

# ePub<sup>WU</sup> Institutional Repository

Bernadette Kamleitner and Berna Erki

Payment method and perceptions of ownership

Article (Draft)

*Original Citation:*

Kamleitner, Bernadette and Erki, Berna (2013) Payment method and perceptions of ownership. *Marketing Letters*, 24 (1). pp. 57-69. ISSN 0923-0645

This version is available at: <http://epub.wu.ac.at/3843/>

Available in ePub<sup>WU</sup>: April 2013

ePub<sup>WU</sup>, the institutional repository of the WU Vienna University of Economics and Business, is provided by the University Library and the IT-Services. The aim is to enable open access to the scholarly output of the WU.

This document is an early version circulated as work in progress. There are differences in punctuation or other grammatical changes which do not affect the meaning.

## **Payment method and perceptions of ownership**

Bernadette Kamleitner

Vienna University of Economics and Business

Augasse 2-6, 1090 Vienna, Austria

Berna Erki

Queen Mary, University of London

Mile End Road, London, E1 4NS, UK

How consumers pay influences how they feel about a transaction. In particular, paying by card has been argued to have an effect on the perception of cost; making it less salient and painful. We propose and show that payment method also influences how consumers feel about the acquired good. Specifically we focus on effects of the payment method on psychological ownership, i.e. the perception of an object as “mine”. We propose that cash payment results in stronger psychological ownership because it influences the extent of perceived investment in an object. We provide evidence for the proposed effect from field and laboratory settings. Results of a longitudinal exit-survey and an experiment show that cash payers report higher levels of immediate psychological ownership than card payers. However, this effect seems to depend on the meanings associated with a payment method. Asian students (who associate credit card payment with investment and debt) do not exhibit this effect. Moreover the initial boost in psychological ownership seems to be comparably short-lived. Whilst those paying in cash experience no further increase in psychological ownership over time, those paying by card do.

## 1. Introduction

Whether consumers pay by card or in cash matters. Previous evidence (e.g., Prelec and Simester 2001; Soman 2003) suggests that payment method influences the perception of the amount paid. Payment by card may be hedonically advantageous (i.e. reducing the “pain of payment”) but economically disadvantageous (i.e. leading to an underestimation of real cost).

Consumer transactions however consist of both payment and object acquired. Behavior towards an object and its seller is a function of how consumers’ feel about both aspects. While the literature indicates an effect of payment method on cost perception, it holds no such empirical evidence with regard to the acquired good. Yet literature on mental accounting suggests that costs and benefits of a transaction can be reciprocally linked so as to influence each other’s perception (e.g., Kamleitner and Hölzl, 2009). We extend this notion by examining how payment method influences a specific object perception, the extent to which psychological ownership is experienced by the consumer immediately after purchase. We investigate the existence of such a relation and explore its robustness in terms of temporal stability and susceptibility to variations in the meanings associated with payment methods.

This paper is structured as follows. We first review existing literature on the effect that the payment method has on the perception of a transaction. Next we report theories and findings that imply an effect of payment method on object perception. After providing a brief discussion of psychological ownership we link all these streams of literature to hypothesize a short-term effect of payment method on psychological ownership. Results of a longitudinal exit-survey provide evidence for this link and its temporal stability. A laboratory experiment corroborates the basic finding and highlights a potential moderator, the influence of the meanings associated with paying by credit card. Finally, overall results are discussed in light of various theoretical and practical implications.

## 2. Theory

### 2.1 Existing literature on the influence of payment method on transaction experience

Payment methods differ in terms of transparency. Payment by cash is the most 'transparent' form of payment with consumers having a good awareness of the real value of funds being used (Raghubir and Srivastava 2008). Credit card payments (and other payment cards) are much less transparent because they do not involve the same physical price rehearsal (e.g., Soman 2003). The main direct consequence of cards' reduced cost salience is a decrease in the experienced 'pain of payment' (Soman 2001) and price sensitivity (Monger and Feinberg 1997).

Credit cards are also special in terms of timing because object acquisition precedes the actual depletion of funds. This temporal separation further reduces the pain of paying and has been argued to facilitate consumer spending (Prelec and Loewenstein 1998). While some studies support an effect of temporal separation by establishing differences between credit and debit card payments (e.g., Soman 2001), others find no such difference and make it a simple matter of cash versus cards (e.g., Morewedge et al. 2007).

These arguments of cost salience and pain explain why those paying by credit card tend to spend (e.g., Hirschman 1979; Prelec and Simester 2001) and anticipate to spend (Raghubir and Srivastava 2008) more than cash payers. Moreover, consumers systematically underestimate past and future credit card bills because they find it hard to recall individual credit card expenses (e.g., Soman 2003). It is in part this consumer forgetfulness that explains the liberating effect that credit cards have on purchasing behavior.

More recent research has added to the picture by showing that the payment method not only affects how much is spent, but also what is acquired. In most studies, credit card payments have been shown to increase unplanned or hedonic spending when compared to cash payments (e.g., Inman et al. 2009; Thomas et al. 2011). Bagchi and Block (2011) note an

exception in the purchase of food products for immediate consumption. In this case, cash payment increases the likelihood of choosing unhealthy, indulgent food because this type of consumption provides an instant affective fix for the pain caused by parting with cash.

Although the bulk of research shows consistent effects of payment method, null effects have occasionally been reported for specific consumer groups (e.g., Hafalir and Loewenstein 2009). A likely reason for these inconsistencies relates to the fact that payment methods may not only differ with respect to their objective, physical dimensions but also with regard to the subjective personal meanings associated with different payment methods. The majority of research has focused on and argues solely based on the objective differences between payment methods. Yet, there are some indications that differences in subjective perceptions of payment methods may have been unjustly neglected. For example, in some studies the mere presence of credit card insignia was able to increase spending (e.g., Feinberg 1986). Associative learning accounts have been called upon to explain these differences in behavior through simple exposure to credit card logos. Although some of the concrete learning accounts proposed have met with empirically founded criticism (Shimp and Moody 2000), the notion that the specific meaning of credit cards may moderate its effect on spending is likely. It might explain why convenience users of credit cards--for whom credit cards are just that, a matter of convenience--spent more when paying by credit card whereas revolving users--who suffer from credit card debt and are likely to associate credit cards with an increase in potentially onerous debt--did not (Hafalir and Loewenstein 2009). Considering that the bulk of research has been conducted in Western societies (mainly US) the real extent to which the cultural meaning of credit cards influences consumer behavior is still unknown.

To summarize we suggest that payment methods differ on objective (i.e. handling and rehearsal of payment, immediate spending limitations, delayed debit) as well as subjective and culturally driven (i.e. meaning assigned to credit cards) dimensions. As long as

consumers think of credit cards as a matter of convenience or do not feel strongly about them objective differences are likely to steer reactions. This was likely the case for most studies on the subject area which have predominantly been conducted in the U.S. However, if consumers were to feel strongly about credit cards (e.g. signifying investments or debt) the influence of objective and subjective differences could potentially counteract each other.

## 2.2. Potential effects of payment method on the acquired good

Credit card users are assumed to spend more because they 'feel' the cost of payment less; not because they evaluate the object more highly. Yet, mental accounting proposes that the pain of payment and the pleasure of consumption are related (e.g., Prelec and Loewenstein 1998). The payment method could, hence, also influence object perception.

Evidence that points towards such a link comes from the phenomenon of source dependence (Loewenstein and Issacharoff 1994). Different sources of money can influence the valuation of objects; in particular, earning an object increases its value compared to acquiring it easily without effort. This finding could generalize to differences between payment methods, with painful and hence comparably harder cash payments leading to a higher valuation than psychologically easier card payments.

Notably payment methods differ not only with respect to the salience of the specific amount spent but also with respect to the salience of a benchmark for this amount (i.e. a spending limit). Cash payments are by their own nature limited to the amount of money that is in a person's wallet. Card payments often face no such temporal or physical limitations of scale. This difference in the salience of resources available may also influence how the object is perceived. Morewedge et al. (2007) show that the smaller the salient resources are, the larger the units of consumption appear to be. This implies that the same object may appear larger, i.e. more psychologically meaningful, through the resource limitations associated with payment by cash.

Some preliminary evidence for an effect of payment method on “object” perception comes from a study on child support payments. The way support payments are made affects the amount of time that non-custodial parents spend with their children and the amount of extra support given (e.g., payment for a school trip, Gunter 2010). If payment is not salient because support contribution is automatically withheld, non-custodial parents spend less time with their children and provide less additional support than if child support is actively paid.

### 2.3. Psychological ownership as a driver of consumer behavior

Theories about the relationship between payment method and object perception align well with the specific perception of psychological ownership, namely the extent to which an object is perceived as MINE (Pierce et al. 2003). Mostly psychological ownership has been studied in the context of the workplace (e.g., Wagner et al. 2003). Recently it has found its way into consumer literature (e.g., Peck and Shu 2009) and it has emerged as an important driver underlying other consumer perceptions and behavior (e.g., Reb and Connolly 2007).

Its role as a predictor of other affective and behavioral reactions makes psychological ownership a variable of considerable interest. Its theoretical foundation makes it a variable with potential for conceptually based theorizing. Although there is comparably little empirical research, Pierce et al. (2003) suggest that there are three generic routes through which psychological ownership emerges. These are (a) controlling the target, (b) knowing the target intimately and (c) investing the self into the target. Importantly, even comparably small changes in the object-person relationship can lead to significant changes in psychological ownership. For example, Peck and Shu (2009) find that merely touching an object, which provides object information and control, instantaneously increases perceived ownership and, in turn, an impulse towards acquiring the object.

### 2.4. Effect of payment method on psychological ownership

How one pays neither affects the extent to which an object can be controlled nor the

extent to which it can be intimately known. However, the mode of payment may influence psychological ownership through the extent of personal investment. Paying by card tends to make the cost and hence the investment less salient than paying in cash. Consequently, we expect consumers to experience higher levels of psychological ownership if they pay in cash than if they pay by card.

Notably this prediction is qualified by the assumption that consumers primarily associate convenience with paying by (credit) card. This is likely the case for many consumers in a Western context. But credit cards are multi-faceted. They are a convenient payment method, a source of credit, and may act as lifestyle facilitators (e.g., Wickramasinghe and Gurugamage 2009). Depending on which of these facets dominates, associations of convenience may be substituted with associations signaling personal investments. If connotations associated with credit cards primarily imply cost and investment, these associations may counteract the decrease of perceived cost and investment due to their physical features.

Once an object has been acquired the method of payment is likely forgotten and future use of the product enables all three routes towards psychological ownership to become effective. Consequently, we expect that the effect of payment method on psychological ownership is strongest immediately after payment and decreases over time.

### 3. Study 1 – an exit survey

Upon leaving one of several stores for apparel in the UK participants were randomly addressed and asked to fill in a survey on their purchase. Overall 110 men and 98 women of predominantly Western origin agreed to complete a questionnaire and participate in a follow up survey in return for a small chocolate bar. Participants were aged between 18 and 55 years.

After providing demographic information and contact details for the follow up survey, participants were asked to briefly describe an item of clothing that they just bought for



themselves and that they felt excited about. Next they described specifics of the payment, and answered questions related to the item.

Two weeks after the initial survey all participants were sent a personalized follow up survey reminding them of the item and reassessing their perceptions. There were no significant demographic differences between those participating in the follow up survey ( $n = 72$ ) and those who participated once.

### 3.1. Measures

Most items were assessed on 7-point scales. Psychological ownership was assessed by three items (e.g., ‘I feel like this is MY rather than THE piece of clothing’) that were adapted from Peck and Shu (2009) and Wagner et al. (2003). This measure proved reliable ( $\alpha_{time\ 1} = .84$ ,  $\alpha_{time\ 2} = .78$ ). To assess the payment method participants were asked to tick the appropriate box choosing between cash, debit card, credit card, cheque and other.

In addition to these core measures we also explored other potential consequences known to proceed from psychological ownership (e.g., Kamleitner and Rabinovich 2010). We chose one affective and one behavioral construct: attachment and intentions to care. Three adjectives describing participants’ feelings towards the piece of clothing (attached, bonded, connected; adopted from Thomson et al. 2005) assessed attachment ( $\alpha_{time\ 1} = .97$ ,  $\alpha_{time\ 2} = .98$ ). The initial exit survey also assessed intended level of item care (‘How much care will you take of the item?’ from ‘no care at all’ to ‘extreme care’), and intended usage frequency (‘How often do you think are you going to wear the item?’ from ‘never’ to ‘always’). The follow up survey assessed actual usage frequency and the perceived enjoyment derived from wearing the item (from ‘very much’ to ‘not at all’). We also endeavored to control for the role of pain of payment (‘How did it feel to pay for the item?’ from ‘not painful at all’ to ‘very painful’) and the potential confounding factors of item price and perceived level of wealth (‘How wealthy do you consider yourself?’ from ‘super rich’ to ‘very poor’).

### 3.2 Results – Study 1

All participants either paid in cash ( $n = 89$ ), by debit card ( $n = 60$ ) or by credit card ( $n = 59$ ). Items chosen were coded into six different categories of clothing by two independent coders. Coders disagreed on two out of 208 cases; this was resolved through discussion. There was no difference in items chosen across payment methods,  $Chi^2(10) = 6.20, n.s.$

#### 3.2.1 Payment method and psychological ownership at time of payment

A univariate ANOVA revealed significant differences in psychological ownership across payment methods (see Figure 1a),  $F(2,205) = 27.93, p < .001, \eta^2 = .21$ . As hypothesized, planned contrasts showed that those paying in cash experience a stronger sense of ownership for the garment than those paying by card. The type of card made no difference.

Next we investigated whether the effect could be due to differences in pain of payment. In line with previous research pain of payment varied across payment methods,  $F(2,205) = 22.92, p < .001, \eta^2 = .18$ , and was stronger for those paying in cash ( $M = 4.15, SD = 1.72$ ) than those paying either by debit ( $M = 2.42, SD = 1.61$ ) or credit card ( $M = 2.59, SD = 1.89$ ). However, when added as a covariate the pain of paying did not influence the effect of payment method on psychological ownership,  $F(1,204) = 1.08, n.s.$ , which remained largely unaltered<sup>1</sup>,  $F(2,204) = 20.20, p < .001, \eta^2 = .17$ . It seems that it is not the increased pain of paying that leads participants to feel an increased sense of ownership when paying in cash.

The data also allow precluding that the effect simply results from differences in item price. Unlike observations in earlier studies (e.g., Hirschman 1979) and likely due to the specific instructions in choosing an item to report on there was no relation between price and payment methods,  $F(2,204) = 1.26, n.s.$  Although price approaches significance when added as a covariate,  $F(1,204) = 29.40, p = .07, \eta^2 = .02$ , the effect of payment method on psychological ownership remains robust,  $F(2,204) = 29.40, p < .001, \eta^2 = .22$ . The same holds

---

<sup>1</sup> Dichotomising payment method into a dummy variable (card vs. cash) and running Sobel-tests also provides no evidence for mediation through pain of payment.

for perceived wealth which neither differed across payment methods, nor acted as a significant covariate.

### *3.2.2 Relation between payment method and other aspects of object perception*

We explored whether the method of payment may influence object attachment, intended care and usage frequency. Univariate analyses indicate a significant effect on intended care,  $F(2, 205) = 14.92, p < .001, \eta^2 = .13$ , and attachment,  $F(2, 205) = 3.80, p < .05, \eta^2 = .04$ , but not on intended usage frequency. The exact nature of the differences follows the same pattern as differences in psychological ownership. Those paying by cash felt more attached to ( $M = 4.61, SD = 1.72$ ) and intended to care more ( $M = 4.49, SD = 1.76$ ) for the item than either those paying by debit card ( $M_{\text{attachment}} = 3.75, SD = 2.06; M_{\text{care}} = 3.32, SD = 1.60$ ) or those paying by credit card ( $M_{\text{attachment}} = 4.14, SD = 1.93; M_{\text{care}} = 3.07, SD = 1.77$ ). By adding psychological ownership as a covariate, (intended care:  $F(1, 204) = 43.75, p < .001, \eta^2 = .18$ , attachment:  $F(1, 204) = 21.58, p < .001, \eta^2 = .10$ ), all previously observed effects of payment method turn non-significant (intended care:  $F(2, 204) = 2.57, p = .08, \eta^2 = .02$ , attachment:  $F(2, 204) = 0.84, n.s., \eta^2 = .01$ ) signaling that differences may be driven by the effect of payment method on psychological ownership.

### *3.2.3. Long-term effects of payment method*

Those partaking in the follow up survey did not seem to differ from those who did not respond. There was no difference in the payment methods used, the original level of psychological ownership and the average item price. This suggests the absence of a response bias with regard to the variables of interest.

Comparing the degree of psychological ownership across time in a 3(between: payment method) x 2(within: time 1 vs. time 2) yielded main effects of time,  $F(1, 69) = 9.54, p < .01, \eta^2 = .12$ , and payment method,  $F(2, 69) = 7.82, p = .001, \eta^2 = .19$ , qualified by their significant interaction,  $F(2, 69) = 4.62, p < .05, \eta^2 = .12$ . As depicted in Figure 1a those

paying by card experienced an increase whereas the level of psychological ownership remained stable for those who had initially paid in cash. At time 2 the initial difference in psychological ownership across payment methods had disappeared.

[insert Figure 1 about here]

Two weeks after the acquisition payment method also neither related to how frequently participants reported to wear the item nor to their self-professed enjoyment of the item. However, differences in attachment could still be observed. Credit card payers ( $M = 3.52$ ,  $SD = 2.10$ ) but not debit card payers ( $M = 4.90$ ,  $SD = 1.35$ ) remained less attached than cash payers ( $M = 4.75$ ,  $SD = 1.80$ ),  $F(2, 69) = 3.95$ ,  $p < .05$ ,  $\eta^2 = .10$ .

### 3.3. Discussion Study 1

The data support the hypothesized difference in psychological ownership across payment methods. This difference is robust with regard to the assessed item characteristics, and it does not directly relate to the pain of payment. Moreover, this main effect seems to underlie further immediate variations in consumer reactions, namely the level of attachment and the level of intended item care. Notably the immediate boost in psychological ownership does not seem to be sustained over time. Over the course of two weeks those paying by card developed the same level of psychological ownership as those paying in cash. Apart from a lower sense of attachment experienced by credit card payers, all other initial differences across payment methods seem to equally disappear.

Some earlier evidence suggests that credit card payments differ psychologically from debit card payments (Soman 2001). We neither expected nor found such a difference. The remarkable similarity of results across card payments suggests that it is indeed cost transparency that mattered most.

Study 1's biggest limitation is the lack of control over the payment methods used due to its field setting. Although many of those paying by card would likely have been unable to

pay in cash and there was no difference in items chosen, we cannot entirely preclude the possibility that those who experienced higher psychological ownership were more likely to pay in cash. Although our observations suggest otherwise, we also cannot entirely preclude the possibility that card payers bought more items and were hence less attached to individual items than cash payers. Moreover Study 1 used a Western sample and does not allow assessing the potential influence of variations in cultural meanings of credit cards.

#### 4. Study 2 – A cross-cultural experiment

Study 2 was designed in response to these short-comings. An experiment systematically varied payment methods and kept the nature of the object and the amount of objects constant by asking all participants to buy the same item, a pen. This pen was made meaningful by becoming “the pen that you get yourself for your first day at your first job”.

In addition to controlling for potential confounds Study 2 explored a potential moderator: differences in the meaning ascribed to credit cards. For some groups of consumers credit cards may signal cost and personal investments (e.g., by being associated with danger of indebtedness, important investments or expensive purchases). Such meanings would increase subjective cost awareness and counteract the effect of reduced objective cost transparency on psychological ownership. Variations in meaning are likely to go hand in hand with differences in credit card usage practices. These vary across cultures and demographics (Wickramasinghe and Gurugamage 2009).

Using a sample of UK undergraduate students we focus on one of the most pronounced differences within this sample: ethnic background. To the best of our knowledge ethnic differences in credit card meanings have not yet been identified (though there are differences in money attitudes; e.g., Medina et al. 1996) and likely depend on the specific environment. To explore any such differences, we interviewed three Asian, three European and three black students. Results revealed that students with Asian background

(predominantly from the Indian Subcontinent) primarily associate credit card payment with cost (i.e., “important big purchases” and “going in debt”), whereas the primary associations for the other ethnic groups were along the lines of “no big deal” and “a matter of convenience”. We expect these differences in meaning to lead to differences across ethnic backgrounds.

#### 4.1. Participants and Design

Overall 33 UK students with Asian and 27 students with non-Asian background (32 female; median age 21 years) agreed to participate in an experiment simulating events during the first day of work. After reporting demographic information and signing a consent sheet, participants received a wallet containing replica of money and a replica credit card (including pin code). After completing unrelated questionnaires, they were asked to buy a pen, the target product, and crisps in the next room. The stall selling pens systematically manipulated the accepted method of payment (cash versus card only). After purchasing the pen participants had to visit a fictitious office, fill in forms and finally proceed to another table where they were asked to report on their pain of paying, psychological ownership for ( $\alpha = .89$ ), attachment to ( $\alpha = .82$ ), and intended usage of the pen.

#### 4.2. Results and Discussion Study 2

A 2(card vs. cash) x 2(Asian vs. non-Asian) ANOVA with psychological ownership as dependent variable revealed no main effects,  $F_{ethnic}(1, 56) = 0.70, n.s.$ ,  $F_{payment}(1, 56) = 1.63, n.s.$ , but a significant interaction effect,  $F(1, 56) = 11.00, p = .002, \eta^2 = .16$  (see Figure 1b). Whereas non-Asian students experienced a stronger sense of ownership for the pen if they had paid by cash ( $M_{cash} = 5.52, SD = 1.41; M_{card} = 3.67, SD = 1.68, t(25) = 3.11, p < .01$ ), the pattern reversed for Asian students and payment method did not significantly affect their extent of psychological ownership ( $M_{cash} = 4.29, SD = 1.83; M_{card} = 5.12, SD = 1.26, t(31) = -1.52, n.s.$ ). These results are in line with the assumption that the effect on psychological

ownership is a result of inherent features (i.e. cost transparency) but also of the cultural meanings attached to payment methods. It seems likely that in line with preliminary interviews Asian students perceive “investing” themselves equally across payment methods; they hence report similar degrees of psychological ownership.

Contrary to earlier evidence neither payment method nor ethnicity or their interaction influenced the pain of paying (all  $F$ 's  $< 1$ ) and it did not become significant if added as a covariate ( $F < 1$ ). Unlike in Study 1 there was no effect of either independent variable on the level of attachment and intended usage (all  $F$ 's  $< 1.5$ ), although attachment was correlated with and likely influenced by psychological ownership ( $r = .31, p = .01$ ).

## 5. General Discussion

This is the first paper to show that payment method may instantly affect the psychological bond between a consumer and an object. Cash payers feel more possessive about an acquired object than card payers. Sometimes this comes along with an increase in attachment and the level of intended immediate object care. Notably the effect of payment method depends on the cultural meanings associated with credit card payments. Whereas it can be observed for participants from Western cultures, it disappears for a subsample of Asian students who associate credit card payment with investment and debt rather than convenience. Moreover, the instant boost in psychological ownership resulting from the method of payment does seem to dissipate as actual experience with the object sets in.

Perhaps the most important finding is the cultural variation of the effect observed in Study 2. While the physical act of paying by card undoubtedly reduces cost salience, an association of credit cards as a route into debt or towards major acquisitions, may counteract these physical features. Notably, the proposed dependence on the cultural meanings associated with credit cards aligns well with an earlier study showing that it is only convenience users and not revolving users that exhibit an increase in spending in response to

credit card stimuli (Hafalir and Loewenstein 2009). Drawing on such earlier evidence and the findings at hand suggests that existing research on payment methods may be too universal in its claims. Further research on the meanings that payment methods are imbued with seems warranted and indeed needed. Our Asian subsample was rather homogenous in its composition (primarily second generation descendants from families with origins in the Sub-Indian continent) and we expect differences in meanings even within ethnic backgrounds.

Another important finding is the independence of the established effect from the pain of paying. Despite there being no direct empirical connection we assume that pain of paying and psychological ownership may be qualitatively different outcomes of the same underlying process: the transparency and perception of costs (e.g., Soman 2003). This has interesting implications for the mental accounting literature. In a seminal paper Prelec and Loewenstein (1998) argued that the pain of payment spills over on the pleasure of consumption. We find no spill-over effect of pain of payment on psychological ownership.

The apparent absence of an effect of payment method on pain of payment in Study 2 is another aspect worth noting. We presume that by paying with replica, the actual pain of parting may have been vastly reduced while the transparency of the amount spent and the meanings associated with doing so via a specific payment method has not.

Additional theoretical insights relate to psychological ownership. As has been observed before (e.g., Peck and Shu 2009) differences in psychological ownership can emerge very quickly and be based on minor variations in context. Notably, the high initial levels of psychological ownership found with cash payers in Study 1 did not increase further with product experience. This highlights a topic that has so far escaped empirical scrutiny: the temporal stability of psychological ownership induced through different routes.

Future research also seems necessary to investigate whether long-term effects depend on the nature of the object. For example, products whose use needs to be learned (e.g.,



technical goods such as mobile phones) may be more likely to retain an initial advantage in the extent of psychological ownership. If more time and care are devoted to the product at the very beginning, consumers may develop a higher capability to use and benefit from a product and make it “theirs”.

The type of product may also influence the extent to which psychological ownership can be influenced in the first place and whether it spills over to other object perceptions and behaviors. Whereas we observed a transmission of the effect on other variables (attachment and intended care) in Study 1, in Study 2 the effect of payment method did not carry over to differences in attachment. It seems likely that the effect of psychological ownership on other object perceptions becomes more pronounced for products that are relevant to the self (i.e. a self-chosen piece of clothing versus an experimentally acquired pen). Moreover attachment has been argued to develop over time (Kleine and Baker 2004). In Study 1 participants had interacted with the object (trying on etc.), no such basis for attachment existed in Study 2.

We focused on the perception of durable goods and have no means of ensuring that the effect would hold for disposable products that are acquired to be consumed and disposed (e.g. food) rather than repeatedly used and owned. Indeed looking at objective estimates rather than subjective object-person bonds, Bagchi and Block (2011) find no differences across payment methods in liking and perceptions of taste of immediately consumed snacks.

This paper aimed to prepare the theoretical and empirical groundwork for understanding how and when the method of payment influences consumers' product perception. Despite depending on a culture of credit card convenience use and fading over time, the observed effect seems of managerial relevance. It is immediately at and after acquisition that behaviors that aim at enhancing an objects lifetime take place. Cash payers may be less likely to damage a product early on, they may be more likely to carefully read instruction manuals and despite being cash constrained they may be at least as likely to

acquire care products or product insurances as convenience users of credit cards. It seems even possible that cash payments influence the value attached to education or advice received<sup>2</sup>. In summary, though card payers may be better customers in that they spend more freely, they may not feel as strongly about what they get. Future research will have to determine whether incentivizing consumers to pay in cash may be a nudge worthwhile.

#### Acknowledgements

The authors are grateful to SBM QMUL seedcorn fund for financial support, to Mehmet Topal for support in Study 1, and to Shaherun Islam, Rida Rashid, Rani Narayanan, and Dominique Silao for help in conducting Study 2. Most of the research was conducted while the first author was at Queen Mary, University of London.

#### References

- Bagchi R, Block LG (2011) Chocolate cake please! Why do we indulge more when it feels more expensive? *Journal of Public Policy and Marketing* 30 (2):294-306
- Feinberg RA (1986) Credit cards as spending facilitating stimuli: A conditioning interpretation. *Journal of Consumer Research* 13 (3):348-356
- Gunter S (2010) Child Support Payment Method and Father-Child Contact. SSRN eLibrary available at SSRN: <http://ssrn.com/abstract=1768307>
- Hafalir EI, Loewenstein GF (2009) The Impact of Credit Cards on Spending: A Field Experiment. SSRN eLibrary
- Hirschman EC (1979) Differences in consumer purchase behavior by credit card payment system. *Journal of Consumer Research* 6 (1):58-66
- Inman JJ, Winer RS, Ferraro R (2009) The interplay among category characteristics, customer characteristics, and customer activities on in-store decision making. *Journal of*

---

<sup>2</sup> We are grateful to an anonymous reviewer for highlighting this potential implication.

Marketing 73 (5):19-29

- Kamleitner B, Hölzl E (2009) Cost-benefit-associations and financial behavior. *Applied Psychology: An International Review* 58 (3):435-452.
- Kamleitner B, Rabinovich A (2010) Mine versus Our: Does it matter? In: Campbell MC, Inman J, Pieters R (eds) *Advances in Consumer Research*, vol 37. Association for Consumer Research, Duluth MN, pp 87-88
- Kleine SS, Baker SM (2004) An integrative review of material possession attachment. *Academy of Marketing Science Review* 1:1. Retrieved from <http://www.amsreview.org/articles/kleine01-2004.pdf>
- Loewenstein GF, Issacharoff S (1994) Source dependence in the valuation of objects. *Journal of Behavioral Decision Making* 7:157-168
- Medina JF, Saegert J, Gresham A (1996) Comparison of Mexican-American and Anglo-American attitudes toward money. *The Journal of Consumer Affairs* 30 (1):124-145
- Monger JE, Feinberg RA (1997) Mode of payment and formation of reference prices. *Pricing Strategy and Practice* 5 (4):142-147
- Morewedge CK, Holtzman L, Epley N (2007) Unfixed resources: Perceived costs, consumption, and the accessible account effect. *Journal of Consumer Research* 34 (4):459-467
- Peck J, Shu SB (2009) The effect of mere touch on perceived ownership. *Journal of Consumer Research* 36 (3):434-447
- Pierce JL, Kostova T, Dirks KT (2003) The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology* 7 (1):84-107
- Prelec D, Loewenstein G (1998) The red and the black: Mental accounting of savings and debt. *Marketing Science* 17 (1):4-28
- Prelec D, Simester D (2001) Always leave home without it: A further investigation of the

- credit-card effect on willingness to pay. *Marketing Letters* 12 (1):5-12
- Raghubir P, Srivastava J (2008) Monopoly money: The effect of payment coupling and form on spending behavior. *Journal of Experimental Psychology: Applied* 14 (3):213-225
- Reb J, Connolly T (2007) Possessions, feelings of ownership and the endowment effect. *Judgment and Decision Making* 2 (2):29-36
- Shimp TA, Moody MP (2000) In Search of a Theoretical Explanation for the Credit Card Effect. *Journal of Business Research* 48 (1):17-23
- Soman D (2001) Effects of payment mechanism on spending behavior: The role of rehearsal and immediacy of payments. *Journal of Consumer Research* 27 (4):460-474
- Soman D (2003) The effect of payment transparency on consumption: Quasi-experiments from the field. *Marketing Letters* 14 (3):173-183
- Srivastava J, Raghubir P (2002) Debiasing using decomposition: The case of memory-based credit card expense estimates. *Journal of Consumer Psychology* 12 (3):253-264
- Thomas M, Desai KK, Seenivasan S (2011) How credit card payments increase unhealthy food purchases: visceral regulation of vices. *Journal of Consumer Research* 38 (June):126-139
- Thomson M, MacInnis DJ, Park CW (2005) The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology* 15 (1):77-91
- Wagner SH, Parker CP, Christiansen ND (2003) Employees that think and act like owners: Effects of ownership beliefs and behaviors on organizational effectiveness. *Personnel Psychology* 56 (4):847-871
- Wickramasinghe V, Gurugamage A (2009) Consumer credit card ownership and usage practices: empirical evidence from Sri Lanka. *International Journal of Consumer Studies* 33 (4):436-447

**Fig. 1** Means of psychological ownership across conditions in Studies 1 (1a) and 2 (1b)

