THE REVERSAL OF THE ENDOWMENT EFFECT WITHIN
PEER-TO-PEER RENTALS

A Thesis in
Business Administration

by

Daniel J. Shaffer

© 2015 Daniel J. Shaffer

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

December 2015
The thesis of Daniel J. Shaffer was reviewed and approved* by the following:

Margaret G. Meloy
Professor of Marketing
Thesis Advisor

Eunice Y. Kim
Assistant Professor of Marketing

Hans X. Baumgartner
Smeal Professor in Marketing
Head of the Department of Marketing

*Signatures are on file in the Graduate School.
ABSTRACT

The endowment effect—the observed gap between a buyer’s willingness to pay and an owner’s willingness to accept for an identical good such that the willingness to accept is higher than the willingness to pay—is an important issue for economists and marketers as it violates the Coase Theorem. With the rising popularity of peer-to-peer platforms such as Uber and AirBnB within the past decade, the present research provides preliminary evidence of a reversed endowment effect within peer-to-peer rentals. In two studies presented in this thesis, we present evidence that this reversal is driven at least in part by a unique lack of psychological loss for those renting out their possessions as compared to those selling their possessions. Further and contrary to our predictions, we find that Exchange Providers, those who own a possession with the sole purpose of renting it out to make money, exhibit higher price valuations for their possessions than Co-Consumption Providers, individuals who both personally use their possession as well as rent it out to make money. Together, this research contributes not only to literature on the endowment effect, but also adds much needed clarity to our growing understanding of peer-to-peer renting.
# TABLE OF CONTENTS

List of Figures........................................................................................................................................ vi

List of Tables........................................................................................................................................ vii

Chapter 1  Introduction and Literature Review .................................................................................. 1
   Access-based consumption ................................................................................................................ 3
   The endowment effect and related phenomena ................................................................................ 4
   Mediators of the endowment effect ................................................................................................. 7
     Psychological ownership .................................................................................................................. 8
     Affective reactions ........................................................................................................................... 9
   Predicted distinctions between peer-to-peer sales and peer-to-peer rentals .................................. 10
   Predicted distinctions between Co-Consumption and exchange providers ................................. 11
   Overview of studies ......................................................................................................................... 13

Chapter 2  Study 1: Testing the endowment effect within peer-to-peer sales and peer-to-peer rentals ......................................................................................................................... 14
   Methods and Measures .................................................................................................................. 14
     Participants ................................................................................................................................ 14
     Procedure .................................................................................................................................. 15
   Results ........................................................................................................................................... 18
   Discussion ..................................................................................................................................... 22

Chapter 3  Study 2: Comparing provider intentions on price valuations ........................................... 24
   Methods and measures .................................................................................................................. 25
     Participants ................................................................................................................................ 25
     Procedure .................................................................................................................................. 25
   Results ........................................................................................................................................... 27
   Discussion ..................................................................................................................................... 30

Chapter 4  General Discussion ........................................................................................................... 32
   Theoretical contributions and marketing implications .................................................................... 32
   Potential limitations ....................................................................................................................... 34
   Future research ............................................................................................................................. 35

References .......................................................................................................................................... 40

Appendix A: Study 1 Camping Tent Stimuli ...................................................................................... 44

Appendix B: Study 2 Camping Tent Stimuli ...................................................................................... 45
LIST OF FIGURES

Figure 1.1. Predicted Mediators of Loss Aversion for Sellers (Shu and Peck 2011).......................... 8

Figure 2.1. Study 1: Tent Valuation Mediation through Psychological Ownership & Positive Affect (Controlling for Product Identification & Product Perceptions)........................................20

Figure 2.2. Study 1: Tent Valuation Mediation through Psychological Ownership without Possession & Positive Affect (Controlling for Product Identification & Product Perceptions)
21

Figure 4.1. Price Valuation Conceptualization between P2P Sales and Rentals...............................38
LIST OF TABLES

Table 2.1. Study 1 Summary of Results ................................................................. 18
Table 3.1. Study 2 Summary of Results ................................................................. 28
Chapter 1

Introduction and Literature Review

Facilitated by the increasing popularity in social media and the advancement of technology over the course of the past decade, alternative modes of acquisition and consumption beyond legal ownership are beginning to transform the consumer landscape. Instead of purchasing and owning possessions, consumers are more frequently exhibiting shifting desires to simply access goods for temporary durations rather than permanently acquire goods through legal acquisition. As Chen (2009) and Marx (2011) both argue, legal ownership may no longer be the ultimate expression of consumer desire in the emerging “sharing economy.”

Though access-based consumption models can vary widely in their applications and structures, popular peer-to-peer examples include Uber and Airbnb, among others. In this thesis, we investigate the specific access-based mode of consumption of peer-to-peer renting, which can be defined as “an exchange whereby one individual makes available their physical possessions temporarily to another individual for a rental fee in order to meet the temporary needs of the renter without a transfer of legal ownership” (p. 1311, Philip, Ozanne, and Ballantine 2015).

Whereas prior literature is ripe with examples of how peer-to-peer sales through exchanges of legal ownership are subject to the endowment effect—that is, a price differential between a buyer’s Willingness to Pay (WTP) and an owner’s Willingness to Accept (WTA) for an identical good such that WTA is greater than WTP (Thaler 1980)—no research to date has investigated whether or not the endowment effect similarly holds.
The mere possession effect, for example, which states that merely possessing a good can lead to an instantaneous increase in preference for it (Heider 1958), would suggest that the WTA price of those who possess a good and are looking to rent out that possession to others (known here forth as Providers) would exceed the WTP price of those looking to rent (known here forth as Renters), thus leading to a traditional endowment effect within peer-to-peer rentals. Similarly, the mere ownership effect, defined as an individual's tendency to evaluate an object more favorably merely because he or she owns it (Beggan 1992), would also suggest a traditional endowment effect within peer-to-peer rentals.

Both of the “mere” effects observed rely on two underlying mechanisms, psychological ownership of the possession and affective reaction towards that possession (Shu and Peck 2011). In the case of sharing, it is plausible that Providers experience less psychological loss than an individual looking to legally sell his or her possession (known here forth as Sellers) given the temporary, versus permanent, relinquishment of said possessions. In such a case, we would instead expect a cancelation, or even potential reversal, of the endowment effect in peer-to-peer rentals due to mitigated psychological loss associated with the temporarily forfeited possession.

Given the reasonable theoretical predictions for each of these potential outcomes, this paper therefore investigates whether the endowment effect holds for peer-to-peer rentals. We then conclude this paper with several practical marketing applications of our findings along with several proposed avenues of future research. We now turn to a deeper examination of the key economic and psychological processes of peer-to-peer rentals.
Access-based consumption

While legal ownership and possession have historically been of prominent interest to consumer researchers, access-based modes of consumption with strangers (facilitated by advances in technology and social media) have only recently begun to garner their own share of empirical attention. Access-based consumption is defined as transactions that may be market mediated in which no transfer of legal ownership occurs (Bardhi and Eckhardt 2012). It differs from legal ownership in two notable ways: 1) the nature of the object-self relationship, and 2) the rules that govern and regulate this relationship. When a product is legal owned, consumers often identify with their possessions, which often become part of their extended self (Belk 1988). They can be vital in maintaining, displaying, and transforming the self (Kleine, Kleine, and Allen 1995; Richins 1994; Schouten 1991). In contrast to legal ownership, access-based consumption is often temporary and circumstantial (Chen 2009). As such, the consumer-object relationship in access-based consumption may differ substantially in psychological and emotional appeal from that of legal ownership.

Access-based consumption has also historically governed less favorable perceptions than legal ownership by consumers. For example, access-based consumption was once historically stigmatized as an inferior consumption mode (Ronald 2008) and was often seen as wasteful, dangerous, or limited in individual freedom (Cheshire, Walters, and Rosenblatt 2010). Consequently, individuals who engaged in renting products in times past were often ridiculed as irresponsible consumers who were misallocating their purchasing power (Rowlands and Gurney 2000).
Recently, however, a focus on sustainability has resulted in shifts in attitudes towards access-based consumption and spurred dramatic changes in consumer behavior. More favorable attitudes towards renting have led to a proliferation of access systems in the marketplace. To elaborate, consumers in the 1970s mainly rented goods for utilitarian purposes (Berry and Maricle 1973). As consumers have become more educated, sophisticated, adventurous, and more discerning, however, many consumers are now looking to experience a product rather than consume it for its pure utility (Silverstein and Fiske 2005). As a consequence, a growing segment of consumers are now freely choosing to rent or lease goods as an alternative form of consumption (Watson 2006). Increasing participation in car and bike sharing (e.g. Zipcar and Citi Bike, respectively) is one such example of this change (Bardhi and Eckhardt 2012).

Given advancements in social media technologies and the proliferation of access-based consumption behaviors in today’s marketplace, this research therefore looks to investigate whether the endowment effect is present for peer-to-peer rentals. This is an area of inquiry not yet explored. We compare the market for peer-to-peer sales against peer-to-peer rentals to verify that the endowment effect is replicated for sales. Thus, any differences observed are due solely to access-based consumption.

**The endowment effect and related phenomena**

What is the endowment effect? Originally coined by Thaler (1980), the endowment effect refers to the gap between a buyer’s WTP and an owner’s WTA for an identical good such that WTA is greater than WTP. Having been replicated in a variety of settings for almost thirty years using various objects such as mugs, pens, key chains,
chocolate bars, and sports tickets, among others, the endowment effect has proven to be a highly robust phenomenon in economics, psychology, and marketing literatures (Kahneman, Knetsch, and Thaler 1990; Knetsch and Sinden 1984; Thaler 1980).

Kahneman, Knetsch, and Thaler (1990) were among the first researchers to empirically explore this effect by comparing how valuations of physical goods differed between sellers and buyers. Initial findings from their experiments revealed that participants had a much greater reluctance to sell than buy. Specifically, these authors showed that the median seller’s WTA price of $5.75 for a coffee mug, for example, was over twice the median buyer’s WTP price of $2.25.

The endowment effect therefore presents an issue for economists and marketers because it violates the Coase Theorem, which states that with low bargaining costs, perfect information and competition, and the absence of wealth and income effects, resources will be allocated efficiently and optimally regardless of who initially owns them (Coase 1960). Follow-up research on the endowment effect has also investigated how manipulations such as emotion, ownership duration, object valence, and changes in cognitive perspective moderate this basic finding in which consumers' valuation of an object increases once they have taken ownership of it (Brenner, Rottenstreich, Sood, and Bilgin 2007; Carmon and Ariely 2000; Lerner, Small, and Loewenstein 2004; Strahilevitz and Loewenstein 1998). For example, Carmon and Ariely (2000) found that buying-and selling-price estimates reflect a focus on what the consumer forgoes in the potential exchange—buyers tend to focus on their sentiment toward what they forgo (typically, the expenditure) whereas sellers tend to focus on their sentiment toward surrendering the item. Lerner, Small, and Loewenstein (2004) also demonstrated that disgust, when
induced by a prior, irrelevant situation, reduces selling and choice prices and eliminates the endowment effect. In particular, the authors found that sadness reduced selling prices but increased choice prices, thereby producing a reverse endowment effect in which choice prices exceeded selling prices.

Phenomena related to the endowment effect such as the mere ownership effect, mere possession effect, and mere exposure effect, for example, also illustrate a preference for owned, possessed, and familiar goods, respectively. To elaborate, Heider (1958) first advanced the notion that merely possessing an object produces greater partiality for that object citing Irwin and Gebhard’s (1946) finding that children often display a preference for an object given to them as opposed to a similar object given to someone else. In this case, ownership did not arise because of any expressed preference, but resulted from simply being given the object. Even more surprising is the finding of Sen and Johnson (1997) who revealed that preferences for a good produced by its mere and arbitrary possession also led to endowment. In short, prior research indicates that merely possessing a good, or simply imagining such possession, can lead to an instantaneous increase in preference for it.

In related light, Beggan (1992) proposed a mere ownership effect to refer to an individual's tendency to evaluate objects more favorably merely because he or she owns them. Specifically, Beggan defined this mere ownership effect as “the tendency of an owner relative to a non-owner to enhance the perceived attractiveness of an object merely because it is owned” (Beggan, 1992, p.229). This effect is hypothesized to occur because people are motivated to see themselves in a positive light and thus illustrates the importance of the self in mediating how people interpret the world. In other words, being
given the temporary opportunity to handle an object led to the endowment effect as well.

As a final example, the mere exposure effect also shows that people tend to develop a preference for things merely because they are familiar with them, otherwise known as the familiarity principle in social psychology (Zajonc 1968). In short, this effect demonstrates that repeated exposure to a stimuli, be it a person, object, or idea, leads to more positive and enduring feelings about it.

Taken together, these distinct, yet related phenomena demonstrate that people tend to develop favorable impressions or preferences for objects that are personally possessed, owned, or simply more familiar.

**Mediators of the endowment effect**

Beyond understanding the outcome of the endowment effect (i.e. sellers’ WTA is greater than buyers’ WTP), it is also important to understand its underlying psychological mechanisms. Kahneman and colleagues (Kahneman et al. 1990; Loewenstein and Adler 1995) theorized that the endowment effect is largely explained by loss aversion. Loss aversion, broadly defined as people's tendency to strongly prefer avoiding losses to acquiring gains, is represented by a steeper slope in the loss domain than in the gain domain of participants’ subjective utility curves (Kahneman and Tversky 1979). Loss aversion posits that equivalent losses loom psychologically larger than equivalent gains, thereby leading to the observed outcome of the endowment effect. As a result, the loss experienced by sellers is more painful than the financial gain associated with payment. This leads to higher than normal WTA levels.
A step in elucidating our understanding of how loss aversion specifically operated on the endowment effect was first provided by Ariely, Huber, and Wertenbroch (2005), whose theoretical paper proposed that both emotional attachment and cognitive perspective led to loss aversion. Follow-up research by Shu and Peck (2011) empirically substantiated these claims by demonstrating that loss aversion arose from two constructs in particular: psychological ownership (attachment to an object) and affective reaction (emotion for an object). As outlined in Figure 1-1, psychological ownership measures whether or not a loss is perceived, and answers the question, “Is it a loss?” Affective reaction, in contrast, measures the intensity of the loss and helps discern the inquiry, “How bad of a loss?”

![Predicted Mediators of Loss Aversion for Sellers](image)

**Figure 1-1. Predicted Mediators of Loss Aversion for Sellers (Shu and Peck 2011)**

**Psychological ownership**

In contrast to legal ownership, psychological ownership is broadly defined as the feeling that something is “mine” (Pierce, Kostova, and Dirks 2001). According to Pierce Kostova, and Dirks (2001), psychological ownership emerges through three interrelated routes: 1) control over the target, 2) intimate knowledge of the target, and 3) investment
of the self into the target. While legal ownership and psychological ownership are closely related constructs, they can operate separately from one another. For example, psychological ownership can exist without the presence of legal ownership, such as when a firm employee feels strong psychological ownership for their workstation despite not legally owning the physical objects themselves (Pierce et al. 2001). Conversely, legal ownership can also operate without psychological ownership when the reference point is shifted so that the object is no longer part of the endowment (Johnson, Häubl, and Keinan, 2007; List 2003). In these situations, “not owning” becomes the reference point, and giving up the object is no longer seen as a loss, such as when objects intended for exchange are sold or traded. What’s more, pseudo-endowment or anticipatory possession can also have similar psychological effects to legal ownership, even when the individual does not legally own the object (Ariely and Simonson 2003).

According to Shu and Peck (2011), a key feature of loss aversion is reference dependence—an object must be integrated into one's endowment so that not having it is perceived as a psychological loss. In other words, an individual must first assess their impression, “Is it a loss?” before loss aversion can become salient. When the answer to that question becomes increasingly affirmative for a Seller or Provider, there is an increased likelihood that an endowment effect will appear.

Affective reactions

Beyond psychological ownership, the role of affect within loss aversion has also been well documented (see Rottenstreich and Shu 2004 for a review). Whether defined as affect or emotion, an individual's nonconscious affective response towards an object has
been shown to be an important mechanism of how value is determined. For example, Schwarz and Clore (1983) posit that people determine value—whether in objects, ideas, or opinions—by asking themselves, “How do I feel about this?” In addition, loss aversion also appears to increase as the emotional magnitude of decisions increase, especially for strongly negative emotions (Baron 1986; Luce, Payne, and Bettman 1999).

Together, these findings suggest that consumers’ affective reactions towards an object is an important mediator of valuation in the endowment effect since greater levels of emotion have a significant effect on loss aversion. Specifically, higher affective content can increase the perceived size of a loss. Positive or negative affect associated with an object (Brenner et al., 2007; Dhar and Wertenbroch 2000) as well as feelings not directly related to the object (Lerner, Small, and Loewenstein 2004) can thus moderate the size of the endowment effect by changing the amount of pain associated with the loss. In other words, the higher the magnitude of a loss for a Seller, the more likely an endowment effect will appear.

**Predicted distinctions between peer-to-peer sales and peer-to-peer rentals**

Four role types were compared in this paper when comparing the endowment effect within peer-to-peer sales and peer-to-peer rentals. Within peer-to-peer sales, we compared Sellers to Buyers. Naturally, Sellers legally own a possession and are looking to sell that good to a Buyer. Here, we would expect that the traditional endowment effect to remain.

Within peer-to-peer rentals, on the other hand, we compared Providers and Renters. Whereas Providers legally own a good and rent it out to others, Renters do not
own a good and instead rent it from others. In comparison to Sellers, who permanently relinquish legal ownership of their possession after a sale occurs, Providers are able to retain legal ownership when their possessions are rented out. As such, we predict that Providers will feel less overall psychological loss than Sellers when no longer in possession of their good after a transaction has been completed (i.e. when the good is rented out versus sold, respectively). It is this predicted discrepancy in experienced post-transactional psychological loss that we believe may disrupt the endowment effect for peer-to-peer rentals. We note that this difference in psychological loss between Sellers and Providers will mitigate any pre-transactional similarities in mere ownership, possession, or familiarity with their respective goods.

Finally, in accordance with prior theory (e.g., Shu and Peck 2011), we also predict that psychological ownership and positive affect towards the good will be higher for Sellers than for Buyers and will thus positively mediate the effect of Seller roles on price valuation. Similarly, we also predict that psychological ownership and positive affect towards the good will be higher for Providers than for Renters and will also positively mediate the effect of Provider roles on price valuation.

**Predicted distinctions between Co-Consumption and exchange providers**

We also look to investigate boundary effects of Provider intentions on the endowment effect. In particular, we investigate potential differences in WTA price valuations between Co-Consumption Providers—those looking to both personally use as well as rent out their possessions—and Exchange Providers—those who own a possession with the sole purpose of making money off of its rental. This difference in a
transactional versus attachment mindset may also play a role in explaining any endowment effect differences.

While the presence of the endowment effect has been verified in numerous contexts across the years, notable exceptions to this finding have been observed. For example, Novemsky and Kahneman (2005a, b) present evidence that loss aversion, and thus an endowment effect, is found for goods that are owned for consumption, but not for goods that are owned for exchange and are thus given up “as intended.” Similarly, List (2003) documents weaker endowment effects for experienced traders of collectible goods such as sports memorabilia. In particular, he finds that willingness to trade an endowed object was higher for individuals with more trading experience. In an attempt to replicate List’s (2003) work in the realm of psychological ownership, Shu and Peck (2011) find that experienced traders perceive goods merely as objects for exchange rather than as personal possessions. As a result, experienced traders feel low psychological ownership for those goods. Novice traders, in contrast, who have not yet thoroughly developed an exchange mindset, retain higher levels of psychological ownership for their possessions. In short, these findings demonstrate that it is loss aversion, and not greed for earned income, that drives higher price valuations.

Building off of these prior studies, we predict that Co-Consumption Providers will have both higher psychological ownership and positive affect for their possession than Exchange Providers because of their greater attachment to the item. As such, in the context of an access-based consumption experience, we would expect that the endowment effect to hold when the nature of the attachment relationship between Provider and product is ongoing and strong. However, we also predict that Exchange
Providers, in contrast, given their predicted weaker psychological ownership and low positive affect for their possession, will show a significant reverse endowment effect as compared to Renters. For them, repeated gains of renting out the item may contribute to a reduction in the feelings of psychological loss that drive the endowment effect.

**Overview of studies**

Two experiments test the aforementioned ideas. Study 1 tests whether the endowment effect appears within peer-to-peer rentals as it does within peer-to-peer sales. Given that psychological ownership of a possession and affective reaction towards that possession have been found to mediate the endowment effect (Shu and Peck 2011), we specifically hypothesize in our first study that Providers will experience less post-transactional psychological loss than Sellers since the item will be returned to the Providers. It is this predicted discrepancy in experienced psychological loss between Providers and Sellers, we believe, that will produce an endowment effect for peer-to-peer sales but may fail to produce an endowment effect for peer-to-peer rentals.

Extending this prediction in a follow up study, we then test how the intentions of different Provider mindsets might also differentially influence the absence of the endowment effect. Specifically, we predict that Co-Consumption Providers will have both higher psychological ownership and positive affect for their possession than Exchange Providers. For the latter, it seems possible that this lack of psychological ownership and attachment will thereby spur an absence or potential reversal of the endowment effect.
Study 1: Testing the endowment effect within peer-to-peer sales and peer-to-peer rentals

The purpose of this first study was to demonstrate that an endowment effect would occur for peer-to-peer sales, thus replicating prior literature, but would fail to appear for peer-to-peer rentals. We predicted this discrepancy because Providers would feel less psychological loss than Sellers when they are no longer in possession of their good after a transaction is completed (i.e. when the good is rented out versus sold, respectively). In accordance with prior theory, we also predicted that psychological ownership and positive affect towards the good would be higher for Sellers (Providers) than for Buyers (Renters) and these effects (psychological ownership and affect) would positively mediate the effect of Seller and Provider roles on price valuation.

Methods and Measures

Participants

Participants (N = 360, 51% female; ages 18-76, M= 35), recruited from Amazon’s online Mechanical Turk system, were paid $.55 to take part in the study and were randomly assigned to one of four conditions: Seller, Buyer, Provider, or Renter.

\footnote{A total of 401 participants were initially recruited to take part in the survey (53\% female; ages 18-77, M= 34). A manipulation check was used to verify an appropriate understanding of each assigned condition. All participants were asked near the end of the survey, “What action were you asked to perform in the scenario that you read about earlier?” with choice options, “To rent the product myself,” “To rent out the product to another individual,” “To buy the product,” “To sell the product,” and “Don’t know/Can’t remember.” Any participants who failed to correctly identify their assigned role were eliminated from analysis. Additionally, any Seller (Provider) who indicated they would sell (rent out) their tent at a lower range of values than a higher range of values, any Buyer (Renter) who indicated they would purchase (rent) a tent at a higher range of values.}
Procedure

After agreeing to participate in the study, each participant was first tasked with imagining being in a particular consumption setting. They read a brief description about a 2-person camping tent that they either hypothetically owned (Seller/Provider) or hypothetically did not own (Buyer/Renter) but were interested in obtaining. Within this description, participants read about the tent’s prior history and product attributes such as durability, weather proofing, and signs of wear and tear, among others; see the Appendix A for full stimuli descriptions. Using a price valuation methodology previously employed by Johnson, Häubl, and Keinan (2007), each participant was then asked to record their valuations of the tent by indicating their willingness to sell the good (rent out for Provider) or buy the good (rent for Renter) at each possible price along a continuum of $20 to $400 at $20 intervals ($5 to $100 at $5 intervals for renting).

Next we asked Sellers and Providers to evaluate psychological ownership twice—once when in possession of the tent before a transaction occurred and again after their tent was either sold or rented out, respectively. When asking Sellers and Providers their psychological ownership before the transaction, we asked, “The following questions deal with the ‘sense of ownership’ that you feel for the camping tent that you just read about assuming it is still in your possession. Indicate the degree to which you personally agree or disagree with the following statements.” Similarly, when asking Buyers and Renters to evaluate psychological ownership before the transaction was made, we asked, “The following questions deal with the ‘sense of ownership’ that you feel for the camping tent

values than a lower range of values, or any participant who vacillated nonsensically across the price valuation range were also eliminated from analysis. After all eliminations were completed, 360 participants remained and were used in final analysis.
that you just read about assuming it is not yet in your possession. Indicate the degree to which you personally agree or disagree with the following statements.” In both cases, we then utilized a four question scale derived from the psychological ownership measure of Pierce et al. (2001) which has been adapted and used by other researchers (e.g., Shu and Peck 2011). The four questions used to measure psychological ownership are, “This is MY product,” “I feel a very high degree of personal ownership for this product,” I sense that this is MY product,” and “It is hard for me to think about this product as MINE” (reverse coded), each on a 7-point scale anchored by endpoints “strongly disagree” to “strongly agree” (α = .95).

When measuring psychological ownership for Sellers and Providers when the tent was no longer in their possession, we then asked: “Now imagine that you have sold the product (rented out the product) to someone in your community and it is no longer in your possession. The following questions deal with the ‘sense of ownership’ that you now feel for the camping tent. Indicate the degree to which you personally agree or disagree with the following statements.” The same four question scale was then assessed (α = .93). Using this methodology, we were able to capture not only traditional differences in psychological ownership between Sellers and Buyers as well as between Providers and Renters, but also to compare how psychological loss was experienced by Sellers as compared to Providers after a transaction was made and the good was no longer in their possession.

Our measurement for affective reaction toward an object is loosely based on the PANAS scale (Watson, Clark, and Tellegen 1988) and variants of this scale used by prior researchers (e.g., Murry and Dacin 1996). Participants were told, “Here is a list of
emotional reactions you may have experienced while evaluating the product. Please indicate how much you felt each of these emotional reactions.” Eight renter-specific items (excited, hopeful, generous, responsible, cooperative, proud, curious, and alert) were combined with nine PANAS-influenced items used in Shu and Peck (2011) (interested, moved, captivated, inquiring, delighted, enthusiastic, appealed, satisfied, and amused) to measure positive affective reaction (α = .94). Two renter-specific items (disgusted and anxious) were combined with nine PANAS-influenced items used in Shu and Peck (2011) (puzzled, irritated, annoyed, fed up, bewildered, scared, nervous, resentful, and furious) to measure negative affective reaction (α = .86). Both indices utilized a 5-point scale and were anchored by the endpoints “not at all” and “a lot.”

Last, product identification levels and positive and negative perceptions of the product were also used as covariates throughout our studies given their likely influence on price valuations. Four questions used to measure product identification included, “Overall, this product would have very little to do with how I feel about myself,” “This product would be an important reflection of who I am,” “This product would be unimportant to my sense of what kind of person I am,” and “In general, using this product would be an important part of my self-image,” each on a 7-point scale anchored by endpoints “strongly disagree” to “strongly agree” (α = .88). When asked to evaluate perceptions of the product, participants were told, “Here is a list of adjectives that may be used to describe this product. Please indicate how much you feel each term accurately describes this product.” Three items (high quality, reliable, and safe) were used to measure positive product perceptions (α = .82) and four items (dirty, disgusting, unattractive, and stigmatized) were used to measure negative product perceptions (α
=.80). Each product perception index was measured on a 7-point scale anchored by endpoints “not at all” to “a lot.”

Results

A summary of the main results for this study, after controlling for product identification and product perceptions, is provided in Table 2.1. As expected, we found significantly greater WTA prices among Sellers (M=$183.74) than WTP prices among Buyers (M=$132.57), thus replicating the traditional endowment effect of peer-to-peer sales in prior literature, $F (1,180) = 19.02, p<.001$. We also found that the endowment effect did not hold for peer-to-peer rentals. Specifically, and perhaps surprisingly, we found a significant reverse endowment effect for product rentals where WTA prices among Providers (M=$40.83) were significantly less than WTP prices among Renters (M=$47.92), $F (1,170) = 3.86, p=.05$.

Table 2.1. Study 1 Summary of Results$^2$

<table>
<thead>
<tr>
<th>Role</th>
<th>n</th>
<th>Tent Price ($)</th>
<th>Psychological Ownership before Transaction (1-7)</th>
<th>Psychological Ownership after Transaction (1-7)</th>
<th>Positive Affect (1-5)</th>
<th>Negative Affect (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seller</td>
<td>89</td>
<td>183.74</td>
<td>4.87</td>
<td>2.81</td>
<td>2.27</td>
<td>1.26</td>
</tr>
<tr>
<td>Buyer</td>
<td>96</td>
<td>132.57</td>
<td>3.33</td>
<td>Did not measure</td>
<td>2.46</td>
<td>1.25</td>
</tr>
<tr>
<td>Provider</td>
<td>79</td>
<td>40.83</td>
<td>5.56</td>
<td>5.50</td>
<td>2.33</td>
<td>1.24</td>
</tr>
<tr>
<td>Renter</td>
<td>96</td>
<td>47.92</td>
<td>2.45</td>
<td>Did not measure</td>
<td>2.39</td>
<td>1.17</td>
</tr>
</tbody>
</table>

$^2$ Psychological Ownership before in Transaction: Sellers and Providers are in possession of the good, while Buyers and Renters are not possession of the good; Psychological Ownership after Transaction: Sellers and Providers are not in possession of the good, while Buyers and Renters are in possession of the good. All presented main effects control for product identification and product perceptions.
Also in support of our predictions and prior theory, we found that our mediating construct of psychological ownership was significantly higher for Sellers (M=4.87) than Buyers (M=3.33), \( F(1,180) = 51.30, p<.001 \). Similarly, we also found that psychological ownership was significantly higher for Providers (M=5.56) than Renters (M=2.45), \( F(1,170) = 319.48, p<.001 \).

Despite the predicted differences found in psychological ownership found between Sellers and Buyers as well as between Providers and Renters, we did not replicate Shu and Peck (2011) or find support for our hypothesis that the mediating construct of positive affect is higher for Sellers (M=2.27) than Buyers (M=2.46) \( (F(1,180) = 3.00, p=.09) \) or Providers (M=2.33) over Renters (M=2.39) \( (F(1,170) = .21, p=.65) \). Additionally, there were no significant differences in negative affect found between Sellers (M=1.26) and Buyers (M=1.25) \( (F(1,180) = .10, p=.75) \) as found by Shu and Peck (2011). Non-significant differences were also observed between Providers (M=1.24) and Renters (M=1.17) \( (F(1,170) = 1.40, p=.24) \), as anticipated.

A test for parallel mediation was then conducted on the established mediators of psychological ownership and positive affect on price valuation (Process Model 4; Hayes 2012). In partial support of our hypothesis that both psychological ownership and positive affect would mediate price valuation, we found that only psychological ownership, and not positive affect, partially mediated price valuation for both product sales and product rentals as their respective indirect effects did not include zero

\[
(\text{psychological ownership } ab \text{ for product sales} = 15.59, 95\% \text{ CI } = 1.50 \text{ to } 31.29; \text{ positive affect } ab \text{ for product sales} = -1.15, 95\% \text{ CI } = -7.27 \text{ to } 1.60; \text{ psychological ownership } ab \text{ for product rentals} = 12.92, 95\% \text{ CI } = 2.56 \text{ to } 24.72; \text{ positive affect } ab \text{ for product rentals} = -1.27, 95\% \text{ CI } = -5.58 \text{ to } 1.54)
\]
= .10, 95% CI = -.32 to 1.52). In both cases, the direct effect remained significant when the mediators of psychological ownership and positive affect were included in the model (direct effect for product sales = 36.73, 95% CI = 9.28 to 64.17; direct effect for product rentals = -20.11, 95% CI = -31.99 to -8.23), see Figure 2.1.

Figure 2.1. Study 1: Tent Valuation Mediation through Psychological Ownership & Positive Affect (Controlling for Product Identification & Product Perceptions)

Finally, when assessing psychological ownership after the transaction was made, we found support for our hypothesis that Providers retained higher psychological ownership after their tent was rented out (M=5.50) than Sellers after their tent was sold.
(M=2.81), $F(1,163) = 166.88$, $p<.001$. Importantly, we also found a significant negative mediation of this change in psychological ownership on price valuation when comparing Sellers and Buyers ($ab = -7.01$, 95% CI = -16.90 to -1.55) though not when comparing Providers and Renters ($ab = 6.59$, 95% CI = -1.79 to 16.67). This suggests that Sellers experience greater loss aversion than Providers when they are no longer in possession of their tent, see Figure 2.2.

![Diagram](image)

Figure 2.2. Study 1: Tent Valuation Mediation through Psychological Ownership without Possession & Positive Affect (Controlling for Product Identification and Product Perceptions)
Discussion

In support of our main hypothesis, study 1 provides preliminary evidence that an endowment effect does not hold for peer-to-peer rentals but in the same context, the endowment effect did hold for peer-to-peer sales. Importantly, preliminary findings from this study in fact demonstrate a reversal of the endowment effect within peer-to-peer rentals—not simply a cancelation of the effect.

Specifically, the results from study 1 show that both Sellers and Providers have higher psychological ownership towards the good than Buyers and Renters, respectively, replicating the patterns of results for peer-to-peer sales in Shu and Peck (2011). Unlike Shu and Peck (2011), we did not find significant differences between Sellers (Providers) and Buyers (Renters) in positive affect towards the good. We did, however, replicate their work by showing a significant mediation of psychological ownership on price valuations for peer-to-peer sales as well as peer-to-peer rentals.

Finally, we also show that Providers are able to retain higher levels of post-transaction psychological ownership than Sellers after their respective goods are no longer in their possession. Given the significant mediation of this construct for product sales, but not product rentals, we gain preliminary evidence that the absence of the endowment effect for product rentals is driven, at least in part, by the overall paucity of loss aversion for Providers as compared to Sellers.

In study 2, we look to further our understanding of these unexpected findings by investigating a potential boundary condition of Provider intentions on price valuations given the apparent reversal of the endowment effect found in study 1. Specifically, we look to test whether Providers with a Co-Consumption intention—to both personally use
a possession as well as rent it out to make money—differ in their price valuations from that of an Exchange intention—to own a possession with the sole purpose of renting it out to make money while never personally using the good oneself.
Chapter 3

Study 2: Comparing provider intentions on price valuations

The reversal of the endowment effect within peer-to-peer product rentals in study 1 led us to examine boundary conditions of two Provider intention types—a Co-Consumption Provider and an Exchange Provider. In particular, we predict in study 2 that Co-Consumption Providers (those who intend to use the possession for personal enjoyment and also rent it out) will have higher psychological ownership and positive affect than Exchange Providers (whose sole intent is to make money off of a rental) because of their greater personal tent use. We additionally hypothesize that both constructs will significantly mediate, and thus increase, willingness to accept price valuations. In turn, we also predict that when the transaction is based on Co-Consumption Providers, their valuations of the product will not differ from Renters. This will lead to a replication of the null endowment effect from study 1. We also predict that Exchange Providers, given their weaker psychological ownership and positive affect for their tent, will show a significant reverse endowment effect as compared to Renters and will rent out the tent for less than Renters are willing to pay.
Methods and measures

Participants

Participants \((N = 118, 50\% \text{ female}; \text{ ages } 19-71, M = 33)\)\(^3\), recruited from Amazon’s online Mechanical Turk system, were paid $.50 to take part in the study and were randomly assigned to one of three conditions: Renter, Exchange Provider, and Co-Consumption Provider. For study 2, we did not include Seller/Buyer conditions in order to focus on the subtleties of access-based consumption.

Procedure

After agreeing to participate in the study, each participant was first tasked with imagining being in a particular consumption setting. They read a brief description about a 2-person camping tent that they either hypothetically owned (Co-Consumption and Exchange Providers) or hypothetically did not own (Renter) but were interested in obtaining. Within this description, participants read about the tent’s prior history and product attributes such as durability, weather proofing, and signs of wear and tear, among others; see the Appendix B for full stimuli descriptions.

\(^3\) A total of 151 participants were initially recruited to take part in the survey \((49\% \text{ female}; \text{ ages } 19-71, M = 33)\). Two manipulation checks were used to verify an appropriate understanding of each assigned condition. In the first manipulation check, all participants were asked, “What action were you asked to perform in the scenario that you read about earlier?” with three choice options, “To rent the product myself,” “To rent out the product to another individual,” and “Don’t know/Can’t remember.” In the second manipulation check, all participants who selected choice option “To rent out the product to another individual” in the first manipulation check were then asked, “According to this passage, have you ever personally used this product in the past?” in order to discern between Co-Consumption and Exchange Providers. Three choice options asked, “Yes,” “No,” and “Don’t know/Can’t remember.” Based on these two manipulation checks, any participants who failed to correctly identify their assigned role were eliminated from analysis. Additionally, any participants who recorded the same irregular price valuations as identified in study 1 or who were ruled statistical outliers when reporting their price valuations were also eliminated from analysis. After all eliminations were completed, 118 participants remained and were used in final analysis.
In contrast to study 1, in which all product rental participants indicated their willingness pay or accept at each possible price along a continuum of $5 to $100 at $5 intervals, this study instead utilized an open-ended price valuation format as used in Reb and Connolly (2007). Using this alternative price valuation format, any replication that showed that an endowment effect is absent in product rentals as it was in study 1 should become more robust. In the question itself, Renters (Co-Consumption and Exchange Providers) were asked, “(As the current owner of this tent,) what is the maximum (minimum) amount of money you would pay (accept) to rent (rent out) this camping tent for a period of one week from (to) someone in your community? Please be as realistic in your estimation as possible. Please indicate this amount in $US in the space provided below.”

After providing the WTP or WTA responses, participants indicated their psychological ownership and affective reactions to the scenario. The same measures as used in study 1 to capture psychological ownership and both positive and negative affective reaction were again used in this study.

Participants assigned only to the Provider conditions were asked, “How important is it to you to personally use this tent?” measured on a 7-point scale anchored by endpoints “Not at all important” and “Very important.”

Additionally, participants assigned only to the Provider conditions were asked, “How important is it to you to make money off the rental of this tent?” measured on a 7-point scale anchored by endpoints “Not at all important” and “Very important.”

Finally, the same measures as used in study 1 to capture product identification and product perceptions were again used in this study as covariates on price valuation.
Results

Verifying our manipulation checks, we found that Co-Consumption Providers (M=5.51) perceived greater importance of personally using their tent than Exchange Providers (M=2.31), $F(1, 69) = 88.65, p<.001$. Exchange Providers (M=6.04) perceived greater importance in making money off of their possession than Co-Consumption Providers (M=4.87), $F(1, 69) = 88.65, p<.001$.

A summary of the main results for this study, after controlling for product identification and product perceptions, is provided in Table 3.1. When combining each of the two Provider types, we replicated the reverse endowment effect results from study 1 such that Renters (M=$72.26) had a significantly higher WTP price than the WTA price of Providers (M=$49.43), $F(1,113) = 5.33, p=.02$. Also replicating results from study 1, we found that Providers (M=5.68) had significantly higher psychological ownership than Renters (M=1.55), $F(1,113) = 3.87, p=.05$. Additionally, Providers (M=2.55) did not differ in either their positive affect from Renters (M=2.55) ($F(1,113) < .01, p=.98$), nor their negative affect (Providers M=1.22, Renters M=1.14, $F(1,113) = 1.11, p=.30$), again replicating results from study 1.
When comparing the two Provider types and contrary to our prediction that Exchange Providers would have significantly lower WTA prices than Co-Consumption Providers because of their weaker psychological ownership and positive affect for their tents, we curiously find the opposite pattern of results: Exchange Providers (M=$59.75) had significantly higher WTA prices than Co-Consumption Providers (M=$37.15), \( F(1,112) = 3.87, p=.05 \). In turn, and in opposition to our hypothesis, we found no presence of the endowment effect between Exchange Providers (M=$59.75) and Renters (M=$72.26), \( F(1,112) = 1.36, p=.35 \), but a significant reverse endowment effect between Co-Consumption Providers (M=$37.15) and Renters (M=$72.26), \( F(1,112) = 9.25, p=.003 \), thus indicating that participants in study 1 most likely held Co-Consumption Provider intentions.

When evaluating the mediating constructs of psychological ownership and positive affect on price valuation, we again did not find support for our hypothesis that Co-Consumption Providers would demonstrate higher levels of these mediating constructs when compared to Exchange Providers. Instead, we found that Co-

---

Table 3.1. Study 2 Summary of Results

<table>
<thead>
<tr>
<th>Role</th>
<th>n</th>
<th>Tent Price ($)</th>
<th>Psychological Ownership (1-7)</th>
<th>Positive Affect (1-5)</th>
<th>Negative Affect (1-5)</th>
<th>Importance of Personal Tent Use (1-7)</th>
<th>Importance of Making Money off Product Rental (1-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renter</td>
<td>44</td>
<td>72.26</td>
<td>2.15</td>
<td>2.55</td>
<td>1.14</td>
<td>Did not measure</td>
<td>Did not measure</td>
</tr>
<tr>
<td>All Providers</td>
<td>74</td>
<td>49.43</td>
<td>5.68</td>
<td>2.55</td>
<td>1.22</td>
<td>3.82</td>
<td>5.49</td>
</tr>
<tr>
<td>Exchange Provider</td>
<td>39</td>
<td>59.75</td>
<td>5.62</td>
<td>2.51</td>
<td>1.19</td>
<td>2.31</td>
<td>6.04</td>
</tr>
<tr>
<td>Co-Consumption Provider</td>
<td>35</td>
<td>37.15</td>
<td>5.74</td>
<td>2.60</td>
<td>1.26</td>
<td>5.51</td>
<td>4.87</td>
</tr>
</tbody>
</table>
Consumption Providers (M=5.74) did not differ in psychological ownership from Exchange Providers (M=5.62), $F(1,112) = .22, p=.64$. Similarly, and contrary to predictions, we also found that Co-Consumption Providers (M=2.60) did not differ from Exchange Providers (M=2.51) in positive affect as well, $F(1,112) = .20, p=.66$. Neither the original mediators were useful in predicting the reversal of the endowment effect.

Replicating the results from study 1, we found that both Provider types had higher psychological ownership than Renters. Specifically, we found that Co-Consumption Providers (M=5.74) were higher in psychological ownership than Renters (M=2.15), $F(1,112) = 201.45, p<.001$, and Exchange Providers (M=5.62) were also higher in psychological ownership than Renters (M=2.15), $F(1,112) = 218.77, p<.001$. We did not find any differences in positive affect between Co-Consumption Providers (M=2.60) and Renters (M=2.55), $F(1,112) = .08, p=.78$, nor between Exchange Providers (M=2.51) and Renters (M=2.55), $F(1,112) = .03, p=.86$.

Further, neither psychological ownership nor positive affect significantly mediated price valuations when comparing Co-Consumption Providers to Renters (Process Model 4; Hayes 2012; psychological ownership $ab = 28.44, 95\% CI = -7.00$ to $91.54$; positive affect $ab = .39, 95\% CI = -3.32$ to $9.77$), or when comparing Exchange Providers to Renters, (psychological ownership $ab = 16.21, 95\% CI = -13.01$ to $59.94$; positive affect $ab = -.67, 95\% CI = -11.59$ to $1.74$). This result is in contrast to the significant mediation of psychological ownership on price valuation for both peer-to-peer sales and peer-to-peer rentals in study 1.
Discussion

In an attempt to better understand the unanticipated reversal of the classic endowment effect for peer-to-peer rentals found in study 1, we examined how two Provider intention types, Co-Consumption and Exchange, differed in their price valuations against Renters in study 2.

Replicating results from study 1, a reverse endowment effect appeared such that Renters had higher WTP prices than the WTA prices of Providers. This result replicated findings from study 1. Also replicating results from study 1, we found that Providers had higher psychological ownership than Renters, but did not differ in either positive or negative affect.

When comparing the two Provider types and contrary to our main predictions, we found that Exchange Providers had higher WTA prices than Co-Consumption Providers. While both Co-Consumption Providers and Exchange Providers had higher psychological ownership than Renters, as anticipated, we found no differences in psychological ownership nor positive affect between Provider types, failing to support our hypothesis that Co-Consumption Providers would have higher psychological ownership and positive affect than Exchange Providers.

Further, when testing psychological ownership and positive affect for mediation, we found neither construct significantly mediated price valuation. This is in direct contrast to study 1 where psychological ownership was significant.

Taken together, the results from study 2 suggest that unlike peer-to-peer sales, where concerns over loss aversion seem to trump desires for earned income given higher WTA prices for sellers with an exchange intention over a consumption intention
(Novemsky and Khaneman 2005a, b; List 2003; Shu and Peck 2011), peer-to-peer rentals seem to show the opposite pattern of results. In particular, we find that Exchange providers demand higher WTA prices than Co-Consumption Providers, thus indicating that greed trumps concerns over loss aversion within peer-to-peer rentals.

A question of interest for future research thus becomes why we observed a significant reversal of the endowment effect for Co-Consumption Providers since psychological ownership, affective reaction, perceived importance of personal tent use, perceived importance of making money off of the product rental, product identification, and product perceptions did not seem to fully account for this outcome. A more thorough investigation into other potential mediators of this effect, as well as potential psychological differences between Buyers and Renters, is therefore needed.
Chapter 4

General Discussion

Taken together, this research contributes not only to the ever-growing literature of the endowment effect, but also adds much needed clarity to our growing understanding of peer-to-peer rentals. This paper concludes with a brief discussion of the theoretical and practical implications of these findings, their potential limitations, as well as fruitful avenues of future research.

Theoretical contributions and marketing implications

Several theoretical contributions and practical marketing implications emerge from our findings. In support of our main hypothesis in study 1, we provide preliminary evidence that the endowment effect may not hold for peer-to-peer rentals in the same way that it does with peer-to-peer sales. In particular, we found an unexpected reversal of the endowment effect in peer-to-peer sales.

The results of study 1 show that both Sellers and Providers have higher psychological ownership towards the good than Buyers and Renters, respectively, replicating the patterns of results for product sales in Shu and Peck (2011). Though we did not find significant differences between Sellers (Providers) and Buyers (Renters) in positive affect towards the good as Shu & Peck (2011) had previously demonstrated in peer-to-peer sales, we did replicate their work by showing a significant mediation of psychological ownership on price valuations for peer-to-peer sales as well as peer-to-peer rentals. Finally, we also showed that Providers are able to retain higher levels of
psychological ownership than Sellers after their respective goods are no longer in their possession. Given the significant mediation of this construct for product sales, but not product rentals, we gain preliminary evidence that the absence of the endowment effect for product rentals is driven, at least in part, by the overall paucity of loss aversion for Providers as compared to Sellers.

The reversal of the endowment effect within peer-to-peer product rentals in study 1 led us to examine boundary conditions of various Provider intentions in study 2. Prior research in peer-to-peer sales demonstrate that concerns over psychological loss of a possession trump desires for earned income. Consumption Sellers typically demand higher WTA prices than Exchange Sellers (Novemsky and Khaneman 2005a, b; List 2003; Shu and Peck 2011). Building off of these past findings and contrary to our main predictions, we found that Exchange Providers instead demanded higher WTA prices than Co-Consumption Providers. The desire for income trumped concerns over psychological loss of a possession within peer-to-peer rentals, the opposite pattern of results for peer-to-peer sales.

Further, while both Co-Consumption Providers and Exchange Providers have higher psychological ownership than Renters, as expected, we found no differences in psychological ownership between Provider types, failing to support our hypothesis that Co-Consumption Providers would have higher psychological ownership than Exchange Providers. Additionally, we found no differences between Co-Consumption Providers and Exchange Providers in positive affect.
Finally, when testing psychological ownership and positive affect as mediators in study 2, we found that neither construct significantly mediated price valuation, unlike our findings from study 1 where psychological ownership was significant.

The practical implications of these findings is clear. Our results suggest that Providers should not be hesitant to charge higher than initially anticipated prices since Renters seem willing, in many cases, to pay those demands. In other words, given that the endowment effect appears to reverse for peer-to-peer rentals, Renters are seemingly more willing to pay higher prices to Providers to rent out a good than Buyers are willing to pay Sellers to purchase a good. As such, Co-Consumption Providers may therefore be able to maximize their “bonus” income without aggravating or offending targeted Renters.

Potential limitations

Like all research, this study is not without its potential limitations. To start, both studies employed some variation of a camping tent scenario. While findings from each of these studies offer preliminary evidence that an endowment effect is reversed for peer-to-peer rentals, future research will surely need to test other product categories beyond tent rentals in order to substantiate and generalize the presented findings to other rental contexts.

A second potential limitation of the present research is the artificial and hypothetical nature of the stimuli manipulations themselves. Most prior endowment effect studies have relied on physical exchanges of goods (e.g. mugs, pens, etc.) to examine the phenomenon at hand. Because we only asked participants to hypothetically imagine each respective rental/purchase scenario, instead of actively engaging in some
type of physical transaction, our findings may not be obtained with real money on the line. Future research will therefore need to test these theories in field settings whenever possible, or at the very least, manipulate some kind of physical rental transaction within a laboratory setting.

A final potential limitation of this research deals specifically within study 2. In particular, our Co-Consumption Providers, as described in this study to participants personally used their possession with a high degree of frequency. Because this characterization is in complete contrast to Exchange Providers who never personally use their possessions and only look to make money off of its rental, our findings only highlight theoretical differences when Providers who are on each end of this “Provider spectrum.” Potential subtleties within this spectrum, if any, will therefore need to be more thoroughly investigated in future research.

**Future research**

Moving forward, calls for future research in this area offer several fruitful avenues. Perhaps the most pressing need for future research, as briefly mentioned in the discussion of study 2, is to better understand why a significant reversal of the endowment effect occurs for Co-Consumption Providers since a number of previously tested factors including psychological ownership, affective reaction, perceived importance of personal tent use, perceived importance of making money off of the product rental, product identification, and product perceptions do not seem to fully account for this finding.

One potential explanation of this reversal is differences in risk tolerance levels between Sellers and Providers. Kahneman and Tversky (1984) define risk aversion as a
preference for a sure outcome over a gamble with higher or equal expected value. Whether or not some outcome is perceived as a loss or gain, however, depends on the reference point. Some changes are conceptualized as attempts to facilitate gains. Other changes, in contrast, are conceptualized as attempts to minimize losses or costs. In general, when the prospect of gains is emphasized, people will more likely reject risky behaviors. When risky behaviors are rejected, people are considered risk averse. However, when attempts to curb losses are salient, people tend to instead engage in risk seeking behaviors. These individuals, in contrast, are considered more risk tolerant (Kahneman and Tversky 1979; Tversky and Kahneman 1992).

In the domain of peer-to-peer sales and rentals, it is possible that Co-Consumption Providers will have more of a gain-frame and thus be more risk averse than both Exchange Providers and Sellers. Co-Consumption Providers uniquely benefit from earning incoming while also personally enjoying the use of their possession. As a result, Co-Consumption Providers alone should therefore perceive generated income as a mere “bonus” given their primary interest in personally using their tent. In contrast, Exchange Providers should perceive generated income as the focal reason for owning the possession and would more likely be willing to risk the possibility of earning no money for a chance at more compensation. Similarly, Sellers should also be more willing than Co-Consumption Providers to engage in riskier behavior and take a gamble for more compensation given their higher predicted levels of psychological loss at the thought of selling their possession. Future research will therefore need to test these predictions in order to see how differing risk tolerance levels between Provider types and Sellers influences the presence, absence, or reversal of the endowment effect.
It is also possible that fond memories of past use of the possession for Co-Consumption Providers spurs a unique empathy for Renters, thereby leading to a reversed endowment effect. If Co-Consumption Providers feel a desire to “share” their enjoyable experiences with Renters, this might also help explain their low observed WTA prices. In other words, it is possible that Co-Consumption Providers are more altruistic than both Exchange Providers and Sellers given their unique Co-Consumption behavior.

Another potential avenue of future research may is to examine the psychological and emotional distinctions between Renters and Buyers, as the presented research has focused almost exclusively on comparing Providers and Sellers. To elaborate, we are only aware at the present time that the endowment effect reverses for peer-to-peer rentals yet holds for peer-to-peer sales. We are less informed, however, on the exact mechanisms of the Renter-Provider relationship of this reversal, see Figure 4.1.
A number of potential scenarios could thus account for this reversal. For example, preliminary evidence suggests that Providers are decreasing their price valuations beyond those of Renters since Providers are not suffering from the same degree of loss aversion as Sellers. However, in an alternative explanation of our findings, perhaps Renters see more value in a rental good than Buyers in a potential purchase. In such a case, a reverse endowment effect between Providers and Renters would also appear. A third possibility

---

In a peer-to-peer (P2P) sale, we observe an endowment effect where a Seller’s WTA price exceeds a Buyer’s WTP price. Three possible scenarios, however, may explain the observed reversal endowment effect for P2P rentals where a Renter’s WTP price exceeds a (Co-Consumption) Provider’s WTA price. In Scenario 1, Providers reduce their price valuation below those of Renters, perhaps because Providers do not feel as much psychological loss for their possession as compared to Sellers and do not feel the same need to charge as “high” a price. In Scenario 2, Renters increase their price valuations beyond those of Providers, perhaps because Renters see more value in a rental good than Buyers in a potential purchase. In Scenario 3, there is some combination of the first two scenarios. In all three P2P rental scenarios, however, the endowment effect has been reversed. More investigation is therefore needed, especially pertaining to the Renter versus Buyer comparison, to more appropriately determine the reversal mechanisms of this endowment effect.
is a simultaneous lowering of price valuations for Providers and an increase in price valuations for Renters. In all three peer-to-peer rental scenarios, however, the reversed endowment effect has been replicated. More investigation is therefore needed, especially pertaining to the Renter versus Buyer comparison, to more appropriately determine the mechanism of this reversal.

Future research may also investigate contexts in which the endowment effect may reappear for peer-to-peer rentals. For example, perhaps when a rental good is likely to get damaged or incur financial loss, Providers may demand a higher price valuation. In this case, the endowment effect may re-appear. Similarly, perhaps when Renters perceive a rental good as more disgusting or stigmatized, the endowment effect would also re-appear.

Last, the present research only examines rental transactions in peer-to-peer settings. However, the question remains whether or not these findings generalize to third-party distributors (i.e. companies who rent out goods such as Rent the Runway). In these cases, Renters may attach differing perceptions to the rental good because it is not personally identified with a Provider. For example, are Renters more willing to pay a premium to rent someone else’s personal possession rather than a corporately owned rental good? Additionally, are there any unique territorial concerns associated with a peer-to-peer rental possession? Inquiries such as these will therefore need to be more thoroughly investigated in future research.
References


Raghunathan, Rajagopal and Michel Tuan Pham (1999), “All negative moods are not equal: Motivational influences on anxiety and sadness on decision making,” *Organizational Behavior and Human Decision Processes*, 79 (July), 56-77.


Appendix A: Study 1 Camping Tent Stimuli

Sellers and Providers:

Please take a minute to imagine that you own a 2-person camping tent with the following characteristics:

• You have used this camping tent in the past but it is in excellent, usable condition
• Sets up and tears down in 10 minutes with Insta-Clip poles
• Durable, high quality fabric construction
• Waterproof WeatherTec System
• No visible signs of wear or tear

After you have a picture of this product in mind, please click to the next page.

Buyers and Renters:

Please take a minute to imagine a 2-person camping tent with the following characteristics:

• Has been used in the past by at least one other unknown individual but it is in excellent, usable condition
• Sets up and tears down in 10 minutes with Insta-Clip poles
• Durable, high quality fabric construction
• Waterproof WeatherTec System
• No visible signs of wear or tear

After you have a picture of this product in mind, please click to the next page.
Appendix B: Study 2 Camping Tent Stimuli

Renters:

Please take a minute to imagine that someone in your community owns a 2-person camping tent with the following characteristics:
- This camping tent has been rented out this tent to others in your community on numerous occasions
- It is in excellent, usable condition
- Sets up and tears down in 10 minutes with Insta-Clip poles
- Durable, high quality fabric construction
- Waterproof WeatherTec System
- No visible signs of wear or tear

After you have a picture of this product in mind, please click to the next page.

Co-Consumption Providers:

Please take a minute to imagine that you own a 2-person camping tent with the following characteristics:
- You have personally used this camping tent in the past on numerous occasions
- While not in use, you have also rented out this tent to others in your community on numerous occasions
- It is in excellent, usable condition
- Sets up and tears down in 10 minutes with Insta-Clip poles
- Durable, high quality fabric construction
- Waterproof WeatherTec System
- No visible signs of wear or tear

After you have a picture of this product in mind, please click to the next page.

Exchange Providers:

Please take a minute to imagine that you own a 2-person camping tent with the following characteristics:
- Has been used in the past by at least one other unknown individual but it is in excellent, usable condition
- Sets up and tears down in 10 minutes with Insta-Clip poles
- Durable, high quality fabric construction
- Waterproof WeatherTec System
- No visible signs of wear or tear

After you have a picture of this product in mind, please click to the next page.