The Role of Design in the Appropriation of Shared Objects: Autolib in Paris

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ABSTRACT

This article looks at consumers’ appropriation of cars in a carsharing system. Underpinned by research on design and design knowledge, our paper illustrates how specific design elements contributed to the appropriation of shared vehicles through controlling, knowing and creating the product and the service.

INTRODUCTION

Virginie has a client meeting and decides to drive there. She looks at her phone: three cars are waiting for her one block away. She has been using Autolib, a carsharing system supported by Paris’ City Council, for almost two years now. She knows the vehicles (there’s only one model, the Bluecar, an electric car) and the system intimately. She places her card on the reader and the door of the vehicle in the middle opens. She unplugs the car from the charging station and gets in. The car greets her: ‘Hello Virginie’ and starts playing her favorite radio. She presses the pedal; she is on the road again. She has come to love that feeling.

In a context of rising collaborative consumption (Botsman and Rogers, 2010; John, 2013) a new focus on sharing behaviors (Belk, 2007, 2010) and access-based consumption (Bardhi and Eckhardt, 2012) has emerged in the research community. Studies have looked at the pros and cons of using instead of owning for consumers and companies (Bardhi and Eckhardt, 2012; Meijkamp, 1998; Jonsson, 2007). Sharing is often depicted as a liberating form of consumption as it frees the consumer from the domination of objects (Bardhi and Eckhardt, 2012) and even as a form of anti-consumption that allows consumers to express their rejection of the market (Ozanne and Ballantine, 2010). Belk (2010) distinguishes between an affective form of sharing (“sharing in”) and a more economically driven “sharing out”. In this second type of sharing, the consumer is not driven by an altruistic motive but rather by practicality or cost reduction. This second type of sharing is probably less impressive than collaborative projects between consumers, and yet it is the most interesting to study in order to observe new relationships between consumers, products and brands (Belk, 2010). When a consumer owns a product, a natural process of appropriation towards that object occurs. Appropriation is a fundamental characteristic of human behavior. It is crucial in the self-fulfillment process (Serfaty-Garzon, 2003), and helps consumers in the construction of their identities (Belk, 1988; Cerulo, 1997; Kleine et al., 1995; Kleine and Baker, 2004). In marketing, appropriation of the product is necessary in order to create a relationship with the brand (Fournier, 1998). When an object is shared the dynamic of appropriation is threatened (Bardhi and Eckhardt, 2012). How can a company conceive a product that will be shared but that also will enable consumers to develop a certain appropriation towards it, thus creating a relationship with the brand? Based on the analysis of current theories in the discipline of design and design thinking, our paper explores the links between design and appropriation in the context of shared objects. Specifically, we look at key design elements than can have an impact on creating appropriation.

LITERATURE REVIEW

Sharing

Sharing is a specific form of consumption, a model that differs from traditional gift giving or commodity exchange (Belk, 2010). This specific form of consumption invites us to reconsider the consumer-object relationship. The role of consumption as a possession-based activity has long been studied in marketing (Belk, 1988; Richins, 1994; Ahuvia, 2005), as it remains the dominant form of consumption (Guillard, 2014). However this traditional scheme has recently been disrupted by the emergence of the sharing economy (Botsman and Rogers, 2010). Sharing is in itself an ambivalent term. It signifies both cutting something into pieces and living a common experience. Belk (2010) distinguishes between “sharing in” that qualifies sharing behaviors existing in close, intimate circles such as family or friends; and “sharing out”, which is when sharing happens outside of the extended self of the individual. Car sharing is an example of sharing out, when consumers use cars that belong to a third-party (Meijkamp, 1998; Jonsson, 2007; Katzev, 2003). Bardhi and Eckhardt (2012) have conceptualized those instances of consumption as “access-based consumption”, which they defined as ‘transactions that can be mediated in which no transfer of ownership take place’. Studying a case of car sharing, the authors refuted that a perceived sense of ownership could exist between the consumers and the accessed object, meaning that no appropriative relationship existed. However the company they chose to focus their case study on had not implemented a design project for their product or service.

Design

Implementing a design project implies thinking about the product itself but also about the actors of the object (the users), and the situation of usage (the consumption context) (Findeli and Bousbac, 2005). The discipline of design is, in its most recent conception, highly concerned with ‘the accomplishment of human beings’ individual and collective purposes’ (Buchanan, 2001). Design research tries to link insights from social sciences, such as marketing research, with the development of new product and product features (Buchanan, 2001). From a marketing point of view design is often depicted as a mere product development activity, and on the other hand, to designers marketing is often too concerned with cost and managerial issues. This situation creates communication and understanding issues between the two disciplines (Beverland and Farrelly, 2011). Yet as these authors show, when the two fields work hand in hand the results can be sensational. It is thus necessary to understand design as a culture, integrating elements from production to distribution; consumption to waste; demography to consumer psychology (Julier, 2014). The discipline of design, with a strong reflection on the definition of a product and knowledge on product features’ roles in consumption can help us analyze how to generate appropriation of a shared product. It is our understanding that marketing research could benefit from a more design-oriented point of view.

 Appropriation

The common sense given to appropriation is to “make something mine”. The feeling of appropriation is universal and an inherent part of human nature. Rouhette (Encyclopedia Universalis) gives the example of engraved bone weapons dating back to the Paleolithic as a representation of appropriation. Appropriation is not to be confused with ownership. The later is defined by legal standards whereas appropriation’s definition is rooted in common sense. Appropriation implies actions from the individual who wishes to make something his. It is a dynamic and complex process.

This phenomenon has been studied largely in the case of spaces (Fischer, 1981). In marketing it was particularly the case in servic-
es marketing and store design (Aubert-Gamet, 1996; Kolenc, 2008; Badot and Lemoine, 2009). Place appropriation can be defined as a process of “actions and interventions on a space to transform and personalize it” (Aubert-Gamet, 1996). In the context of experiential consumption (Holbrook and Hirschman, 1982) research has shown that the appropriation of the experience’s space is necessary to allow the immersion of the consumer into the experience (Bonnin, 2002; Carù and Cova, 2003).

Etymologically, to appropriate something refers to the natural action by which food penetrated the organism. This is relevant in the case of object appropriation and the extended-self theory. Sartre’s work (1943) theorizes the human desire to have things. He identified three ways one could appropriate something: creating (making something to have it), knowing (knowing something intimately contributes to its existence for me) and a third one that can be described as controlling. Controlling refers to overcoming an obstacle. It is also linked to the ability to use the object and to have the power to destroy it (to modify its matter). To Sartre, wanting to have an object meant wanting to be in a relationship with this object.

Belk (1988) drew on Sartre’s work to understand the impact of this relationship on consumers’ identity construction. He examined how our possessions become a part of our selves to constitute our extended selves. He translated into three self-extension processes the three having ways developed by Sartre (1943): controlling/appropriating, creating and knowing. He added a fourth way which he identified as symbolic contamination. Contamination is a passive form of self-extension that occurs by involuntarily incorporating others into one’s extended self (Argo, Dahl and Morales, 2006). Fernandez and Lastovicka (2011) deconstructed this process of self-extension by looking at how objects could contaminate the self. They answered Belk’s (2005) call to develop an alternate, non-Western view of the concept of self-incorporation by offering a more assimilationist view. Rather than to conceptualize self-extension as the individual extending oneself towards the objects, they are looking at ways that possessions are assimilated inward. The locus of control is moved from the individual to the object. They found that controlling is the main element of the appropriative process. Creating and knowing intimately lead to controlling via mastery of the object (Fernandez and Lastovicka, 2011). More specifically they found that contamination occurs on all four processes of self-extension. Creating and knowing intimately implies contamination, and as a consequence so does controlling.

Sartre (1943) defined possession of an object as ‘being through the object’. Behind every having behavior is a will of being (Fromm, 1976). The link between the appropriated object and the self is strong. Marxist theory goes further by stating that it is only through the appropriation of the means of production that workers could be freed from a bourgeois appropriation, make sense of their life and find purpose. Appropriation is crucial in the development of the selves and the well-being of individuals. In today’s context of rising sharing behaviors this process seems threatened (Bardhi and Eckhardt, 2012), which is why it is necessary to understand how to enable consumers to appropriate objects that they share with others.

**METHODODOLOGY**

Because we aim to understand the process of appropriation of shared objects our research follows a comprehensive logic. Hence, a qualitative methodology is preferred. The literature could not provide enough depths to formulate a hypothesis because studying sharing is relatively new in marketing research. That is why we engaged our research through an abductive approach, constantly going back and forth between the field and the literature.

We conducted interviews with users of the carsharing system Autolib in Paris. Autolib offers a network of electric cars in Paris and its close suburbs. For about ten euros a month, plus a small cost for each journey, users have access to all the cars and benefit from the service and the infrastructure. Autolib and companies like Zipcar share many common characteristics, however Autolib differs in that it supports only one type of car. Its fleet of car is homogeneous and consists in the model “The Bluecar” designed by Pininfarina. Thirteen interviews were conducted with Parisians and close suburbs inhabitants (see Table 1. below). Each interview lasted between forty and seventy minutes. The discussion focused on sharing in general, the relationship with the company Autolib and the Bluecar.

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Profession</th>
<th>Place of residence</th>
<th>User for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carla</td>
<td>27</td>
<td>Student</td>
<td>Suburbs</td>
<td>6 months</td>
</tr>
<tr>
<td>Marianne</td>
<td>25</td>
<td>Intern</td>
<td>Paris</td>
<td>2 years</td>
</tr>
<tr>
<td>Olivier</td>
<td>27</td>
<td>Consultant</td>
<td>Paris</td>
<td>4 months</td>
</tr>
<tr>
<td>Tristan</td>
<td>22</td>
<td>Intern</td>
<td>Paris</td>
<td>1,5 years</td>
</tr>
<tr>
<td>Johanna</td>
<td>26</td>
<td>Student</td>
<td>Paris</td>
<td>2,5 years</td>
</tr>
<tr>
<td>Jean-Marc</td>
<td>31</td>
<td>Employee</td>
<td>Paris</td>
<td>1,5 years</td>
</tr>
<tr>
<td>Lionel</td>
<td>29</td>
<td>Engineer</td>
<td>Suburbs</td>
<td>2,5 years</td>
</tr>
<tr>
<td>Jean-Baptiste</td>
<td>28</td>
<td>Engineer</td>
<td>Paris</td>
<td>7 months</td>
</tr>
<tr>
<td>Mélissa</td>
<td>23</td>
<td>Student</td>
<td>Suburbs</td>
<td>6 months</td>
</tr>
<tr>
<td>Christophe</td>
<td>30</td>
<td>Engineer</td>
<td>Suburbs</td>
<td>1,5 years</td>
</tr>
<tr>
<td>Gaëlle</td>
<td>32</td>
<td>Employee</td>
<td>Paris</td>
<td>2 years</td>
</tr>
<tr>
<td>Sacha</td>
<td>20</td>
<td>Student</td>
<td>Paris</td>
<td>10 months</td>
</tr>
<tr>
<td>Valérie</td>
<td>27</td>
<td>Lawyer</td>
<td>Suburbs</td>
<td>1 months</td>
</tr>
</tbody>
</table>

Categorization of the interviews was done both deductively (appropriation as an existing construct) and inductively (identifying emerging themes) (Spiggle, 1994). The analysis was guided by the constant comparative method of analysis described by Spiggle (1994), in which each incident in the data is compared with other incidents of the same category in order to identify similarities and differences. Our analysis led us to understand the appropriation process, the relationship with the firm’s product and service, and the consumer’s view of sharing in general. Specifically, we were able to identify key design features involved in the appropriation process.

**FINDINGS**

Our findings follow Sartre’s (1943) theory of appropriation and Belk’s (1988) theory of self-extension. The first three processes of appropriation were recognized in our interviews: controlling, knowing and creating (Sartre, 1943; Belk, 1988). Instances of contamination were identified, yet none of them were positive contamination (Argo, Dahl and Morales, 2008). As a result contamination was not examined here as a process of appropriation (Fernandez and Lastovicka, 2011). Out of the thirteen respondents, only four did not felt appropriation of the Bluecars. Two of them felt the negative contamination of others too much (Argo, Dahl and Morales, 2006) and drove with gloves or washed their hands as soon as they got out of the car. One did not use the service enough (only once every three or four months). Finally the fourth was fully engaged into altruistic sharing and had the feeling of living in community (closer to the ‘sharing in’ described by Belk, 2010). The other respondents really felt like the cars they were using...
were theirs. This was expressed through sentences such as ‘Yes, to me, when I’m in the car, I put the music on and I feel like I’m in my car, I do not feel as though I am in someone else’s car’ (Johanna, 26). Our analysis indicated a real appropriation of the shared car for these respondents. For each of the three processes of appropriation we identified the key design features that enabled these feelings.

Controlling

Appropriation by controlling implies overpassing a difficulty or mastering the matter (Sartre, 1943; Belk, 1988; Brunel and Roux, 2006). Because we exercise a control over an object it becomes ours: ‘It is yourself who leads, there’s no mechanics, no ‘machine’ ready to dominate. It is there and it works. There is a real feeling of possession’ (Olivier, 27). This feeling is enabled by the electric motor of the car and the automatic gear: driving is smooth and silent, and thus we understand that this has for consequence that the driver feels in complete control over the vehicle. It is important to note here that automatic gear and electric cars are not, to this day, very common in France. We also noticed that respondents were empowered by the height of the driver’s seat. Even if the car is quite small and ‘urban’, the seat is higher than usual, giving them an impression of control: ‘Something interesting is that the car is quite high, a bit like 4x4, so that the driving’s seat is quite high, higher than almost all the other cars, and that reinforces the game-like sensation’ (Jean-Baptiste, 28). This game-like sensation is central to the controlling element. When Sartre first explained what he meant by ‘mastering the matter’ he gave the example of games and sports. Finally, the design of the service also played a role in giving control to the users. The possibility to book a car, to book a parking space at the place of destination and the vast implantation of the electric charging stations established a ‘whenever I want, wherever I want’ system that empowered consumers.

Knowing

Knowing is a form of having, it is because I know the object that it exists for me (Sartre, 1943; Belk, 1988). The simple fact of seeing something reveals it to me and participates to its existence for me. In this way, I ‘own’ it because it exists through my eyes. With the Bluecar it is less abstract; the feeling of owning the car emerged from the habits that are created between the user and the car. Perhaps one of the most important design features that made possible the appropriation of the shared cars was the uniformity of its fleet vehicles. Because of the use of one single model, the Bluecar, users were able to recognize the car in the street from afar, to know the specificities associated with driving it and to describe the vehicle’s interior. Moreover it established the impression of always getting in the same car: ‘You’re used to it. We know where all the buttons are, there is no need to search for anything every time’ (Carla, 27). Because of this uniformity, habits are created between the users and the cars: ‘Yes I am very familiar [with the car], I know that the first thing to do is to turn the power on because the built-in computer can be slow sometimes. So I turn the power on first to get it started and in the meantime I adjust the mirrors and the seat. I do it in that order.’ (Lionel, 29). This relationship of familiarity is reinforced by the role of the built-in computer. Favorite radio stations are saved, as well as favorite destinations. When the user enters the car, the radio is automatically the same as the previous time, just like in possessed cars.

Creating

Creating is the oldest form of appropriation. At the origins men needed to create the objects they wanted to use and own. Today this can be attained through invested time, energy and money (Sartre, 1943; Belk, 1988). Designing a service that involves consumers in the process is crucial in this regard. Users clearly expressed the necessity of their involvement: ‘You just have to understand the mechanisms. After a while it becomes mechanical but at the beginning you have to understand it well. You can’t just arrive and leave, you have to lay [your card] to show that it’s you, […] things like that.’ (Mélissa, 23). The long subscribing process reinforced this feeling of involvement: ‘it’s really a peculiar process. You must really want to use them to try it, you have to take a card and all’ (Tristan, 22). Money and energy invested for each journey, in the good functioning of the service were also factors of appropriation: ‘[…] then you’ve got your Bluecar flash- ing, you lay your card on the detector to open the small shutter, you unplug, you put away the thing, the electrical supply, you get into your car’ (Tristan, 22). Each time a car is used the driver has to re-plug it into the charging station. When a feature is malfunctioning or a car is damaged, users are invited to report the issue to the customer service.

DISCUSSION

This article adds to current research on sharing and access-based consumption (Belk, 2010; Bardhi and Eckhardt, 2012). Specifically, this research contributes to our understanding of the existing relationship between consumers and shared products. Appropriation of shared cars was made possible thanks to strong product and service design features at key points in the appropriation process. Specifically, we identified that design enabled users to control and to know the vehicle as well as to create the service.

The present research also aims to contribute to the discussion between the disciplines of marketing and design. Both are focused on the end-users and their relationship with objects. While the number of research on product design in marketing journals is slowly increasing (Luchs and Swan, 2011), the two fields do not collaborate easily (Beverland and Farrelly, 2011). Research that combines both approaches can contribute to narrowing this gap and to create connections between the two disciplines.

This article presents the limits inherent to the nature of our research. We have studied the appropriation process in the context of Autolib in Paris; our results are tied to this context. Secondly, the number of interviews is limited, in particular to understand consumers who do not feel any appropriation of the Bluecar. It could be interesting to develop solutions to give them the keys to appropriation.

This research can benefit companies in the sharing economy. By looking at best practice in the field they can ameliorate their products and services to better respond to the consumer’s desire for wellbeing. Indeed it is our understanding that consumers will be more inclined to engage into loyalty behaviors with cars that they feel are ‘theirs’.

Finally, this article opens several potential research avenues for further research to better understand the relationship between the consumer and the shared object. Ethnography has a strong tradition in design research (Button, 2000) and with that in mind it would be relevant to observe consumers in their daily activities involving shared objects. Also, other shared objects should be included in the research to broaden the perspectives, such as household appliances shared amongst occupants of the same building. Furthermore questions arise regarding the appropriation of a shared place: are the dynamics the same than for shared objects? Kleine and Baker (2004) show that place attachment shares many characteristics with possession attachment. Both objects and places are central for the consumer’s definition of self. This encourages future research to compare the appropriation process for shared objects and places. It might be, for instance, interesting to observe these dynamics in coworking spaces.
Table 2. Summary of Findings

<table>
<thead>
<tr>
<th>Theme</th>
<th>Definition</th>
<th>Design element</th>
<th>Quotation example</th>
</tr>
</thead>
</table>
| Existence of appropriation| 9 respondents expressed feelings of appropriation towards the car: controlling, knowing or/and creating (Sartre, 1943) | → Electric motor of the car and the automatic gear: driving is smooth and silent, driver feels in complete control over the vehicle  
→ Empowerment via service design: ‘whenever I want, wherever I want’: Consumers control the service process | ‘Yes, to me, when I’m in the car, I put the music on and I feel like I’m in my car, I do not feel as though I am in someone else’s car’ (Johanna, 26). |
| Controlling               | Overpassing a difficulty or mastering the matter (Sartre, 1943; Brunel and Roux, 2006) | → Electric motor of the car and the automatic gear: driving is smooth and silent, driver feels in complete control over the vehicle  
→ Empowerment via service design: ‘whenever I want, wherever I want’: Consumers control the service process | ‘It is yourself who leads, there’s no mechanics, no ‘machine’ ready to dominate. It is there and it works. There is a real feeling of possession’ (Olivier, 27). |
| Knowing                   | Knowing is a form of having, it is because I know the object that it exists by and for me (Sartre, 1943). The simple fact of seeing for instance something reveals it to me and participates to its existence for me | Uniformity of the fleet’s vehicle contributes to create habits. The consumer:  
→ Recognizes the car in the street from afar  
→ Knows the specificities associated with driving  
→ Describes the vehicle’s interior  
→ Has an impression of always getting in the same car | ‘You’re used to it. We know where all the buttons are, there is no need to search for anything every time’ (Carla, 27)  
‘The personalization is well done, having our radios already there, the station closest to my home in my favorites’ (Jean-Marc, 31) |
| Creating                  | Creating is the oldest form of appropriation. At the origins men needed to create the things they wanted to own. Today this can be attained through invested time, energy and money (Sartre, 1943). | Co-construction of the service via subscribing process, money and energy invested in the good functioning of the service. Each time a car is used its drivers has to re-plug it into the charging station. When a feature is malfunctioning or a car is damaged, users are invited to report the issue to the customer service. | ‘[…] then you’ve got your Bluecar flashing, you lay your card on the detector to open the small shutter, you unplug, you put away the thing, the electrical supply, you get into your car’ (Tristan, 22) |

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