the sake of the relationships themselves because these types of relationships fulfill human needs for sociality (Fiske, 1991). By comparison, the social benefits individuals get from engaging in relationships perceived as MP is lower because this type of relationships is often merely a means to facilitate the exchange of goods or services, with the exchange as the objective of the relationship rather than the relationship itself (Bridoux and Stoelhorst, 2016).

CS and EM deliver social benefits by contributing to building an identity that transcends the self (Bridoux and Stoelhorst, 2016). In relationships perceived as CS, relational partners are seen as community members who are very similar (i.e. they share the same important characteristics such as values and norms), which fulfills individuals' need for affiliation with social groups (Brickson, 2007; Bridoux and Stoelhorst, 2016). In relationships perceived as EM, individuals' identity stretches to include the relational partners' well-being, at least as long as the partners are perceived to be cooperative (Brickson, 2007; Bridoux and Stoelhorst, 2016). The tit-for-tat reciprocity at the core of EM fulfills people's need for equality (Bridoux and Stoelhorst, 2016), a widely shared social preference (Tricomi et al., 2010). EM relationships as the "common blueprint for connecting people (...) in every society people give matching gifts back and forth (...) what people get out of such even exchanges is not some kind of long term gain or material security, but the EM relationship itself" (Fiske, 1992: 703-704). In contrast to identities that transcend the self in CS and EM, the level of identification in MP is personal: the individual sees him/herself as different and therefore more detached from others (Brickson, 2007; Bridoux and Stoelhorst, 2016). In turn, more psychological distance

has been found to lead to lower empathy in users confronting with a poor experience on sharing platforms (Pera et al., 2019).

Moreover, both CS and EM signal respect and care for the relational partners and their property: in CS, the norm is altruism towards other community members, whereas in EM the norm is balanced reciprocity. These moral norms and the empathy they generate in participants should help reduce the perceived vulnerability from sharing with strangers in an online context. In contrast, MP signals self-interest, which increases perceived vulnerability and may lead consumers to shy away from a platform where relationships appear to be governed by this relational model in order to avoid being taken advantage of. These arguments lead to the following hypotheses:

H3a. The larger the difference in CS scores between two business models, the more likely consumers are to choose the business model with the higher score.

H3b. The larger the difference in EM scores between two business models, the more likely consumers are to choose the business model with the higher score.

H3c. The larger the difference in MP scores between two business models, the less likely consumers are to choose the business model with the higher score.

2.3 MATERIALS AND METHODS

2.3.1 Respondents and procedure

The respondents were recruited in the summer of 2016 in the major cities of the Netherlands (Rotterdam, The Hague, Amsterdam, and Utrecht). Respondents were approached in public areas such as at university campuses, parks, the beach, train stations, and shopping malls. Respondents were asked to give their email address, after which they were invited to take part in an online survey hosted by SurveyMonkey. The survey was in Dutch.³ Respondents were not financially compensated for their participation, but they could take part in a lottery where they could win an iPad. Many respondents volunteered to share the link to the survey with their colleagues and friends and on social media, resulting in some snowball sampling.

Of the 949 respondents who accessed the survey, 601 provided fully completed questionnaires. The sample comprised 334 women and 267 men (57 vs. 44%), 344 respondents held a university degree, 182 a higher vocational education, and 73 reported a lower education level than higher vocational (57 vs. 30 vs. 12%). The average age was 32.5 (SD=13.69). Approximately half of the respondents fell into a lower income bracket (< 1500 euros per month), 165 respondents (27%) enjoyed a medium income (between 1501 and 1500 euros per month) and 134 (22%) enjoyed a gross monthly income of 3501 euros or more. A little over half of the respondents lived in the four largest cities in the Netherlands, the remaining 278 respondents (46%) lived in a less densely populated area. With these characteristics this sample is not fully representative of the Dutch population. Specifically, based on the data from the Dutch Central Bureau of Statistics, our sample counts a higher proportion of women than a representative sample would (50.4% of women in the Dutch population), is younger (41.5 was the average age in the Netherlands in 2016), quite more educated (30% of the Dutch population had a university or higher vocational degree in 2016), and less affluent (the median gross income was €2585 in 2016) (www.cbs.nl).

In line with previous studies of the relational models (Haslam and Fiske, 1999; Simpson and Laham, 2015), a within-subject, joint evaluation design was used. Specifically, respondents were randomly assigned to the role of provider or user and read hypothetical descriptions of the three business models, after which they chose one platform on which to share and were asked to score each platform on CS, EM, and MP. By comparison to a separate evaluation design, a joint evaluation design provides respondents with a shared context for comparison (McGraw and Tetlock, 2005). Explicit comparisons allow for evaluating trade-offs, which results in more reasoned choices (for more information Bazerman and Moore (2013)). A joint evaluation design has been successfully implemented to study the impact of relational framing on taboo trade-offs, moral judgement, and group types (Lickel et al., 2006; McGraw and Tetlock, 2005; Simpson et al., 2016). These studies found people capable of making “subtle normative distinctions in relational schemas” when they evaluate multiple scenarios (McGraw and Tetlock, 2005: 8), while they also showed that evaluations of relational construal were similar to the ones obtained from designs in which respondents only read one scenario (Simpson et al., 2016).

After answering some questions related to demographics, respondents

were randomly assigned to the role of provider or user to ensure that the findings were not specific to either users (who access other consumers' underutilized assets) or providers (who offer those assets) (Schor, 2014). They then read a short introductory story specific to their role as user or provider in the context of online sharing of personal items (see Appendix A, Table A1). The objective was to provide respondents with sufficient background information to help them imagine themselves as a prospective participant of a peer-to-peer sharing platform, similar to the experimental study by Raaijmakers et al. (2015). This seems necessary because many Dutch people were not yet familiar with the online sharing of personal items (Duurzaam Ondernemen, 2016). For example, respondents allocated to the user role read that they needed a standing table for a party and that they had come across three alternatives to the more traditional options of renting professionally or buying online, which were described as too expensive.

Following the introductory story, all respondents read the same three descriptions, each of a hypothetical sharing platform with one of the three business models (see Appendix A, Table A1 for the descriptions). The descriptions contained the two important features of the three business models: the presence or absence of a monetary payment from the user to the provider ('renting' or 'sharing for free') and the nature of the social interactions ('in-person interaction' or 'no in-person interaction'). All three options were based on the real life-sharing platform PeerbyClassic (a platform with a sharing for free model) and its renting sibling PeerbyGo (Voor de Wereld van Morgen, n.d.). Building on the experimental work by Lamberton and Rose (2012), the non-monetary costs associated with the three business models were included. For example, for users of a sharing for free platform, the transaction is free of charge, however the user is expected to personally pick up the item from his or her neighbor, which costs time. The order in which the three descriptions were presented was counterbalanced. After reading the three descriptions, respondents were asked to choose which sharing platform they preferred to access or provide the sharing table.

Checks were included to capture the realism and credibility of the hypothetical situation of being a user/provider of a standing table and having to choose between the three platforms described. In line with Sen and Bhattacharya (2001), respondents rated the hypothetical situation on a 7-point answer scale (1= completely disagree; 7= completely agree): 'I found the situation in the above-mentioned scenario realistic' (realism) and 'I had

no problem imagining myself in the above-mentioned situation' (credibility). Respondents found it easy to imagine the hypothetical situation: the mean scores of realism was 5.30 and the mean score for credibility 5.25. Analysis of Variance (ANOVA) further revealed that ratings of realism and credibility were not significantly different between the role of provider and the role of user (for realism: $F(1, 599) = 0.01, p = 0.93$; for credibility: $F(1, 599) = 1.08, p = 0.30$).

2.3.2 Measures

We measured our dependent variable *platform choice* by asking respondents to make a hypothetical choice-decision between the three sharing platforms.

To measure the *perceptions of relationships among peers*, respondents read three short descriptions of the relational models (these descriptions and the other measures can be found in Appendix A, Table A2). For example, the CS description was: 'this is a platform that is characterized by a high degree of generosity. On this platform, people feel that they belong to the same group and have a lot in common with one another.' Next, respondents were asked to think about each of the three sharing platforms in turn and to rate to what extent the descriptions matched how they expected people to interact on this platform on a 7-point Likert scale (1= not at all; 7=to a great extent). This approach is similar to the one described in Biber, Hupfeld and Meier (2008) and Simpson et al. (2016) and allows to capture in a short amount of time respondents' perceptions of peer-to-peer relationships for each of the business models.

Economic benefits were measured with three items adopted from Hamari et al. (2016) and rated on a 7-point Likert answer scale (1= completely disagree; 7= completely agree). A representative item is 'I see myself participating in the sharing economy because it will benefit me financially'. The scale was reliable ($\alpha = 0.73$). *Social benefits* were measured with four items adopted from Paul, Hennig-Thurau, Gremler, Gwinner, and Wiertz (2009) on a 7-point Likert scale (1= completely disagree; 7= completely agree). One of the items is: 'I see myself participating in the sharing economy because it allows me to do something good for other members on the sharing platform'. The scale was reliable ($\alpha = 0.83$).

Several demographic factors were included as control variables, namely gender, age, level of education, income, and geographic location. Previous research has shown that low-income groups and older people are more

motivated by economic benefits and convenience (Böcker and Meelen, 2017), whilst women are more socially driven (Hellwig et al., 2015). Studies also found willingness to participate to be lower in less densely populated areas (Thebault-Spieker et al., 2015), indicating the need to control for urban living as well.

In addition to these demographic variables and a dummy to capture respondents' role as provider or user, two individual-level characteristics were also included as controls. First, environmental benefits were measured with a single item coming from Hamari et al. (2016). Whilst we did not expect the three business models to differ with regard to environmental benefits, we decided to control for this type of benefits as it is often mentioned as a driver of people's participation in the sharing economy (e.g., Schor, 2014). Second, given Hellwig et al.'s (2015) findings that participants can be segmented based on generosity and generalized reciprocity, we included a measure of *other-orientation* using Schwartz's (1994) self-transcendence as suggested by Schuler and Cording (2006). Self-transcendence corresponds to an other-oriented view of interactions and expresses "acceptance of others as equals and concern for their welfare" (Schwartz, 1994: 25). Self-transcendence includes the values universalism (understanding, appreciation, tolerance, and protection for the welfare of all people and for nature) and benevolence (preservation and enhancement of the welfare of people with whom one is in frequent contact) (Schwartz, 1994). Self-transcendence was measured using the 10 portraits from the portrait value questionnaire that measure universalism and benevolence (Schwartz et al., 2001). Each short portrait describes a person's goals and aspirations and respondents have to answer 'how much like you is this person?' on a 6-point Likert scale (1= not like me at all; 6= very much like me). The reliability of the scale was good ($\alpha=0.80$).

2.4 RESULTS

This results section is structured in three steps: (1) the descriptive statistics and correlations; (2) the results related the mental perceptions of peer-to-peer relationships (H2a and b); and (3) the results related to the drivers of consumers' choice of one of the three peer-to-peer sharing platform (H1a and b and H3a-c). Presenting together the results for the effects of the type of benefits consumers seek (H1a and b) and the differences in mental representations of peer-to-peer relationships across the business models

(H3a-c) makes it possible to show that the drivers suggested by relational models theory complement what is already known in terms of the social and economic benefits consumers seek.

2.4.1 Descriptive statistics and correlations

As indicated in Table 2.1, the 601 respondents were divided relatively equally across the 'user' (48.4%) and 'provider' scenarios (52.6%) and across the 12 different versions (user/provider x 6 sequences of the business models). Cross-tabs analysis showed no significant association between the order in which the platforms were presented and respondents' platform choice ($\chi^2 = 8.94$; $p = 0.66$).

2.4.2 Business models and mental representations of peer-to-peer relationships

Respondents were expected to rate the three hypothetical sharing platforms differently on the three relational models. Specifically, sharing for free was expected to score higher on CS compared to the other two business models (H2a), renting with in-person interactions to score higher on EM than the other two business models (H2b) and finally renting without in-person interaction to score higher on MP compared to the other two business models (H2c). These hypotheses were tested with a series of separate one-way repeated-measures ANOVAs with post-hoc pairwise comparisons (Wendorf, 2004). Whenever necessary we corrected the degrees of freedom with a Greenhouse-Geisser correction (Abdi, 2010). Table 2.2 shows the mean scores on CS, EM, and MP across the three business models. The results of the ANOVAs reported in Table 2.2 revealed that these mean scores were significantly different across the three business models: for CS ($F(1.84, 1115.65) = 958.06$, $p < 0.001$), on EM ($F(1.82, 1100.51) = 47.13$, $p < 0.001$), and on MP ($F(1.66, 1101.43) = 357.41$, $p < 0.001$).

Table 2.1 Descriptives and correlations

Variable	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 Sharing for free vs. renting without in-person interactions	427	0.70	0.46																							
2 Renting with in-person interactions vs. renting without in-person interactions	301	0.58	0.49																							
3 Sharing for free vs. renting with in-person interactions	474	0.63	0.48																							
4 CS differential	601	2.59	1.62	0.07	0.08	-0.02																				
5 EM differential	601	0.21	1.88	0.22**	0.21**	0.02	-0.01																			
6 MP differential	601	-1.91	2.15	0.08	0.03	0.05	-0.39**	0.21**																		
7 CS differential	601	1.37	1.39	0.04	0.19**	-0.154**	0.64**	0.02	-0.17**																	
8 EM differential	601	0.63	1.46	0.09	0.16**	-0.09	0.20**	0.58**	-0.14**	0.20**																
9 MP differential	601	-0.14	1.26	0.10*	0.10	0.00	-0.08	0.09*	0.48**	0.06	0.38**															
10 CS differential	601	1.22	1.29	0.04	-0.09	0.14**	0.56**	-0.03	-0.31**	-0.27**	0.04	-0.16**														
11 EM differential	601	-0.42	1.57	0.19**	0.09	0.11*	-0.20**	0.66**	0.37**	-0.17**	-0.23**	-0.24**	-0.08													
12 MP differential	601	-1.22	1.67	-0.02	-0.06	0.04	-0.30**	0.19**	0.73**	-0.06	-0.09*	0.19**	-0.32**	0.30**												
13 Economic benefits	601	5.23	0.97	-0.22**	-0.03	-0.21**	0.06	-0.12**	0.00	0.07	-0.03	0.07	0.00	-0.11**	0.01	(0.73)										
14 Social benefits	601	3.99	1.21	0.37**	0.17**	0.24**	-0.06	0.14**	0.06	-0.02	0.04	0.05	-0.05	0.14**	0.06	-0.10*	(0.83)									
15 Environmental benefits	601	4.88	1.29	0.15**	0.08	0.09	-0.03	0.11**	-0.01	-0.02	0.04	-0.04	-0.02	0.09*	0.01	0.00	0.44**									
16 Other-orientation	601	0.33	0.48	0.22**	0.11*	0.13**	-0.10*	.158**	0.00	-0.08	0.09*	0.08	-0.05	0.10*	-0.02	-0.10*	0.31**	0.37**	(0.80)							
17 Provider	601	0.52	0.50	-0.01	0.05	-0.06	0.07	0.02	-0.12**	0.03	-0.01	-0.12**	0.06	0.04	-0.08	-0.10*	0.03	-0.03	0.06							
18 Age	601	32.53	13.69	0.17**	-0.04	0.21**	-0.09*	0.22**	0.04	-0.11**	0.06	-0.03	0.00	0.21**	0.01	-0.34**	0.22**	0.23**	0.34**							
19 Female	601	0.56	0.50	0.04	-0.03	0.06	-0.07	-0.02	-0.04	-0.13**	-0.05	-0.04	0.05	0.01	-0.02	0.03	0.09**	0.11**	0.19**							
20 Education lower	601	0.12	0.33	-0.02	-0.08	0.06	-0.02	-0.02	0.06	0.00	-0.05	0.00	-0.03	0.03	0.06	-0.01	0.06	-0.03	-0.02	0.01	-0.01	0.08				
21 Education higher vocational	601	0.30	0.46	-0.01	0.00	-0.01	-0.10*	0.01	0.08	0.05	-0.02	0.06	-0.08	0.03	0.02	-0.08	-0.02	-0.07	0.10*	0.00	0.12**	0.06	-0.25**			
22 Income medium	601	0.27	0.45	-0.06	-0.13*	0.07	-0.01	0.00	0.04	-0.02	-0.09*	-0.07	0.01	0.09*	0.07	-0.06	0.05	0.03	0.05	0.03	0.19**	0.02	0.00	0.17**		
23 Income high	601	0.22	0.42	0.12*	0.01	0.12*	0.02	0.15**	-0.02	-0.03	0.12**	-0.01	0.06	0.06	-0.06	-0.22**	0.09*	0.08*	0.04	-0.04	0.46**	-0.17**	-0.16**	0.01	-0.33**	
24 Urban living	601	0.54	0.50	-0.05	-0.02	-0.03	0.01	-0.07	-0.05	0.01	-0.04	-0.06	0.00	-0.05	0.00	0.12**	-0.06	0.06	-0.04	0.02	-0.19**	0.03	-0.16**	-0.21**	-0.01	0.09*

Note. Some cells are empty by construction of the dummy variables. Cronbach alphas are reported in brackets on the diagonal. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed).

Table 2.2 Scores of the three business models on the three relational models

Relational model	Sharing for free		Renting with interactions		Renting without interactions		F-test for each relational model ^a	η_p^2
	M	SD	M	SD	M	SD		
Communal Sharing (CS)	5.97	0.96	4.76	1.06	3.40	1.25	958.06***	0.61
Equality Matching (EM)	4.92	1.30	5.34	1.03	4.70	1.26	47.31***	0.07
Market pricing (MP)	3.57	1.52	4.79	1.12	5.48	1.14	357.41***	0.37

^aThe Greenhouse-Geiser adjustment is reported in all cases because the sphericity assumption was violated
 *** $p < 0.001$

Table 2.3 Post hoc pairwise comparisons between the three business models

Relational Model	Compare	Mean difference	95% confidence interval	
			Lower	Upper
Communal Sharing (CS)	Sharing for free vs. Renting without in-person interactions	2.57* **	2.41	2.73
	Renting with in-person interactions vs. Renting without in-person interactions	1.36* **	1.22	1.49
	Sharing for free vs. Renting with in-person interactions	1.22* **	1.09	1.34
Equality Matching (EM)	Renting with in-person interactions vs. Sharing for free	0.42* **	0.27	0.57
	Renting with in-person interactions vs. Renting without in-person interactions	0.64* **	0.50	0.78
	Sharing for free vs. Renting without in-person interactions	0.22* **	0.04	0.40
Market Pricing (MP)	Renting without in-person interactions vs. Sharing for free	1.91* **	1.70	2.12
	Renting without in-person interactions vs. Renting with in-person interactions	0.70* **	0.55	0.84
	Renting with in-person interactions vs. Sharing for free	1.21* **	1.05	1.38

A Bonferroni correction has been applied
 *** $p < .01$, ** $p < .01$, * $p < .05$

In support of H2a, a post-hoc test revealed (see Table 2.3) that CS perceptions were significantly higher for sharing for free ($M=5.977$, $SD= 0.96$) than for renting with in-person interactions ($M=4.776$, $SD= 1.06$, $p<0.001$) and for renting without in-person interaction condition ($M=3.40$, $SD= 1.25$, $p<0.001$). Results also supported H2b: renting with in-person interactions was scored higher on EM ($M=5.34$, $SD=1.02$) than sharing for free ($M=4.92$,

SD= 1.30, $p < 0.001$) and renting without in-person interactions ($M = 4.70$, $SD = 1.26$, $p < 0.001$). Finally, in line with H2c, pairwise comparisons indicated that renting without in-person interactions was scored significantly higher on MP ($M = 5.48$, $SD = 1.14$) than sharing for free ($M = 3.57$, $SD = 1.52$, $p < 0.001$) and renting with in-person interactions ($M = 4.79$, $SD = 1.12$, $p < 0.001$). The partial eta squared showed the effect size of the type of business model on CS perceptions to be very large ($\eta_p^2 = 0.61$), on EM perceptions to be medium ($\eta_p^2 = 0.07$), and on MP perceptions to be large ($\eta_p^2 = 0.37$).

Table 2.4 Logistic regressions to test the relationships between perceptions of peer-to-peer relationships and choice

Predictors	Sharing for free vs. Renting without in-person interactions				Renting with in-person interactions vs. Renting without in-person interactions				Sharing for free vs. Renting with in-person interactions			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
CS differentials		1.25**		1.31**		1.32**		1.32**		1.33***		1.37***
EM differentials		1.20**		1.18*		1.15		1.16		1.10		1.09
MP differentials		1.10		1.10		1.03		1.02		1.09		1.07
Social benefits			2.05***	2.07***			1.37*	1.37*			1.49***	1.50***
Economic benefits			0.61***	0.61***			0.84	0.85			0.67***	0.66***
<i>Controls:</i>												
Environmental benefits	1.10	1.10	0.90	0.90	1.12	1.12	1.02	1.01	1.02	1.02	0.90	0.91
Other orientation	2.37**	2.39**	1.87*	1.93*	1.75†	1.74†	1.71†	1.70†	1.43	1.48	1.28	1.33
Provider	0.93	0.93	0.74	0.75	1.21	1.16	1.12	1.07	0.76	0.72	0.68†	0.63*
Age	1.02	1.01	1.00	1.00	1.00	1.00	0.99	0.99	1.02*	1.02†	1.01	1.01
Female	1.05	1.11	0.91	0.99	0.78	0.90	0.76	0.88	1.34	1.29	1.34	1.29
Education lower ^a	0.84	0.88	0.69	0.77	0.54	0.59	0.53	0.57	1.50	1.51	1.18	1.20
Education higher vocational ^a	0.81	0.84	0.93	1.00	1.08	1.16	1.039	1.13	0.82	0.86	0.75	0.79
Income medium ^b	0.76	0.69	0.67	0.61	0.47*	0.46*	0.46*	0.44*	1.47	1.38	1.31	1.25
Income high ^b	1.31	1.14	1.09	0.96	0.73	0.65	0.70	0.62	1.61	1.52	1.38	1.30
Urban living	0.83	0.90	0.91	1.00	0.94	0.94	1.00	1.00	0.99	0.96	1.09	1.07
<i>Model fit:</i>												
Model Chi square	32.72***	51.54***	87.92***	104.89***	15.87	31.38*	23.60*	38.64***	32.66***	46.83***	59.04***	77.49***
Cox and Snell R ²	0.07	0.11	0.19	0.22	0.05	0.10	0.08	0.12	0.07	0.09	0.12	0.15
Nagelkerke R ²	0.11	0.16	0.26	0.31	0.07	0.13	0.10	0.16	0.09	0.13	0.17	0.21
<i>Correct classification:</i>												
Overall (%)	71.4	71.0	73.5	75.6	61.8	63.5	66.1	66.8	62.4	65.8	69.0	68.4
Choice (%)	96.7	91.7	90.0	89.3	82.8	79.3	83.9	79.9	87.3	86.7	86.0	83.3
Non-choice (%)	11.8	22.0	34.6	43.3	33.1	41.7	41.7	48.8	19.5	29.9	39.7	42.5

Notes. ^aThe baseline is a university degree, ^bThe baseline is a low income. The reported coefficients are the odd ratios (Exp(B)).
† $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed).

2.4.3 Sought benefits, mental representations of relationships, and choice

Exactly 50 percent of the respondents chose a sharing for free model and 29 percent chose renting with in-person interactions, making renting without in-person interactions the least popular business model. In order to test

whether respondents' choice was influenced by differences in perceptions of peer-to-peer relationships across the business models (H3a-c) as well as by the type of benefits they seek (H1a and b), the choice variable was coded into three dummy variables – (1) sharing for free versus renting without in-person interactions, (2) renting with in-person interactions versus renting without in-person interactions, and (3) sharing for free versus renting with in-person interactions. Next, four binary logistic regressions were run for each dummy variable (see Table 2.4): Model 1 containing only the control variables, Model 2 containing the control variables and the CS, EM and MP differentials for the two business models that were compared, Model 3 containing the control variables and the benefits respondents sought, and Model 4 containing all the variables. Table 2.4 shows the odds ratio, i.e. the change in odds resulting from a one unit change in the predictor. An odds ratio greater than 1 indicates that as the predictor increases, the likelihood of the outcome occurring increases. An odds ratio smaller than 1, on the other hand, indicates that as the predictor increases, the odds of the outcome occurring decrease. The Chi-square values shown in Table 2.4 under model fit indicated that Models 2, 3, and 4 containing the predictors of interest significantly predicted respondents' choice between each pair of business model.

In line with H1a – which predicted a positive relationship between the search for social benefits and the likelihood of choosing sharing for free over renting without in-person interactions –, inspection of the odd ratios in Models 3 and 4 for this first pair of business models showed that respondents in search of higher social benefits were significantly more likely to prefer sharing for free (in Model 3: $\text{Exp}(B)=2.05$, $p<0.001$; in Model 4: $\text{Exp}(B)=2.07$, $p<0.001$). The magnitude of the odd ratios (2.05 and 2.04) further revealed that one unit increase on the 7-point scale for social benefits was linked to doubling the likelihood of choosing sharing for free over renting without in-person interactions.

Similarly, H1b – which predicted a positive relationship between the search for economic benefits and the likelihood of choosing renting without in-person interactions over sharing for free – was supported. The odd ratios in Models 3 and 4 for the first pair of business models in Table 2.4 indicated that respondents in search of higher economic benefits were significantly less likely to prefer sharing for free (in Model 3: $\text{Exp}(B)=0.61$, $p<0.001$; in Model 4: $\text{Exp}(B)=0.61$, $p=0.001$), and therefore more likely to prefer renting without in-person interactions.

While no hypothesis was formulated regarding the relationships between benefits and the other two binary choices between models, the odd ratios revealed that, similarly to what was observed for the choice between sharing for free and renting without in-person interactions, the likelihood of choosing sharing for free over renting with in-person interactions was significantly positively related with seeking social benefits (in Model 3: $\text{Exp}(B)=1.49$, $p<0.001$; in Model 4: $\text{Exp}(B)=1.50$, $p<0.001$) and significantly negatively related with seeking economic benefits (in Model 3: $\text{Exp}(B)=0.67$, $p=0.001$; in Model 4: $\text{Exp}(B)=0.66$, $p=0.001$). In contrast, the results showed that only social benefits were significantly related with the choice between renting with in-person interactions and renting without in-person interactions: the odd ratios indicated that the more respondents were driven by social benefits, the more likely they were to prefer renting with in-person interactions over renting without such interactions (in Model 3: $\text{Exp}(B)=1.37$, $p=0.01$; in Model 4: $\text{Exp}(B)=1.37$, $p=0.013$). There was no significant relationship between economic benefits and the choice between the two renting models (in Model 3: $\text{Exp}(B)=0.84$, $p=0.28$; in Model 4: $\text{Exp}(B)=0.85$, $p=0.30$).

Turning to the mental representations of peer-to-peer relationships, the results provided support for H3a, which predicted that larger differences in CS scores would increase the likelihood of choosing the business model with the higher score, which, as expected, turned out to be sharing for free. This held for the choice between sharing for free and renting without in-person interactions (in Model 2: $\text{Exp}(B)=1.25$, $p=0.006$; in Model 4: $\text{Exp}(B)=1.31$, $p=0.002$), for the choice between renting with in-person interactions and renting without in-person interactions (in Model 2: $\text{Exp}(B)=1.32$, $p=0.002$; in Model 4: $\text{Exp}(B)=1.32$, $p=0.003$), as well as for the choice between sharing for free and renting with in-person interactions (in Model 2: $\text{Exp}(B)=1.33$, $p=0.001$; in Model 4: $\text{Exp}(B)=1.37$, $p<0.001$). Looking across all these odd ratios, a one unit increase in the difference in CS score is linked to an increase of about thirty percent of the likelihood of choosing sharing for free over renting without in-person interactions.

H3b, which proposed a positive relationship between larger differences in EM scores and likelihood of choosing the model with the higher score, was only supported for the choice between sharing for free and renting without in-person interactions (in Model 2: $\text{Exp}(B)=1.20$, $p=0.006$; in Model 4: $\text{Exp}(B)=1.18$, $p=0.02$). In contrast, to what was hypothesized in H3b, larger differences in EM scores between business models did not relate significantly

to the likelihood of choosing renting with in-person interactions over renting without in-person interactions (in Model 2: $\text{Exp}(B)=1.15$, $p=0.11$ in Model 4: $\text{Exp}(B)=1.16$, $p=0.11$) or sharing for free over renting with in-person interactions (in Model 2: $\text{Exp}(B)=1.10$, $p=0.19$; in Model 4: $\text{Exp}(B)=1.09$, $p=0.23$).

Finally, H3c, which proposed a negative relationship between larger differences in MP scores and the likelihood of choosing the business model with the largest score, was not supported for any of the three choices. Odd ratios were neither significant for the choice between sharing for free and renting without in-person interactions (in Model 2: $\text{Exp}(B)=1.10$, $p=0.12$; in Model 4: $\text{Exp}(B)=1.10$, $p=0.16$), nor for the choice between renting with and renting without in-person interactions (in Model 2: $\text{Exp}(B)=1.03$, $p=0.79$; in Model 4: $\text{Exp}(B)=1.02$, $p=0.86$), nor for the choice between sharing for free and renting with in-person interactions (in Model 2: $\text{Exp}(B)=1.09$, $p=0.21$; in Model 4: $\text{Exp}(B)=1.07$, $p=0.33$).

While the hypotheses regard either the effects of the type of benefits consumers seek on consumers' choice of a platform (H1a and b) or the effects of the differences in mental representations of peer-to-peer relationships across the business models (H3a-c), comparing the results reported in Models 2 and Models 3 to the results reported in Models 4 provides additional information about how these two sets of explanations relate to each other. Specifically, the coefficients and significance levels remain very similar when entering the two sets of explanatory variables together in Models 4 as compared to having them separately in Models 2 and 3 (with only the differentials in perceptions of the relational models in Models 2 and only the two types of benefits in Models 3). This indicates that the effects of these explanatory variables on consumers' choice do not overlap much, but rather complement each other in explaining this dependent variable.

The results for the control variables in Table 2.4 suggest that consumers' other-orientation helps explain consumers' choice of sharing for free over renting without in-person interactions even when all our variables of interest are taken into consideration (in Model 4: $\text{Exp}(B)=1.93$, $p=0.04$). Similar results are observed for consumers' choice of renting with in-person interactions over renting without in-person interactions, but these results are only significant at the 10 percent level (in Model 4: $\text{Exp}(B)=1.70$, $p=0.09$). In contrast, consumers' other-orientation does not help explain the choice of sharing for free over renting with in-person interactions. As expected, the

environmental benefits consumers seek do not relate to consumers' choice among the three business models studied here. This was expected because the three business models do not differ along this dimension. Finally, we did not find much evidence for a difference between users and providers. The only difference between users and providers significant at the 5 percent level was found for the choice between sharing for free and renting with in-person interactions: providers are more likely than users to choose renting with in-person interactions over sharing for free (in Model 4: $\text{Exp}(B)=0.63$, $p=0.03$).

2.5 DISCUSSION

At a time where peer-to-peer sharing platforms are experimenting with various business models in order to find a way to both attract enough consumers and earn money from their activities, the present study aimed to shed new light on consumers' choice among three platform business models by turning to what consumers expect platforms to deliver with regard to the nature of relationships among consumers, in complement to the usual focus on the types of benefits (social and economic) consumers seek. Using a within-subject, joint evaluation design whereby respondents reported a hypothetical choice among three platforms that differ only with regard to their business model, the results revealed three things.

First, in line with previous research arguing that individuals look for social benefits in addition to economic benefits when they engage in the sharing economy (Bucher et al., 2016; Habibi et al., 2016; Hamari et al., 2016; Hellwig et al., 2015), sharing for free was found to be the most popular business model, followed by renting with in-person interactions, whereas only one in five respondents chose renting without in-person interactions over the other two alternatives. A basic message is therefore that there is room for a variety of business models across peer-to-peer sharing platforms.

Second, the study lends support for Hellwig et al.'s (2015) proposition that individuals would be more attracted to some platforms than others according to type of benefits they seek. As expected based on the literature, comparing sharing for free and renting without in-person interactions showed that seeking social benefits increased the likelihood to choose a sharing for free model while seeking economic benefits increased the likelihood of choosing renting without in-person interactions. For researchers interested in the impact of social and economic benefits on platform attractiveness, the novelty

of this study was to consider two different business models in which sharing is monetized, namely renting with and without in-person interactions. This allows for a more fine-grained understanding of the impact of monetizing sharing. Comparing sharing for free and renting with in-person interactions revealed the same pattern as for the choice between sharing for free and renting without in-person interactions: seeking social (economic) benefits makes choosing sharing for free (renting with in-person interactions) more likely. Comparing renting with and without in-person interactions showed that consumers were more likely to choose the former when seeking social benefits, but were not pulled towards the latter in search of economic benefits.

Third, based on relational models theory, the results show that the business model of a sharing platform influences how consumers see peer-to-peer relationships on the platform. More precisely, the scores of the three business models on the relational models suggest that changing platforms' business models towards renting and more convenience by removing in-person interactions is likely to result in making peer-to-peer sharing appear more like traditional economic exchanges (MP). These scores also reveal that renting with in-person interactions was perceived as falling in between the two other business models in terms of CS and MP, but was perceived as highest on EM.

Finally, the paper also found that some of the mental representations of peer-to-peer relationships help explain consumers' choice of sharing platform. Specifically, the results showed that consumers' choice was linked to the degree to which peer-to-peer relationships were perceived as governed by CS. Differences in CS perceptions explained the choice of sharing for free over both renting with and without in-person interactions, as well as the choice of renting with over renting without in-person interactions. In contrast to what was hypothesized, differences in EM perceptions explained relatively little: the differences in EM perceptions were only significant for the choice of sharing for free over renting without in-person interactions. This could be linked to the fact that, while significant, the differences between the three business models on the EM dimension were quite smaller than the differences on the CS dimension (see Table 2.3). Surprisingly too, the differences in MP perceptions were not significantly related to platform choice, even though the scores on MP varied significantly across the business models.

The last section below summarizes the contributions, presents the contributions, discusses the managerial limitations, and offers directions for future research.

2.6 CONCLUSION

2.6.1 Contributions

The present research adds to the body of research examining platform attractiveness by making three contributions. A first important contribution of the study is to use relational models theory to provide a complementary explanation to the traditional focus on the type of benefits consumers seek. How consumers see the relationships among participants on peer-to-peer sharing platforms was found to explain their choice of platform above and beyond the type of benefits they seek. While complementary in their explanatory power, these explanations are also related to each other, therefore the title “the other side of the coin”. In this respect, the application of relational models theory points to the need to more systematically unpack the nature of the social benefits consumers seek and peer-to-peer sharing platforms can deliver. Specifically, sharing through a peer-to-peer sharing platform can provide at least two forms of social benefits: benefits that come from belonging to a community where altruism guides transactions (CS) and benefits that come from transacting with partners who are seen as equal on the basis of balanced reciprocity (EM). The sharing literature has so far focused on the former form of social benefits by emphasizing the emotional bonds with others, the belonging to a community, and the possibility to do something good for others (Hellwig et al., 2015). While Belk (2010) typified altruism as generalized reciprocity, which may be somewhat confusing, altruism and balanced reciprocity, and therefore the social benefits they can provide to consumers, are fundamentally different from each other. Where altruism implies solidarity with members of the same community rather than an obligation to reciprocate (Celata et al., 2017), balanced reciprocity is very much about the obligation to reciprocate. According to relational models theory, one may experience the obligation to reciprocate without identifying strongly with a community, as long as one does not purely identify at the individual level and sees the exchange partner as a means to a personal end.

A second contribution of the study is to suggest that it is not so much making peer-to-peer sharing more market-like that affects platform attractiveness but making it more community like. Some authors have questioned how monetizing sharing transactions would affect the attractiveness of the sharing economy on the arguments, among others, that renting is not true sharing (Belk, 2014a) and that an emphasis on economic benefits would alienate

consumers seeking social benefits (Hellwig et al., 2015). Others are more hopeful, arguing that it is feasible to have “dual-mode” business models that combine social and economic benefits in consumers’ eyes (Habibi et al., 2017). The results here indicate that money does not seem to necessarily “profane the sharing transaction and transform it into a commodity exchange” as Belk (2014: 19) expected it. Specifically, while consumers scored the three business models differently on MP (with renting without in-person interactions scoring highest and sharing for free lowest), these differences did not contribute to explaining consumers’ choice among the models. Rather it may be that MP is the default model for relationships among strangers and that peer-to-peer sharing can offer more than this default when peer-to-peer relationships are perceived to be also governed by CS and, to a smaller extent, by EM.

Finally, by comparing three business models that differ along the two dimensions free vs. renting and with or without in-person interactions, the study contributes some new insights into what drives the capacity of platforms to deliver social benefits. Whereas the literature has long focused on the free vs. monetized sharing as the key dimension for the delivery of more or less social benefits to consumers (Belk, 2010, 2014a; Habibi et al., 2017; Hellwig et al., 2015), work has also pointed at the importance of in-person interactions (Pera et al., 2017; Rosen et al., 2011). The present study suggests that both dimensions matter. On the one hand, in support of an impact of the (non)monetization of sharing on social benefits, higher perceptions of CS and seeking social benefits were found to explain the choice of sharing for free over renting with in-person interactions. On the other hand, in-person interactions also appear to matter in delivering social benefits: higher perceptions of CS and seeking social benefits were also found to explain the choice of renting with in-person interactions over renting without in-person interactions.

2.6.2 Managerial implications

This work has two clear implications for platform managers. First, for platform managers who wish to replace sharing for free by a renting scheme, this study shows that, for a large majority of consumers, it is important to keep in-person interactions rather than introducing remote access technologies with the hope that consumers will be swayed by an increase in convenience. The success of Airbnb illustrates just how much value renting with in-person interactions can generate if implemented properly.

Second, that renting does not necessarily destroy the social benefits a platform can deliver to consumers is good news for managers of sharing platforms who are looking for ways to capture some of the value their platform generates without endangering the attractiveness of their platform. To managers who wish to preserve social benefits while introducing a renting scheme in their business model, the present study suggests working towards activating a CS frame in consumers. Examples of successful sharing platforms indicate that activating a CS frame in consumers can be achieved in a number of ways. A first way to do this is to embed the idea of community in the mission of the platform. Airbnb, for example, claims to exist “to create a world where anyone can belong anywhere, providing healthy travel that is local, authentic, diverse, inclusive and sustainable”⁴.

A second way is to organize local offline events such as meet and greets between members, workshops around common themes or a neighborhood get-together in order to foster a sense of emotional bonding and community. For example, Couchsurfing’s members in the same geographic area, along with nearby Couchsurfing’s travelers, often hold physical community gatherings and participate in activities (Rosen et al., 2011). By offering or supporting offline community-building events, peer-to-peer sharing platforms can actually transform themselves into hybrid online-offline communities (Rosen et al., 2011).

Third, while our research focused on how the ‘free vs. renting’ and ‘with or without in-person interactions’ dimensions of business models affect consumers’ perceptions of peers in general, platforms can enable consumers to build personal reputations. Personal reputation mechanisms, in turn, make it possible to perceive communal sharing relationships with specific peers, even if at the level of the platform peer-to-peer relationships are not seen as governed much by communal sharing. In line with this argument, research has shown that personal reputation outweighs product descriptions in explaining providers’ popularity (Mauri et al., 2018). To support consumers’ building personal reputations, it seems important that platforms implement rating systems and encourage the sharing of personal information such as full identification and personal photo (Abrate and Viglia, 2019; Wang and Nicolau, 2017).

2.6.3 Limitations and future research

With its use of hypothetical scenarios and a joint evaluation design, this

study presents several limitations. First, respondents were asked to imagine themselves being in possession of or looking for a personal item, namely a standing table. More research is needed to investigate whether the findings described above generalize to other personal items. On the one hand, motivations to participate in different subsectors of peer-to-peer sharing seem to differ: the correlational study by Böcker and Meelen (2017) indicated that economic motivations matter more for accommodations and car sharing than they do for sharing a meal or a ride. On the other hand, one could expect that the much larger financial and emotional risks involved in sharing prized possessions such as homes and cars could make perceptions of relationships matter much more than for the sharing of a standing table. Second, whereas a joint evaluation design has the advantage of more reasoned choices, consumers do not always have full information regarding alternative business models in practice. As research has shown that participants sometimes make different choices when they receive information about just one option (separate evaluation) versus when they can easily compare all the options (joint evaluation) (e.g. Hsee, et al., 1999), future research should replicate our study with a between-group experimental design where respondents only have information about one business model. Third, while the respondents reported high scores for realism and credibility, the use of hypothetical scenarios may have biased the results. In order to check the external validity of our results, future research should also study the attractiveness of actual platforms amongst individuals who are considering joining a peer-to-peer sharing platform.

In this study we found that different business models are linked to different perceptions of relationships among peers, which in turn influence consumers' choice among peer-to-peer sharing platforms. Future work might investigate whether how consumers frame their relationships with other members of a sharing platform also helps answer other questions that are important to predict the future of the sharing economy. In particular, there is a lot of potential in applying relational models theory to research how sharing platforms can build trust among peers and facilitate active participation, two topics researchers have called to study more (e.g. Möhlmann, 2015, 2016, Tussyadiah, 2015). Future research could also investigate the impact of different business models on consumers' behavior, in particular the care they take of other people's personal items. While in relationships governed by EM and CS the norms guiding behaviors compel consumers to take

into consideration the well-being of others, pursuing one's self-interest is normatively appropriate in MP relationships (Fiske, 1991). As mentioned at the beginning of the paper, Turo, a U.S. based peer-to-peer car sharing platform (formerly known as RelayRides), has experienced the dangers of removing in-person interactions when it installed General Motors' Onstar system, a tool that allows people to unlock cars via an app. Removing in-person interactions led to a dramatic increase in self-interested behavior and in disputes among members (RelayRides, 2013; Van de Glind, 2015). As a result, the platform reverted back to its old system with in-person interactions in 2013. According to Turo's CEO Andre Haddad: "connecting people is the platform's 'secret sauce'. It helps people feel they can trust each other more" (Loizos, 2015).

Moreover, whilst this study focused on two common dimensions of business models – namely, sharing for free or a fee and the presence or absence of in-person interactions – future research might study other dimensions that could also affect how consumers frame peer-to-peer relationships, among which open versus closed access to assets and the availability of online tools that promote peer-to-peer interactions. With regard to the nature of access to assets, there are new business models where access to a particular asset is by invitation only (closed access). For example, 'our car' by Leaseplan allows to only share one's car with friends and neighbors. Closed access should help the framing of relationships in CS terms (Lickel et al., 2006). Communal sharing is more likely to be primed by perceptions of a 'moral circle' in which a clear distinction is made between in and out group members (Rai and Fiske, 2012). Second, platforms can also strive to develop and maintain social interactions through mobile phone apps that allow for direct communication, email services, and text message notifications. Participants are indeed more likely to rate a group as high on communal sharing when they describe group interactions as frequent (Lickel et al., 2001, 2006).

More generally, as they think about the relevant features of business models for peer-to-peer sharing platforms, scholars could build on what is known about the design principles for groups that face a tension between individual and collective interests (Ostrom, 1990). Clear boundaries and monitoring systems are two of these design principles, but other principles are also important in supporting prosocial behavior such as the presence of graduated sanctions (from light punishment for first-time offenders to severe punishment for repeated offenders) and conflict resolution mechanisms that

help to resolve conflicts quickly and in ways that are perceived as fair by peers (Wilson et al., Cox, 2013).

Notes

1 Rental schemes have also the advantage for platforms to enable the collection of a commission on each peer-to-peer transaction.

2 The fourth model is called Authority Ranking. It refers to “a relationship of asymmetric differences, commonly exhibited in a hierarchical ordering of statuses and precedence, often accompanied by the exercise of command and complementary displays of deference and respect” (Fiske, 1991, p. ix). Given the non-hierarchical nature of relationships on peer-to-peer sharing platforms, Authority Ranking is not applicable to our context.

3 Appendix A: 2.1 and 2.2 present translations in English. The original material in Dutch is available upon request.

4 <https://press.airbnb.com/about-us/>