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When do materialistic consumers join commercial sharing systems

Payam Akbar *, Robert Mai, Stefan Hoffmann

Christian-Albrecht-University of Kiel, Faculty of Business, Economics and Social Sciences, Department of Marketing, 24098 Kiel, Germany

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ABSTRACT

Commercial sharing systems (CSS) evolve to a relevant business concept that provides access to product benefits without ownership. A series of three studies delivers new knowledge on how to target consumers who still refrain from sharing to widen the market potential of CSS. Study 1 demonstrates that materialism's sub-dimension possessiveness is the dominant inhibitor of sharing. Study 2 then confirms that this negative impact of materialism diminishes with elevating levels of the desire for unique consumer products. Study 3 reveals that this interaction effect is further qualified by the ownership of a product if the product category has a strong product-need-fit. This research outlines implications of how marketers can design CSS so that they are also attractive to the critical target segment of materialistic consumers.

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1. Introduction

A growing number of consumers consider commercial sharing systems (CSS) a viable alternative to product ownership (Belk, 2007; Botsman & Rogers, 2010; Havas, 2014) that competes with the dominant logic of purchasing goods (Belk, 2010; Economist, 2013; Sacks, 2011). The commercial sharing market has an estimated volume of more than US\$100 billion (Sacks, 2011) with the potential to exceed \$335 billion by 2025 (PwC, 2014). The global car sharing revenue alone will grow to \$6.2 billion by 2020 (Navigant Research, 2013). Accordingly, marketing academics started to explore the drivers of sharing participation to develop attractive sharing offerings. Yet, consumer research is still in its early phase (Belk, 2010, 2014). The current literature demonstrates that some consumers join CSS due to financial restrictions and a tendency toward frugality, while others participate for ideological reasons (Botsman & Rogers, 2010; Lambertson & Rose, 2012; Ozanne & Ballantine, 2010). In order to expand the share economy to a broader mass of consumers, marketers require knowledge about the motivating factors in different consumer segments, particularly for consumers who have been reluctant to make use of CSS so far.

As materialistic consumers prefer to buy and thus own goods (Belk, 1984, 1985), there is reason to expect that consumer materialism (the deep-seated wish to possess things) is the key barrier to join CSS. The present research proposes that, under certain conditions, even materialistic consumers may choose CSS-offers. Yet, their motivational drivers

may differ from those of frugal or sustainability-conscious consumers (Geiger-Oneto, Gelb, Walker, & Hess, 2013; Hudders, Pandelaere, & Vyncke, 2013; Wang & Griskevicius, 2014). This research suggests that the desire for unique consumer products is a potential moderating factor. Consumers with a strong wish to use unique products may join CSS despite materialistic dispositions. Although no empirical evidence of the interplay between materialism and the desire for unique consumer products has been published, recent studies provide indications that both concepts relate to sharing intentions (Lynn & Harris, 1997; Ozanne & Ballantine, 2010; Podoshen & Andrzejewski, 2012).

This research makes several contributions to the literature. Study 1 tests two types of materialism (possessiveness and non-generosity) against a set of factors that potentially shape the intention to participate in CSS. Study 2 then analyzes how the desire for unique products attenuates the detrimental influence of materialism on sharing participation. Study 3 finally shows how the interplay between both factors depends on whether the ownership of one product fulfills the basic product category need. Together, this research has theoretical implications for explaining consumer sharing behavior as well as managerial implications for developing new sharing offers and for widening the sharing market.

2. Conceptual background

2.1. Commercial sharing systems

CSS provide customers access to product benefits without ownership, and thus, offer revenue and growth potential for companies (Botsman & Rogers, 2010). Drawing on the public goods literature (Ostrom, 2003), the marketing discipline distinguishes between open

* Corresponding author.

E-mail addresses: akbar@bwl.uni-kiel.de (P. Akbar), robert.mai@bwl.uni-kiel.de (R. Mai), stefan.hoffmann@bwl.uni-kiel.de (S. Hoffmann).

and closed CSS (Lamberton & Rose, 2012). In open CSS, consumers get access to the shared good for a fee. Zipcar, for example, provides over 900,000 members on-demand-access to their car fleet for monetary compensation. In closed CSS, only some individuals (qualified by member status, relationship to others, or certain characteristics) get access to the shared good. Mobile providers such as AT&T or Verizon allow their customers to share their cell phone minutes and data volume with predefined others.

2.2. Sharing

The sharing paradigm lays the behavioral foundation of CSS participation. Belk (2007, 126) defines sharing as “the act and process of distributing what is ours to others for their use as well as the act and process of receiving something from others for our use”. The literature distinguishes two modes of sharing, namely sharing in and sharing out (Belk, 2010). While sharing in dissolves interpersonal boundaries, sharing out creates no social bond as individuals divide resources to optimize their use. The marketing discipline focuses on how to commercialize sharing out willingness via CSS, which is also in the scope of this research.

To date, several conceptual (Belk, 2010, 2013; Widlok, 2004), qualitative (Arsel & Dobscha, 2011; Bardhi & Eckhardt, 2012), and non-peer reviewed (Havas, 2014) articles discuss the drivers of why consumers engage in CSS. However, only few empirical studies analyze these drivers quantitatively (Table 1). A prior research shows that factors such as frugality or sustainability motivate consumers to join CSS (Seegebarth, Peyer, Balderjahn, & Wiedmann, 2016). In contrast, factors like materialism dispositions make consumers prefer to possess goods rather than to participate in sharing systems (Ozanne & Ballantine, 2010). The cost–benefit approach of Lamberton and Rose (2012) illustrates that the degree of substitutability or the search costs of sharing affect the sharing decision process. A research further demonstrates that previous experience with sharing fosters participation in CSS (Möhlmann, 2015; Ozanne & Ballantine, 2010).

2.3. Sharing as a hybrid of consumption and anti-consumption

Sharing enables consumers to reduce their purchases without the need to abstain from using products (Botsman & Rogers, 2010). Accordingly, sharing combines constituting elements of the traditional consumption paradigm with aspects of the anti-consumption paradigm. A previous research (Table 1) confirms that some consumers participate in sharing systems to reduce their level of consumption, either for reasons of frugality or sustainability (Seegebarth et al., 2016). Accordingly, CSS participation can be considered a type of anti-consumption

(Chatzidakis & Lee, 2013), that is, an act of reducing or avoiding consumption for ethical, sustainable, or symbolic reasons (Lee, Fernandez, & Hyman, 2009). From an anti-consumption perspective, not choosing a product is not simply a function of the preference to consume one object over another (Zavestoski, 2002). In contrast to regular non-choice decisions, anti-consumption is an active and conscious decision not to consume (Close & Zinkhan, 2009). While scholars traditionally focus on the consumption aspect, the motivation for and the conscious decision to reduce consumption are still under-researched (Craig-Lees, 2006).

To disentangle the hybrid status of sharing conceptually, this research takes into account that consumption subsumes the usage as well as the purchase of goods and services (McCracken, 1990). Likewise, anti-consumption refers to both aspects simultaneously. The sharing concept, however, and more specifically the use of CSS, is a way to reduce the purchase component, irrespective of the usage component (Botsman & Rogers, 2010). Hence, sharing is a form of anti-consumption with regard to possession, but not regarding the use of specific products or brands.

The hybrid nature of sharing is particularly relevant when looking for new ways to increase the attractiveness of CSS. As Hutter and Hoffmann (2013, 217) pinpoint, “anti-consumption obviously requires sacrifices, but many consumers are not willing or able to bear the subjective costs of reduced consumption and, thus, are unwilling to make sacrifices”. In a similar fashion, Connolly and Prothero (2003) reveal that consumers associate consumption self-restrictions as cold and dark. For materialistic consumers, possession is highly relevant and these consumers are thus less likely to reduce consumption. CSS could help to resolve this dilemma because sharing is a possible form of purchase reduction without usage reduction. Hence, this research proposes that under certain circumstances sharing is even attractive for materialistic consumers.

2.4. Materialism

Belk (1987, 26) conceptualizes materialism as a “dominant consumer ideology and the most significant macro development in modern consumer behavior”. Highly materialistic consumers attach importance to worldly possessions that play a central role in their lives (Goldsmith & Clark, 2012). Accordingly, materialism is a crucial predictor of consumer behavior (Ellis, 1992). In contrast to traditional business models, using (rather than possessing) is a key element of sharing by definition. In other words, a person uses things owned by others, as well as giving his/her things to others. While, for persons who share, possession is not the major concern of their consumption behaviors, for materialistic consumers, consumption is usually not satisfying without possession (Belk, 1987).

Table 1
Overview of previous empirical sharing research.

Construct	Key finding
<i>Drivers</i>	Sharing tendency is <i>higher</i> , ...
Price of ownership ^{2, 4}	... the <i>higher</i> the calculated costs of owning and maintaining.
Frugality ^{2, 4}	... the <i>higher</i> the frugality disposition.
Sustainability ⁶	... the <i>higher</i> the sustainability orientation.
Anti-consumption ²	... the <i>higher</i> the anti-consumption disposition.
Anti-industry ⁴	... the <i>higher</i> the anti-industry attitude.
Idealism ³	... the <i>higher</i> the idealistic orientation.
Degree of substitutability ¹	... the <i>higher</i> the substitutability of a good via sharing.
Social utility of sharing ^{1, 2, 4}	... the <i>more</i> options to socialize with sharing system members.
Functional utility of sharing ¹	... the <i>higher</i> the perceived utility of sharing.
Sharing knowledge ^{2, 5}	... the <i>higher</i> the familiarity with the sharing system.
Satisfaction with sharing option ⁵	... the <i>higher</i> the satisfaction with the sharing option.
<i>Inhibitors</i>	Sharing tendency is <i>lower</i> , ...
Materialism ²	... the <i>higher</i> the importance of material goods to a person's life.
Search cost of sharing ^{2, 4}	... the <i>more</i> time is spend looking for providers.
Perceived product scarcity risk ¹	... the <i>higher</i> the perceived likelihood that a product will be unavailable.

Source: ¹Lamberton and Rose (2012); ²Ozanne and Ballantine (2010); ³Hellwig et al. (2015); ⁴Hennig-Thurau et al. (2007); ⁵Möhlmann (2015); ⁶Seegebarth et al. (2016).

A previous empirical research provides indications that materialism plays a key role in the consumer's sharing decision. Ozanne and Ballantine (2010) use data from 397 toy library members to demonstrate that materialism disposition helps to discriminate different segments of sharing-consumers. However, this important role of materialism is still under-researched and factors that intensify or attenuate the inhibiting effect of materialism are not yet explored.

According to Belk (1984), materialism is a multi-dimensional concept. He distinguishes between the sub-dimensions possessiveness and non-generosity. Possessiveness refers to the tendency to retain control or ownership of one's possessions (Belk, 1983). Belk (1984, p.291) argues that a possessive person favors ownership over renting, leasing, or borrowing. Since CSS are – in some way – a progression of leasing and renting business models (Belk, 2013; Philip, Ozanne, & Ballantine, 2015), this paper assumes that the consumers' possessiveness disposition reduces his/her sharing tendency.

H1a. The higher the possessiveness materialism disposition, the lower the consumer's intention to participate in commercial sharing systems.

Non-generosity, the second sub-dimension of the materialism construct, comprises the unwillingness to share or to give possessions to others (Belk, 1984). Non-generosity is a barrier to engage in peer-to-peer sharing systems, whereas participants in CSS do not have to give their own possessions to others. For this reason, this research here expects no or a much weaker influence of non-generosity than that of possessiveness.

H1b. The effect of non-generosity materialism is weaker than the effect of possessiveness materialism on consumer's intention to participate in commercial sharing systems.

2.5. Desire for unique consumer products

A large body of the consumer research literature shows that individuals have a deeply-rooted desire to distinguish themselves from others by means of different consumption patterns (Berger & Heath, 2007; Tian & McKenzie, 2001). Lynn and Harris (1997) call this need for differentiation through consumption the 'desire for unique consumer products'. The latter measures the extent to which consumers "hold as a personal goal the acquisition and possession of consumer goods, services, and experiences that few others possess" (Lynn & Harris, 1997, p. 602). In traditional purchase-based business models, consumers with a high materialism disposition fulfill their desire for unique products by buying and possessing these goods (Lynn & Harris, 1997). So far, there is no conceptual or empirical study that investigates if materialistic individuals not only fulfill their desire for unique products through buying and possessing goods but also through accessing and using goods via CSS.

In access-based business models, per definition, the consumers' desire for unique consumer products cannot be satisfied through possession because consumers do not buy the product. Likewise, the CSS-provider does not sell but give short-time access to the consumer good. While access as an alternative consumption mode next to ownership is a major business model innovation (Baumeister, Scherer, & von Wangenheim, 2015), there is reason to believe (as the section on materialism pointed out) that consumers' materialism disposition attenuates its willingness to take part in CSS. Unique consumer products could be a solution to overcome this obstacle. However the role of unique consumer products in CSS is not explored yet. Therefore, this research here argues that consumer's sharing willingness can be explained better when considering the interplay between materialism and the desire for unique consumer products. This argument is based on the fact that CSS often enable access to products that consumers could not afford or would usually not buy. Thus, sharing is a viable alternative for materialistic consumers with a high uniqueness disposition. Instead of

purchasing unique products, materialistic consumers could get access to unique products by sharing. So far, no investigation has considered this interaction effect of materialism and uniqueness on sharing intention.

H2a. The desire for unique consumer products moderates the effect of materialism on sharing intentions. Consumers with a high materialism disposition are more (less) willing to participate in CSS, if their desire for unique consumer products is high (low).

Research in various fields repeatedly demonstrates that the relationship between behavioral intentions and actual consumption behavior is weak and largely depends on moderating factors (Ajzen, 1991; Auger & Devinney, 2007; De Pelsmacker, Driessen, & Rayp, 2005; Webb & Sheeran, 2006). Particularly in the literature on ethical and sustainable consumption, the mind/behavior-gap is a widely noted phenomenon (Carrigan & Attalla, 2001). Building on the rationale underlying H2a, the authors argue that taking into account a consumer's desire for unique products helps bridging this gap. A consumer with a strong desire for unique consumer products is more likely to translate his/her general sharing intention into participation in CSS.

H2b. A consumer's desire for unique consumer products moderates the relationship between sharing intention and sharing participation. Particularly, consumers with high sharing intention participate in CSS if their desire for unique consumer products is high as well.

2.6. Effect of ownership

A previous research indicates that consumer characteristics influence sharing intentions (Hellwig, Morhart, Girardin, & Hauser, 2015; Lamberton & Rose, 2012; Möhlmann, 2015; Ozanne & Ballantine, 2010; Seegebarth et al., 2016). Yet, this research here suggests that also product characteristics can be an important boundary condition of this effect, and the product-need-fit is presumably particularly relevant. The product-need-fit refers to the extent to which one product fulfills the need associated with a given product category. Product-need-fit is low if one product alone cannot fulfill the entire product category need. For example, a consumer who only owns one hammer is still far from fulfilling his/her need of a fully equipped toolbox for many different uses. In contrast, product-need-fit is high if one exemplary product of the product category largely fulfills the consumer's need related to this category. For instance, ownership of one vehicle fulfills the basic need for mobility associated with the category car, regardless of an SUV or a Pickup.

The ownership of products with different levels of product-need-fit might be important to determine the degree to which consumers are willing to participate in CSS. Owning only one product in a category with a low product-need-fit cannot satisfy the entire product category's needs. In this case, access to further products via CSS helps to satisfy product category needs. Another example for products with a low product-need-fit is toys. A first study of Ozanne and Ozanne (2011) in the context of sharing in a toy library shows that sharing willingness increases when the CSS gives the consumer access to products with a low product-need-fit. In contrast, owning a product with a high product-need-fit largely fulfills the consumer's need within the product category and the willingness to participate in CSS diminishes. In consideration of these differences, this research suggests the following three-way-interaction for product categories with high product-need-fit.

H3. In terms of product categories with a high product-need-fit, the interaction effect of materialism disposition and the desire for unique consumer products on the willingness to participate in CSS is more powerful if consumers do not own products of the category than if they do.

2.7. Suggested model and flow of studies

Across three empirical studies, this research explores the main effect of materialism against a set of moderating influences on the willingness to take part in CSS (Fig. 1). Study 1 tests the fundamental proposition that high materialism disposition strongly reduces the intention to participate in CSS. The study disentangles the diverging effects of possessiveness materialism (H1a) and non-generosity materialism (H1b). Study 2 builds on this knowledge and examines whether the desire for unique consumer products attenuates the negative effect of materialism on sharing intention (H2a) and whether this factor even amplifies the effect of sharing intention on sharing participation (H2b). To allow for conclusions about the universality of these mechanisms, Study 3 then examines if the relevant effects depend on characteristics of the product category, namely the product-need-fit. This study posits that the ownership of products with different levels of product-need-fit is an important moderator of the postulated relationships (H3).

3. Study 1: Main effect of materialism

3.1. Objective

Study 1 explores the basic premise that the consumer's materialism disposition attenuates the intention to participate in CSS. In particular, the aim of this study is to examine which sub-dimension of the materialism concept is relevant to understand the consumer's sharing willingness. Based on the prior discussion in Section 2, this research posits that a consumer's possessiveness disposition reduces his/her sharing tendency, whereas non-generosity is not a barrier to engage in CSS.

3.2. Sample

CSS are predominantly attractive to young consumers who are open to innovative concepts (PwC, 2014). Study 1 therefore recruited a sample of 117 undergraduate students who filled in a paper-and-pencil questionnaire in spring of 2014. The mean age of the respondents is 22.8 years ($SD = 2.39$), and 55.6% of the respondents are male.

3.3. Measures

3.3.1. Sharing

Two different approaches measure the respondent's sharing tendency. First, a five-item seven-point rating scale assesses the consumer's general willingness to share consumer goods by taking part in a CSS ($M = 3.77$, $SD = 1.50$, $\alpha = .89$). This study adapts scales from previous studies (Wu, Chan, & Hwa, 2008; Wu, Lu, Wu, & Fu, 2012) to a sharing

context (Appendix A). Second, Havas (2014) reveals that the consumers' willingness to share varies among industries, with high willingness for tools to low willingness for fashion. To control for domain-specific effects, a cover story informs the subjects about one of two fictional business models: a sharing system that offers tools (toolboxsharing.org) or a fashion sharing system (fashionsharing.org). The study uses the same items that measure the general sharing intention; only the words "do-it-yourself products" ($M = 4.61$, $SD = 1.75$, $\alpha = .93$) and "fashion" ($M = 1.87$, $SD = 1.16$, $\alpha = .95$), respectively, replace the word "consumer goods". An exploratory factor analysis with all indicators of the reflective scales demonstrates discriminant validity of the dependent variables. Isolated factor analyses further show that the average variance extracted exceeds at least 70%. All factor loadings are above .75.

3.3.2. Materialism

The items for both materialism sub-dimensions stem from Belk (1984). A three-item scale ($M = 2.79$, $SD = 1.03$, $\alpha = .75$) measures non-generosity, whereas a two-item scale ($M = 5.70$, $SD = .96$, $\alpha = .70$) assesses possessiveness.

3.3.3. Control variables

To test whether possessiveness is the dominant inhibitor of sharing intentions, this investigation contrasts the influence of the materialism dimensions against a set of control variables (Appendix A). Hennig-Thurau, Henning, and Sattler (2007) test the influence of sharing utility on sharing willingness. Therefore, this study includes Spangenberg, Voss, and Crowley's (1997) utilitarian ($M = 5.31$, $SD = .94$, $\alpha = .83$) and hedonic ($M = 4.21$, $SD = 1.03$, $\alpha = .89$) scales. According to Ozanne and Ballantine (2010), who identify the influence of frugality disposition on sharing intention, this study asks for the participants' frugality disposition using Lastovicka, Bettencourt, Hughner, and Kuntze's (1999) frugality scale ($M = 5.27$, $SD = 1.17$, $\alpha = .75$). Since sharing is often described as an innovative form of consumption (Botsman & Rogers, 2010), study 1 also includes Sharma's (2010) consumer innovativeness scale ($M = 3.63$, $SD = 1.08$, $\alpha = .80$).

Exploratory factor analysis with the indicators of all multi-item predictors and control scales indicate discriminate validity. As expected, the factor analysis extracted six factors and assigned each indicator to the corresponding factor.

To rule out the possibility that common method variance distorts the findings, the study follows the suggestion of Lindell and Whitney (2001) and Podsakoff, MacKenzie, Lee, and Podsakoff (2003). First, as an ex ante means, the study employs different scaling formats and separates the dependent and the independent variables in the survey. Second, as ex post means, the study runs Harman's single factor test. One common factor would extract only 26.46% of the variance, whereas multiple factors account for 69.31%. Additionally, the questionnaire includes an unrelated marker variable ("I like doing sports"). The marker item does not significantly correlate with the focal scales ($|r| < .10$, $p > .10$). Hence, common method variance does not distort the results.

3.4. Results

OLS regression with the two materialism sub-dimensions finds a strong negative and statistically significant influence of possession materialism for each of the three operationalizations of sharing intention: general ($\beta = -.377$, $t = -4.338$, $p \leq .001$), do-it-yourself ($\beta = -.216$, $t = -2.356$, $p \leq .05$), and fashion ($\beta = -.186$, $t = -2.011$, $p \leq .05$). By contrast, materialism in terms of non-generosity does not influence the sharing intention: general ($\beta = -.064$, $t = -.736$, n.s.), do-it-yourself ($\beta = -.101$, $t = -1.100$, n.s.), and fashion ($\beta = -.038$, $t = -.407$, n.s.).

A robustness check model includes the control variables to examine whether other predictors are more important than materialism. As Table 2 shows, the influence of possessiveness materialism on the participation intention remains statistically significant across all three

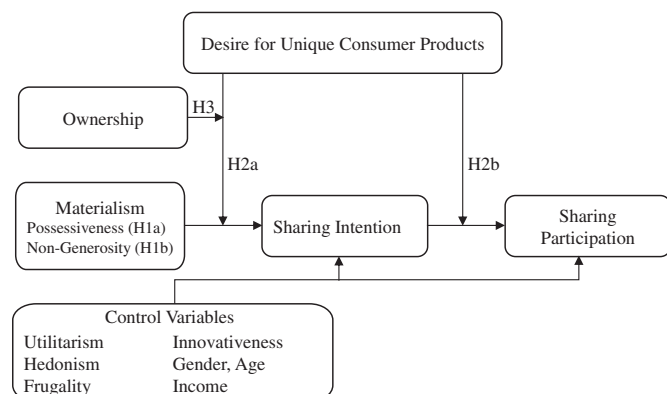


Fig. 1. Conceptual model of sharing participation.

Table 2
Drivers of sharing intentions.

	General sharing intention			Do-it-yourself sharing intention			Fashion sharing intention		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Materialism									
Possessiveness	−.378	−3.892	***	−.272	−2.572	*	−.222	−1.996	*
Non-Generosity	.043	.425		−.082	−.750		.039	.341	
Control Variables									
Utilitarianism	.096	.828		.153	1.208		−.045	−.339	
Hedonism	.258	2.208	*	.030	.238		.287	2.148	*
Frugality	−.046	−.460		.028	.257		.124	1.089	
Innovativeness	.227	2.433	*	.170	1.680		.003	.028	
Gender ¹	−.030	−.306		−.227	−2.135	*	.045	.402	
Age	−.052	−.536		−.059	−.555		.009	.081	
Income	.083	.863		−.020	−.191		−.021	−.195	
R ²	.327			.201			.117		

Notes. OLS regression, standardized coefficients. ¹0 = male, 1 = female.

* $p \leq .05$

** $p \leq .01$.

*** $p \leq .001$.

domains. Hedonism and innovativeness additionally influence the general sharing intention. Hedonism also helps predicting fashion intention. Overall, the analysis provides evidence that the effect of possessiveness materialism is very stable.

3.5. Discussion

Study 1 demonstrates that only one sub-dimension of materialism is relevant to predict whether (or not) consumers make use of CSS. While there is no effect of non-generosity, materialistic possessiveness disposition inhibits consumers from participating in CSS. The study further reveals that the influence of materialism is highly robust even if several theoretically relevant control variables are included into the model. The impact of possessiveness is similar across the general and the domain-specific sharing intentions (do-it-yourself and fashion).

4. Study 2: Moderating effect of the desire for unique consumer products

4.1. Objective

Study 1 reveals that the materialism's sub-dimension possessiveness (hereinafter materialism) is a major obstacle to forming sharing intentions. Accordingly, materialistic consumers are less willing to share common goods. This paper argues that the relationship is more complex and certain consumer characteristics color the influence of materialism on CSS participation. One of these characteristics is the desire for unique consumer products. This second study investigates whether the desire for unique consumer products has the potential to attenuate the negative impact of materialism.

4.2. Sample

In sum, 130 consumers participated in the study in summer of 2014. Trained interviewers approached the respondents in shopping malls and the city center. Quota sampling regarding gender (half of the respondents are male, 52.3%) and age (five groups: 20–29, 30–39, 40–49, 50–59, and 60–69) helps to control for the influence of socio-demographic variables. The mean age is 42.75 years ($SD = 14.60$).

4.3. Measures

4.3.1. Sharing

Study 2 measures sharing in two ways. First, this study uses the five-item domain-general scale from study 1 to assess consumers' sharing intention ($M = 4.84$, $SD = 1.75$, $\alpha = .91$). Second, to measure concrete

sharing participation in a subtle and less intrusive manner, the questionnaire includes a voucher for a fictional commercial tool-sharing web site (www.toolboxsharing.org) which was attached to the last page of the questionnaire. Each coupon contained a code and asked the participants to visit a web site for the case that they wanted to join the CSS. Sharing participation was indicated by consumers tearing off the voucher and taking it with them. To enter the landing page of the fictional CSS, the participants had to redeem the coupon (23% of the subjects entered the coupon, which ensures plausibility of the treatment).

4.3.2. Predictors

The questionnaire contains the scale of study 1 to measure possessiveness materialism ($M = 4.91$, $SD = 1.49$, $\alpha = .74$). A five-item five-point scale from Lynn and Harris (1997) measures the consumer's desire for unique consumer products ($M = 2.77$, $SD = .96$, $\alpha = .87$). The survey also includes the control variables of study 1.

4.3.3. Validity checks

Again, the multi-item scales have high internal consistency, and exploratory factor analysis demonstrates discriminant validity. The single factor test and correlations with a marker variable imply that common method variance does not distort the findings.

4.4. Results

4.4.1. Sharing intentions

OLS regression confirms that materialism significantly reduces the sharing intention (model 1, upper part of Table 3). As expected, the desire for unique consumer products moderates this main effect. Floodlight analysis (Spiller, Fitzsimons, Lynch, & McClelland, 2013) determines a threshold value of 3.50 for the region of desire for unique consumer products where the influence of materialism on sharing intention is significant (78% of the sample) and the region where the impact is not significant (22%). Spotlighting the intention, one standard deviation above/below the mean illustrates the interaction effect. As visualized in Fig. 2, sharing intention decreases with high materialism particularly for those consumers with low desire for unique consumer products ($-1SD$: $\beta = -5.77$, $t = -5.693$, $p \leq .001$), whereas this drop in sharing intentions is much weaker and insignificant for those with stronger desire for unique consumer products ($+1SD$: $\beta = -.149$, $t = -1.334$, $p > .05$). This interaction effect is robust when introducing the control variables as well (model 3), supporting H2a.

Table 3
Influences on sharing intention and participation.

	Model 1: Sharing intention			Model 2: Sharing intention			Model 3: Sharing intention		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Materialism	-.379	-4.631	***	-.363	-4.541	***	-.297	-3.649	***
DUCP ¹				.063	.780		.135	1.580	
Materialism X DUCP ¹				.242	3.019	**	.189	2.382	*
<i>Control variables</i>									
Sex							.127	1.515	
Age							-.022	-.261	
Innovation							-.101	-1.177	
Hedonism							-.005	-.052	
Utilitarianism							.299	3.051	**
Frugality							.044	.537	
Involvement							.063	.744	
R ²	.143			.209			.321		
<i>Model 4: Participation (voucher)</i>									
	<i>B</i>	<i>Wald</i>	<i>p</i>	<i>B</i>	<i>Wald</i>	<i>p</i>	<i>B</i>	<i>Wald</i>	<i>p</i>
Constant	-.343	3.115	+	-.436	4.344	*	-.452	4.185	*
Sharing intention	.902	13.631	***	1.094	14.301	***	1.041	10.597	***
Materialism	-.073	.125		-.150	.472		-.044	.033	
DUCP ¹				-.235	1.222		-.225	.796	
Sharing intention X DUCP ¹				.461	4.802	*	.490	4.686	*
<i>Control variables</i>									
Sex							.071	.091	
Age							-.549	5.180	*
Innovation							-.249	1.028	
Hedonism							-.362	1.965	
Utilitarianism							.376	1.729	
Frugality							-.060	.061	
Involvement							.535	4.663	*
Nagelkerke's R ²	.199			.248			.352		

Notes. OLS regression (model 1–3); logistic regression (model 4–6). ¹Desire for Unique Consumer Products, “I am attracted to rare objects”, “I am more likely to buy a product if it is rare”, “I enjoy having things that others do not possess”, “I rarely pass up the opportunity to order custom features on the products I buy”, “I like to try new products and services before others do”.

+ *p* < .1.
* *p* < .05.
** *p* < .01.
*** *p* < .001.

4.4.2. Sharing participation

Logistic regression analysis examines whether sharing intentions translate into participation (i.e., tearing off the voucher). As model 4 indicates (lower part of Table 3), the subjects were more likely to take the voucher, the higher their sharing intentions. Model 5 confirms that the link between sharing intention and participation is further moderated

by the desire for unique consumer products. Those consumers with high desire for unique consumer products are more likely to act according to their sharing intentions (+ 1SD, *B* = 1.555, *Z* = 3.622, *p* < .001) than those with low desire for unique products (− 1SD, *B* = .634, *Z* = 2.369, *p* < .01) (Fig. 2). For this second moderating effect of the desire for unique products, the threshold value is 1.637 (not significant:

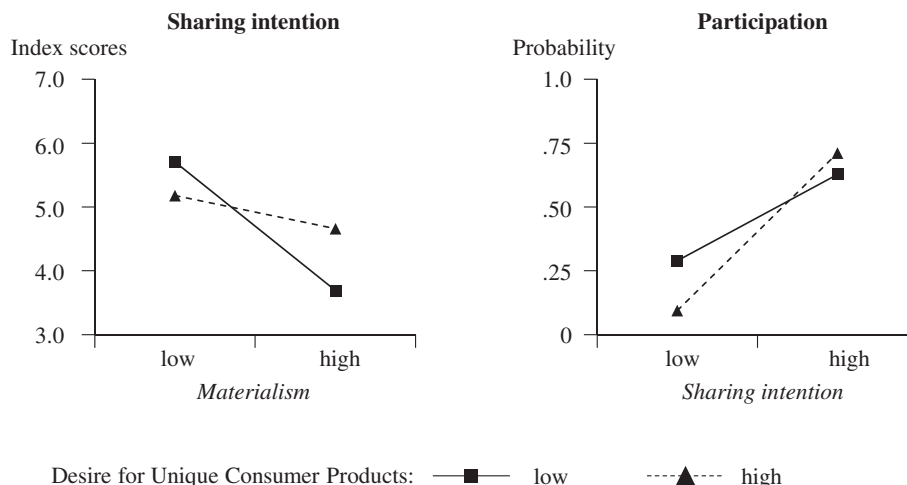


Fig. 2. Two way interactions between materialism and the desire for unique consumer products.

16% of the sample, significant: 84%). The results are robust when including the control variables (model 6), which support H2b.

4.4.3. Mediation analysis

The next step of the analysis examines how the impact of materialism on sharing intention is passed on to participation. The Sobel test confirms that this indirect effect of materialism operating via intention formation is highly significant (indirect effect $IE = -.34$, $Z = -2.847$, $p < .01$). Yet, this indirect influence of materialism is dependent on the level of desire for uniqueness. To explore this moderated mediation, the analysis applies a bootstrapping approach with 10,000 samples to derive the 95% bias-corrected confidence intervals (CI) of the conditional effects. For those with weak desire for unique consumer products ($-1SD$: $IE = -.348$, $CI = -.863$ to $-.003$) and moderate desire for unique consumer products ($0SD$: $IE = -.392$, $CI = -.725$ to $-.147$), the indirect effect of materialism on participation that is mediated by intention formation is much stronger than that of consumers with higher needs for uniqueness. For the latter group of consumers, the indirect effect of materialism is even insignificant ($+1SD$, $IE = -.233$, $CI = -.834$ to $.185$). Again, these results remain stable when including the control variables.

4.5. Discussion

Study 2 provides additional support to H1a. Materialism dispositions prevent consumers from taking part in CSS. However, this study substantiates the moderating role of the desire for unique consumer products. Remarkably, uniqueness operates at two stages of the chain of effects as proposed by our framework. First, and consistent with H2a, the detrimental effect of a consumer's materialism disposition on sharing intention is dampened by the desire for unique consumer products. As sharing provides access to products consumers usually do not own (or are unable to afford), the materialism disposition hampers intention formation of consumers with a strong desire for unique products to a lesser extent. As postulated with H2b, sharing intentions are more likely put into action, the greater the desire for unique products. Put differently, uniqueness elicits two moderating effects that tackle different parts of the causal chain along which materialism is passed on. As a result, the indirect effect of materialism on sharing participation is much more detrimental for consumers with low or moderate desire for unique consumer products, whereas, for those with a strong desire for unique products, the impact of materialism is not passed on via sharing intentions.

Additionally, to test for generalizability, this research surveyed one-hundred and forty consumers to explore the moderated mediation of study 2 in the field of fashion. The main effect of materialism remains stable, but the interaction effect does not reach significance. Study 3 therefore explores whether boundary conditions like the product-need-fit qualify the moderating role of the desire for unique consumer products.

5. Study 3: Product-need-fit and ownership

5.1. Objective

Study 1 shows that materialism dispositions prevent consumers from taking part in CSS; study 2 then reveals that the desire for unique consumer products moderates this relationship. Together, both studies demonstrate that consumer characteristics influence sharing intentions. Study 3 tests whether or not product characteristics are boundary conditions of this effect, and whether product ownership and the product-need-fit help explain the diverging effects across product categories.

5.2. Design

To contrast the findings of study 1 and 2 against a product category with a high product-need-fit, study 3 considers cars. A sample of 251 participants answered an online questionnaire on the topic of car sharing in spring of 2015. The mean age of the respondents is 23.7 years ($SD = 6.63$), 42.2% of the respondents are male and 54% own a car. Study 3 takes the highest loading items of the scales of the preceding studies and adapts them to the field of car sharing.

5.3. Results

Again, OLS regressions confirm that materialism significantly reduces the subject's sharing intention (Table 4). As postulated with H3, the product-need-fit moderates the interaction between materialism and the desire for unique consumer products. The interaction term reaches significance only in the "no ownership" group ($\beta = -.284$, $t = -2.900$, $p \leq .01$), but not for subjects who own a car already ($p > .05$). When including ownership into the model, the three-way-interaction becomes significant ($\beta = .171$, $t = 2.624$, $p \leq .01$) which supports H3.

5.4. Discussion

Study 3 confirms that the desire for unique consumer products colors the negative influence of materialism on the intention to participate in CSS. In a category with a high product-need-fit, the effect is further qualified by product ownership. The desire for unique consumer products exerts its moderating influence only when consumers do not yet own an item within a category with a high product-need-fit. Remarkably, the interaction effect between materialism and desire for unique consumer products is negative in this field. Accordingly, they have not yet fulfilled the basic need and they thus do not care about having unique products.

6. General discussion

Three studies furnish strong evidence that materialism is a dominant inhibitor of consumers' willingness to take part in CSS and that the

Table 4

Drivers of sharing intention in a high product-need-fit category.

	No car ownership			Car ownership			Whole sample		
	β	t	p	β	t	p	β	t	p
Materialism	-.228	-2.276	*	-.193	-2.213	*	-.216	-3.279	***
DUCP ¹	.108	1.159		.098	1.144		.075	1.201	
Materialism X DUCP ¹	-.284	-2.900	**	.104	1.185		-.056	-.893	
Materialism X DUCP ¹ X Ownership ²							.171	2.624	**

Notes. OLS regression, ¹Desire for Unique Consumer Products; ²effect coding for the dichotomous variable ownership ($-1 =$ no ownership, $1 =$ ownership).

* $p \leq .05$.

** $p \leq .01$.

*** $p \leq .001$.

impact of this inhibitor is colored by consumer characteristics as well as product characteristics. The findings relate to and extend the existing literature in several ways. First, Ozanne and Ballantine (2010) demonstrate that the materialism disposition helps to discriminate different segments of sharing-consumers. They provide indications that materialism plays a key role in the consumer's sharing decision. For the first time, this study quantifies the influence of the consumer's materialism disposition on his/her willingness to participate in CSS. Extending prior research, this research empirically distinguishes between the sub-dimensions of materialism (Belk, 1984). The present studies demonstrate for the first time that possessiveness materialism is the key inhibitor for the consumer's acceptance of sharing business models. Secondly, these studies identify the desire for unique consumer products as a crucial lever to mitigate the negative impact of possessiveness materialism. Materialistic consumers who are usually not attracted by sharing offers join CSS if the sharing system fulfills their desire for unique consumer products. Thirdly, this relationship is only relevant when the possession of one product alone does not fulfill the entire product category need (i.e., low product-need-fit). In terms of high product-need-fit, the moderating effect occurs only when consumers do not own the product (which fulfills the need associated with the category already). The findings across the three studies imply that sharing participation depends on a complex set of motivational factors. Remarkably, moderating conditions can compensate other factors that would prevent consumers from taking part in CSS.

Fourthly, Lambertson and Rose (2012) as well as Möhlmann (2015) show that utility-related determinants influence consumer's likelihood to choose a sharing option. This research controls for utilitarian influences on sharing intentions and confirms their findings. Fifthly, Hellwig et al. (2015) identify four clusters of sharing-consumers, with 'sharing opponents' as the second biggest group (28%). While Hellwig et al. (2015, p. 903) call for identifying "characteristics making them prone to sharing", this investigation empirically shows that even sharing pessimists can be transferred into sharing optimists if the CSS offer them unique consumer products. Finally, in a qualitative study, Bardhi and Eckhardt (2012) reveal that some CSS users do not want others to know about their sharing participation. They conduct their study in the field of car sharing where some consumers report that they feel embarrassed when they drive a car marked with the banner of a CSS-provider. Bardhi and Eckhardt (2012, p. 893) refer to this phenomenon as the "deterrence of brand community" and argue that for some consumers "ownership still remains the ideal normative mode of (...) consumption". This research here shows that especially consumers with a high materialism disposition prefer ownership over access, but unique consumer products can increase their sharing willingness. Bardhi and Eckhardt's findings suggest that the moderating role of the desire for unique consumer products only occurs if the shared resource is not branded with the logo of the CSS provider. Otherwise ownership-oriented and materialistic consumers do not perceive the offer as unique and, in the worst case, they even feel ashamed about their decision to take part in the CSS.

7. Further research

As with all empirical research, the three studies have some limitations from a conceptual and methodological standpoint which call for further examinations. Conceptually, the series of studies applied different and very diverse product categories to increase external validity. In addition to the effect of the product-need-fit, the distinction between hedonic and utilitarian product values might be another important moderator. Additionally, since consumers are highly heterogeneous in their preferences, attitudes and other socio-economic criteria, more research should test whether the suggested sharing framework is specific to certain consumer segments. Presumably, some of the relationships of the framework are culture-dependent. For example, materialism might be more influential in individualistic or masculine societies which place

particular emphasis on the individual and on demonstrating status, respectively. In collectivistic cultures, the moderating influence of uniqueness might be weaker because their members show stronger attachment to the in-group than in individualistic countries. However, the opposite pattern is also possible. In collectivistic societies, the suppressed wish to stand out from the group may enhance a striving for uniqueness (demonstrated through certain products) which, in turn, reinforces its moderating role. These ambivalent explanations should be examined in a cross-cultural approach. Additionally, there is reason to assume that the positive effect of the desire for unique consumer products could diminish with increasing salience of the CSS provider's logo. As this research argued above, Bardhi and Eckhardt's (2012) qualitative study gives a first indication for this assumption.

Methodologically, this series of studies applies regression analysis to examine the net effects of the independent variables on the dependent variables. As this statistical method assumes a symmetric relationship between the variables, the method reduces context and complexity, which can lead to a non-exhaustive prediction, even if the model fit is good. In order to maintain the complexity of the relationship between materialism, desire for unique consumer products, and sharing willingness, future research could use asymmetric testing through qualitative comparative analysis and use the protocol that Woodside (2013) suggests. A special issue of the Journal of Business Research exemplifies the potential of this method to enrich previous conclusions from linear regression analyses (Roig-Tierno, Huarng, & Ribeiro-Soriano, 2015).

8. Conclusion

The findings of this research have several important implications to marketers and society at large. From a societal perspective, CSS are a promising concept to build a bridge between the opposing paradigms of consumption and anti-consumption. In the extant anti-consumption approaches, consumers who want to reduce their general consumption patterns (e.g., to save resources) sometimes make painful sacrifices. Under the worst condition, they abstain from buying products they actually like which reduces their wellbeing. CSS enable consumers to reduce possession consumption, while they are still able to use the product in question. This helps to achieve some central goals pursued in anti-consumption (e.g., reducing waste, exploitation of resources) and enhances their well-being. Sharing provides notable side-effects for societies that are rooted in the focus on usage instead of possession.

From a marketer's perspective, the interplay between materialism and uniqueness seems very promising. Companies should highlight the fact that through CSS consumers can use unique goods or products they could not afford or use otherwise. This strategy seems particularly promising for encouraging materialistic-oriented consumers who are very reluctant to join CSS because they are striving to own and less willing to share. To exploit these advantages, knowledge on how to increase the consumer's willingness to participate and how to bridge the intention-behavior gap is of great importance.

Appendix A. Measurement scales study 1

	M	SD	λ	α	EV
<i>General sharing intention</i>	3.77	1.50		.888	70.3
I have a high willingness to use things together with others for a fee.	3.98	1.96	.84		
Sharing consumer goods with others for a fee is a good alternative to ownership.	4.53	2.05	.75		
In the future I will share more instead of buying	3.61	1.60	.85		
I prefer the alternative to use consumer goods for a fee to buying them.	3.38	1.74	.87		
The probability that I share consumer goods with others for a fee is high.	3.37	1.65	.88		

(continued)

	M	SD	λ	α	EV
<i>Do-it-yourself sharing intention</i>	4.61	1.75		.931	78.7
I have a high willingness to use DIY products together with others for a fee.	4.62	2.00	.84		
Sharing DIY products with others for a fee is a good alternative to ownership.	5.52	2.02	.82		
In the future I will share more DIY products instead of buying them.	4.20	1.86	.92		
I prefer the alternative to use DIY products for a fee to buying them.	4.40	1.97	.92		
The probability that I share DIY products with others for a fee is high.	4.29	2.00	.93		
<i>Fashion sharing intention</i>	1.87	1.16		.948	83.8
I have a high willingness to use clothes together with others for a fee.	1.93	1.28	.94		
Sharing clothes with others for a fee is a good alternative to ownership.	2.05	1.37	.81		
In the future I will share more clothes instead of buying them.	1.75	1.14	.96		
I prefer the alternative to use clothes for a fee to buying them.	1.83	1.25	.92		
The probability that I share clothes with others for a fee is high.	1.77	1.32	.95		
<i>Materialism – Subdimension possessiveness</i>	5.70	.96		.701	77.0
I would rather buy something I need than borrow it from someone else.	5.85	1.09	.88		
Renting or leasing a car is more appealing to me than owning one. ^b	5.55	1.09	.88		
<i>Materialism – Subdimension non-generosity</i>	2.79	1.03		.747	66.5
I enjoy having guests stay in my home. ^b	2.68	1.26	.77		
I enjoy sharing what I have. ^b	3.03	1.23	.84		
I don't like to lend things, even to good friends.	2.67	1.31	.84		
<i>Utilitarianism: Sharing is ...</i>	5.31	.94		.831	61.0
Ineffective/Effective	5.47	1.07	.75		
Unhelpful/Helpful	5.60	1.11	.88		
Not functional/Functional	5.38	1.22	.81		
Unnecessary/Necessary	4.80	1.34	.67		
Impractical/Practical	5.30	1.35	.78		
<i>Hedonism: Sharing is ...</i>	4.21	1.03		.897	71.3
Not fun/Fun	4.40	1.29	.78		
Dull/Exciting	4.20	1.11	.87		
Not delightful/Delightful	4.19	1.18	.82		
Not thrilling/Thrilling	3.97	1.22	.90		
Unenjoyable/Enjoyable	4.32	1.32	.84		
<i>Frugality</i>	5.27	1.17		.748	67.4
I discipline myself to get the most out of my money.	5.39	1.35	.85		
I believe in being careful in how I spend money.	5.33	1.39	.88		
I am willing to wait on a purchase I want so that I can save money.	5.10	1.55	.73		
<i>Innovativeness</i>	3.63	1.08		.804	63.4
I am more interested in buying new than known products.	3.74	1.33	.79		
I like to buy new and different products.	4.47	1.19	.79		
I am usually among the first to try new products.	3.20	1.38	.84		
I know more than others about latest new products.	3.11	1.50	.77		

Notes. M = mean; SD = standard deviation; λ = factor loading; α = coefficient alpha; EV = explained variance. ^a Index (scale is not reflective and therefore internal consistency is not reported). ^b reversed coded. General sharing intention, do-it-yourself sharing intention and fashion sharing intention are measured on nine-point Likert scales, and all others on seven-point Likert scales.

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