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Using psychological ownership to guide strategies for slower consumption

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Abstract: This study explores the extent to which the theory of psychological ownership can be used to understand and design for slower consumption through two strategies: product longevity and access-based consumption. To do this we employ a qualitative study investigating objects kept, discarded and used by participants. We find that the theory is useful in informing both product longevity research and access-based consumption. Both strategies benefit from a framework in which the motives and routes to developing object attachment are discussed. Longevity decisions made by users (i.e. keeping, disposing and engaging with objects) are determined by the ability of an object to fulfil the motives in the framework. Routes can be utilized to create more meaningful paths to ownership and attachment. Access-based consumption threatens all three motives for ownership and leaves the user with little meaning. Thus the theory helps explain the consumer reluctance to adopt access-based consumption models as they currently stand.

Introduction

Increasing product longevity and access-based consumption (e.g. product-service systems or other sharing models) are two strategies for slowing resource consumption to sustainable levels (Cooper, 2005). Product longevity generally concerns enhancing the user-object relationship, while access-based consumption redefines it. Despite promising directions in these areas (e.g. Chapman, 2005, 2010; Evans & Cooper, 2010; Tietze & Hansen, 2013; Tukker, 2004; Van Nes, 2010), additional consumer-facing research is needed to facilitate more widespread adoption of both strategies (Mont, 2008; Tukker, 2013). Within this context, we report a qualitative study investigating why individuals do (not) keep objects for a long time and do (not) prefer access schemes. We frame this research within the theory of psychological ownership—the mental state in which individuals feel the target of ownership is 'theirs' (Pierce, Kostova, & Dirks, 2001).

We posit that psychological ownership theory is useful in two ways. First, it addresses why and how individuals own objects. As the name suggests, this ownership is a psychological representation of the individual's relationship to the object and subsequently is bound by interactions rather than legalese. For example, an individual may legally own an object without ever taking possession of it (McCracken, 1986) or conversely, individuals may have feelings of ownership when no legal ownership exists (Pierce, Rubenfeld, & Morgan, 1991; Van Dyne & Pierce, 2004). This nuanced approach to understanding human factors through the lens of ownership should help explain the consumer concerns that have curbed access-based consumption models where companies retain ownership and offer short-term access to consumers.

Second, psychological ownership theory is valuable in understanding meaning creation and object attachment that could contribute to product longevity. That is to say that if object attachment is defined as a perceived psychological closeness to an object (Baumeister, Wangenheim, & Florian, 2014), then psychological ownership represents an extreme form of this closeness—one in which the object may become part of an extended self (Belk, 1988). Shu and Peck (2011) directly link psychological ownership to attachment and show how it contributes to loss aversion. Other studies support this link to loss aversion (Baer

& Brown, 2012; Kahneman & Knetsch, 1991) and highlight additional products of attachment such as higher evaluation (Franke, Schreier, & Kaiser, 2010; Reb & Connolly, 2007) and feelings of stewardship (Hernandez, 2012). In a wider perspective, we see psychological ownership theory useful in providing a coherent model for attachment (Baxter, Aurisicchio, & Childs, 2015a), the elements of which are stressed in a number of design-oriented attachment studies (Desmet & Hekkert, 2007; Mugge, Schifferstein, & Schoormans, 2010, 2006; Mugge, Schoormans, & Schifferstein, 2009; Norton, Mochon, & Ariely, 2011).

The remainder of the article is structured as follows: (i) introduce psychological ownership theory, (ii) discuss research questions and (iii) report key findings from the qualitative research including emergent themes for future research.

Psychological Ownership Theory

Psychological ownership is the mental state in which individuals feel that an object is theirs. The theory of psychological ownership describes the motives (the why) and routes (the how) leading to this mental state (Pierce, Kostova, & Dirks, 2003). It follows that ownership is a result of user experiences. In the perspective of existing experience design frameworks the motives and routes can be thought of as be-goals and do-goals, respectively (Hassenzahl, 2010; Pucillo & Cascini, 2014). Previous work by the authors has mapped and expanded this connection to create the framework in Figure 1 (Baxter et al., 2015a). This framework is bidirectional in that ownership motives drive actions and actions fulfil motives leading to ownership.

Motives

Psychological ownership is driven by three motives: efficacy and effectance, self-identity, and having a place to dwell (Pierce et al., 2001, 2003). Efficacy and effectance is the desire to feel competent through the ability to impact one's surroundings. Self-identity is the desire to create, continue, and/or transform one's public and/or private identity. Having a place to dwell is the desire to gain and preserve physical, emotional, and mental security through familiar surroundings.

Routes

There are three routes to achieving psychological ownership: control, intimate knowledge, and self-investment (Pierce et al., 2001, 2003). Control is the ability to use or

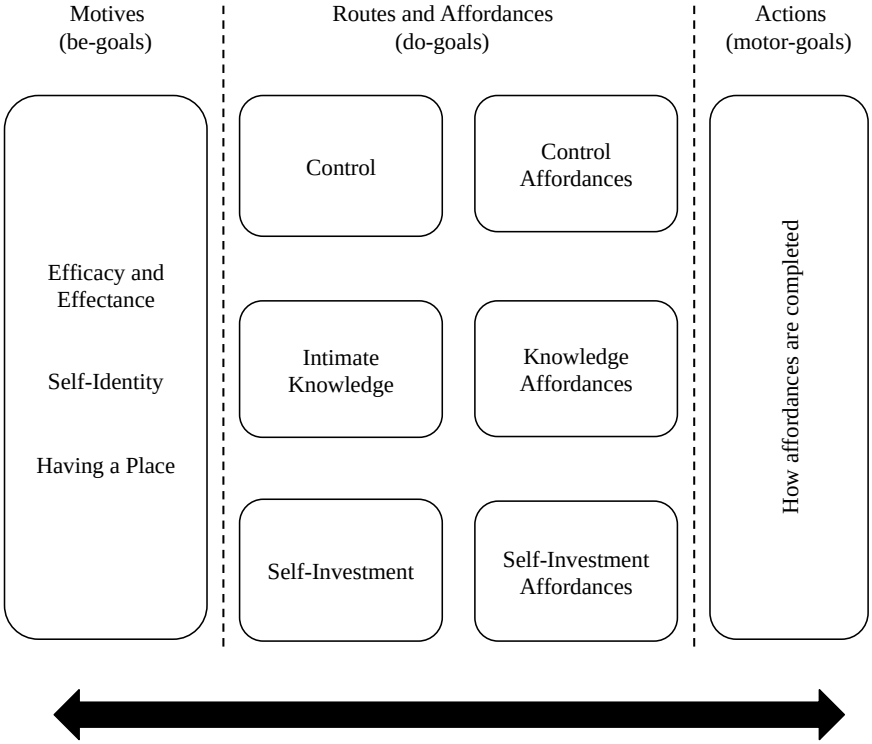

Figure 1. Framework for psychological ownership-based attachment.
Source: Baxter, Aurisicchio, & Childs, 2015a.

transform an object when and how desired. Intimate knowledge comes as users acquire information about the object. Self-investment is the expenditure of time, money, physical effort, and/or psychological energy into an object. Importantly, a prerequisite to these routes is that the object attracts or engages the user.

Research questions

Three research questions guide our evaluation of psychological ownership as a means to address access-based consumption and developing object attachment for product longevity.

RQ1: Are desires to keep products (rather than dispose) guided by the motives in psychological ownership and fulfilled via the routes?
RQ2: Are desires to dispose of products determined by an object no longer meeting these motives?
RQ3: Can reluctance (willingness) to engage in second-hand acquisition and access-based consumption is understood through the perceived failure (ability) of an offering to fulfil the motives within psychological ownership theory?

Through answering these questions we hope to inform future directions in researching and designing strategies for slower, sustainable consumption.

Methods

We interviewed ten participants for this research. Participants consisted of six females and four males, aged from early 20s to late 60s. All interviews were conducted in London, England though the participant's cultural backgrounds consisted of 8 countries through North America, Asia, and Europe.

The intention of the interview was to understand psychological ownership theory as applied to product longevity and access-based consumption. To explore this, we used semi-structured interviews to inquire about interactions with objects: 1) kept for a long time, 2) disposed though still functional and 3) used previously either through second-hand acquisition or access schemes. Participants were asked to identify one or multiple objects in each of these three categories and reflect on them. The choice of the object discussed was left up to the participants. Objects explored included: antiques, consumer electronics, clothing, furniture, and spaces. In each interview, questions regarding the motives and routes of psychological ownership explored nuances of the user-object relationship. Further questions tried to qualitatively assess the extent to which participants felt the object was 'theirs'. Where possible, interviews were conducted in the participant's home or work where objects discussed could be seen and described in greater detail.

Each interview was documented through notes and audio recording. Directly following the interview, notes were reviewed and any insights or themes were recorded. Recordings were transcribed and all resulting data was analysed in an iterative process to extract themes. All names have been changed to preserve anonymity of respondents.

Two limitations of this research are worth noting. First, our findings are limited by the number and background of participants. Ten participants are not enough to understand the distinctions caused by personal values and cultural influences. Second, we are limited by the number of interactions examined. The way a person interacts with consumer electronics differs from a pair of shoes. Future studies will need to address these limitations in order to further validate the extent to which this framework can be generalized.

Findings

Interviews revealed a strong agreement between psychological ownership theory and participants' rationale for keeping, disposing, and engaging with objects. Perhaps equally important, none of our interviewees gave reasons that could not be understood in the context of the theory. The interviews also highlight psychological ownership theory's usefulness in describing why consumers choose ownership rather than access-based consumption schemes. The next sections discuss the findings for product longevity and access-based consumption in detail.

Product longevity

All participants reported significant attachment to the objects that they had kept for a long time. Though not always described in terms of feelings of ownership, motives were consistent with feelings of attachment. This attachment is only as strong as the object's ability to fulfill the

motives and thus, disposal resulted when an object no longer fulfilled the motives. Several themes emerged in this regard.

'Efficacy and effectance' communicate users' ability to influence their surroundings and feel competent. This differs greatly if the object is used as a tool to influence some end task or if the object is an end in itself. If an object is used as a tool, attachment (and subsequent longevity) is dependent on the perceived ability of the object to fulfil a task relative to alternatives. Thus, technological innovation often drives desires to keep or replace objects. Laura described this with regard to her laptop:

> *… I would hate to get a new product. Unless it would enable me in a way my existing product doesn't I wouldn't get it. Even then, [new features need] to be very different. The retina display, for example, had little draw for me.*

If an object is an end in itself, the danger is in the user no longer being able to explore and discover new things about the object. Greg, a video game enthusiast, explained that video games are only useful until he has beaten the game or feels there was little or nothing else to discover at which point he would throw the item away. Matthew shared a similar sentiment about a leather chair he "got bored with" and decided to dispose. Product longevity benefits from design that is complex enough to keep users engaged through continuous discovery.

'Self-identity' is susceptible to changes in self-image (e.g. advancing in society, maturing, fitting a new position) and cultural influences (e.g. trends). The key is to find objects that span both of these. Shirley talked about a wool coat that she has had for over a decade. The coat passed with Shirley through high school, college, and a professional career and was used frequently at all stages of life because it has a timeless design. Shirley used it when she was younger because it was pretty but she has since transferred it to her professional wardrobe because it looks elegant and mature. Longevity is more likely to occur if designers understand and account for when and how self-identity transitions.

'Having a place' provides security to individuals through familiar objects. Often, objects in the same setting compete for this motive. For example, small objects (books, accessories, artwork, furniture, etc.) are often considered within a larger object (house, room, car, etc.) and individuals try to reconcile a desired place these provide together. Ashley showed this trade-off when disposing of a large sofa in her flat that did not contribute to the room:

> *It looks horrible. In terms of hygiene a bit weird. (…) It took up too much space in a small flat which would have been useful. We could have had our living room designed better without the sofa.*

In terms of product longevity, the strongest motive seems to be having a place when it offers psychological security. This psychological security often came from cultural emblems (e.g. an object from one's home country) or when the object reflects specific experiences that create nostalgia. In other instances it provided a psychological state of mind needed in the moment. Shirley described how clothes help her feel "confidence and in a ready state of mind." Greg explained that his attachment to his PlayStation is largely because of the place it provides:

> *I can sit down and play the PlayStation but also it gives me that spot, you know I live with my partner, we are comfortable, we are together 24/7 but if I want to I can have my break. (…) I know I can shut the door and put my headphones in and escape.*

Routes to psychological ownership help users create or discover meaning. We find a typical directionality between user and target objects of ownership (see Figure 2). Control and self-investment are typically things done by the user to the object, whereas intimate knowledge is the result of the user interpreting information communicated by or about the object. Understanding these directions helps inform various approaches (e.g. co-creation, mass customization, designed affordances, associated service offerings, marketing and promotion) to enhancing attachment or ownership.

From the interviews we have tried to extract general paths to attachment as they relate to the routes. This is the result of inquiring how users engaged with objects over time and how they felt their attachment changed accordingly. We found that paths are primarily determined in three ways. First, significant increases in attachment occur when users engage in

focused interactions with an object such as configuring, repairing or researching an object. Second, gradual increases in attachment result over time due to improved ability to control the object, routine effort required in interacting with the object and knowledge received through use. Finally, used objects may create feelings that they are foreign—belonging to someone else. We have depicted common paths of attachment in Figure 3. Path B represents a typical path of attachment for an object—large initial attachment and continued increase as the user learns to better control and cares for the object over time. Path A results from heightened attachment activities (e.g. mass customization) making a steeper slope in the initial attachment. Path C occurs when the object is standardized so as to limit progression through focused interactions. Finally, Path D occurs when users engage with objects used by other people and feel the object is not theirs until they cleanse it from traces of the previous owner.

An example of these paths is seen with a car. Path A might represent an owner's attachment to a car that has been customized and significant work has been put into. Path B would be a car as normally purchased. The

focused interaction in this path being the search for the car and money (e.g. self-investment) spent. Path C might be a company car that a person did not choose or purchase but does get

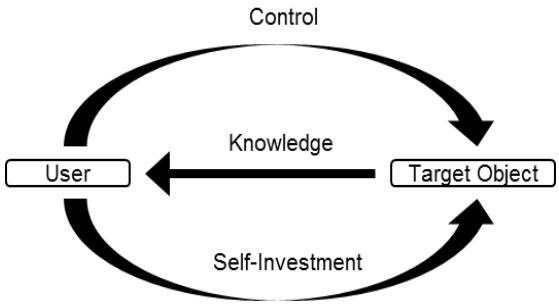

Figure 2. Directional nature of routes.

to know through frequent use over time. Finally, Path D might be a car acquired second-hand or temporarily accessed with reminders of the previous user.

Feelings of aversion due to previous users were a common theme in the interviews. Often these feelings result from the sensorial properties of the object and can be accounted for, to a large extent, in design (Baxter, Aurisicchio, & Childs, 2015b). In other cases, the feeling that an object belongs to someone else eliminates the possibility of use altogether. Greg, talking about second hand goods, explained:

> *I don't think I have ever owned something second hand because… it's bringing someone else' energy into it and I would not have that. I don't have a problem bringing someone else's energy it's just, just not [for] me. I prefer to introduce my energy to anything materialistic.*

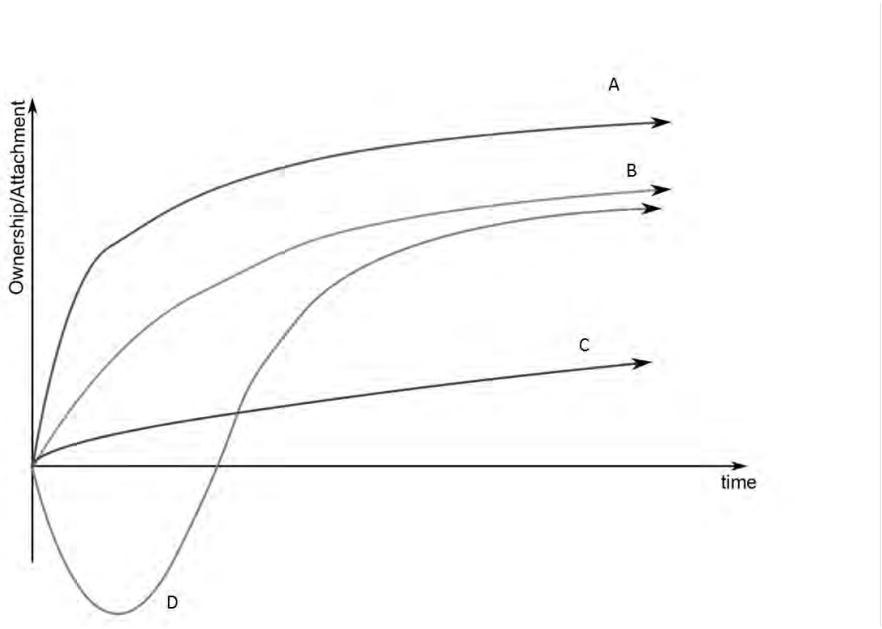

Figure 3. Paths for attachment.

Finally, we do not suppose that psychological ownership will always produce positive environmental results since it may also create an "It's mine so I will do with it as I please" attitude. In such cases, incentives around the result of owning an object (e.g. opportunity to resell, fine for disposal without recycling) might best encourage positive behaviour.

Access-based consumption

Access-based objects are, by design, transient and they consequently threaten all three motives. Having a place requires developing familiarity with the object so it offers security for the user. Such familiarity is threatened by short-term usage. Typical concerns in this context are around cleaning practices and fear that other users will damage the object. Short-term usage is particularly damaging in that it allows users to engage with an object in a neutral state but it may raise feelings of disgust or aversion because the object was in another person's place (the bottom of Path D). These concerns could greatly change object interactions and brand perceptions since the object goes from representing a psychological comfort that contributes to the user's place to a transient condition of use. Vanessa explained such feelings with a coat purchased second-hand that smelt of the previous owner. She went through great effort to remove the smell but those in access-based models may not be willing to invest in such effort.

Self-identity is also threatened under access-based consumption due to transient use. This is because in transient usage, objects, and their meaning, are not easily transferred to the user's extended self. Ashley explained that collecting designer clothes helped her—as a fashion designer—"gain a piece" of the designer behind the clothes. Brian explained that he could never rent a watch because he viewed it as having meaning to him and as a memento—an object remembering him that he could pass on to his children. These situations are very difficult under access.

Efficacy and effectance is clearly the driving factor behind access schemes (e.g. improve usability and convenience) and when objects only focus on this motive access schemes may be most likely to succeed. An example was Matthew's ski rentals. He used to own his own skis but was discouraged by airline fees and the hassle of carrying them around when traveling. A number of years ago he switched from owning to renting skis once he gets to the resort but he still finds that good service to ensure quality and functionality is essential. This designed service is the key to successful access models. If the service is too obtrusive it causes users to feel that they are no longer in control and their efficacy and effectance are threatened.

Conclusions

This research hypothesized that the theory of psychology ownership and the framework presented in this research to contextualise the theory within design are useful in approaching the slower consumption strategies of product longevity and access-based consumption. Product longevity benefits from the framework as it offers a means of developing object attachment. Attachment is driven by a desire to fulfil the motives in the framework and is realized through the routes. Likewise, attachment is broken by an object's inability to fulfil the motives. The directional nature of the routes can guide thinking around tasks aimed at enhancing attachment.

Findings also show that access-based schemes threaten the motives for psychological ownership and help explain why consumers prefer ownership rather than access. The framework informs shortfalls of many access schemes but also helps provide directions for making a more appealing offering. For example, technology may be better utilised to create a place for users in individual usage scenarios through tactics such as saved preferences. The opportunity also exists for design to better guide paths of attachment/ownership and optimize user experience while slowing consumption.

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