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Product Attachment and Satisfaction: The Effects of Pleasure and Memories
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ABSTRACT
Product attachment is the emotional bond a consumer experiences with a product. We empirically test the relationship between product attachment and satisfaction. The results suggest that product attachment and satisfaction are both affected by a product’s utility and appearance. Pleasure is a pathway through which utility and appearance indirectly influence attachment and satisfaction. Utility has a direct effect on satisfaction as well. Only for product attachment, the presence of memories serves as another determinant having a direct effect. In addition, it moderates the effect of appearance. These results suggest that product attachment and satisfaction are two different post-purchase behavior concepts that have no direct relationship.

Consumer behavior research has focused primarily on purchase behavior, whereas knowledge of all phases in the consumption cycle, from acquisition, through use, to disposition is valuable. As a result, less is understood about the consumer-product relationship during ownership, even though post-purchase behavior plays an important role in, for instance, replacement purchases and consumers’ well-being. This paper investigates the post-purchase behavior construct of product attachment.

In the literature on interpersonal relationships, it is suggested that attachment is an emotion-laden target-specific bond between two persons (Bowlby 1979). Correspondingly, product attachment is defined as “the strength of the emotional bond a consumer experiences with a product” (Schifferstein, Mugge, and Hekkert 2004). This definition implies that an emotional tie exists between an individual on the one hand and the object on the other hand. Furthermore, the object to which a person experiences attachment triggers one’s emotions. People develop attachment to products that convey a special meaning (Wallendorf and Arnould 1988). If a person is attached to a product, disposing of this product is undesirable. People feel that when losing the product, the special meaning that is conveyed by the product is lost as well. So people strive to maintain products to which they feel attached, and they exhibit protective behaviors toward these products (Schultz, Kleine, and Kernan 1989).

Kleine and Baker (2004) suggested that product attachment is conceptually distinct from materialism, involvement, brand attachment, and attitude toward the object. Materialism refers to consumers’ tendency to be attached to possessions in general (“possessiveness”), whereas product attachment is typically concerned with a specific object or product variant (Wallendorf and Arnould 1988). Additionally, product attachment differs from the construct of involvement (e.g., Bloch 1982), because involvement is generally conceived as the importance of a whole product category to a person (Ball and Tasaki 1992). Product attachment is also conceptually distinct from consumer-brand relationships (e.g., Fournier 1998), because the latter imply that consumers develop relationships with brands, rather than with specific objects (Kleine and Baker 2004). Finally, product attachment differs from attitude (Kleine, Kleine, and Allen 1995; Schultz, Kleine, and Kernan 1989). Stronger attachments are not always associated with positive emotions, nor are negative feelings always associated with weak attachments.

Although scholars asserted that product attachment is conceptually distinct from several other constructs, the empirical demonstration of their relationships has been limited (Kleine and Baker 2004). This paper empirically tests the relationship between product attachment and satisfaction. Past research has concluded that the pleasure a product evokes as a result of its utility and/or its appearance positively affects both product attachment (Kamptner 1995; Schifferstein, Mugge, and Hekkert 2004) and satisfaction (Mano and Oliver 1993; Oliver 1997). Consequently, this study investigates the effect of pleasure on product attachment and satisfaction. More knowledge on how product attachment, satisfaction, and pleasure relate to each other and in what aspects they are similar or distinct enhances the comprehension of consumers’ post-purchase behavior.

In addition to the pleasure a product evokes, we investigate the effect of memories associated with the product, because memories have a relatively strong effect on the development of product attachment (Schifferstein, Mugge, and Hekkert 2004; Wallendorf and Arnould 1988). We include memories to investigate how pleasure and memories may interact with each other. Furthermore, incorporating this determinant may help us to better distinguish product attachment from satisfaction. Whereas the memories associated with a product are strongly related to product attachment, no effect on satisfaction is expected. In this paper, we propose and test a conceptual model of the relationships between product attachment, satisfaction, pleasure (as a result of a product’s utility and appearance), and memories (see Figure 1). The model is explained in the next paragraphs.

PLEASURE
To examine the relationships between product attachment, satisfaction, and pleasure, the processes by which a product’s utility and appearance affect these concepts are explored. We start with a discussion on the processes by which a product’s utility and appearance can bring about the experience of satisfaction.

An important conceptualization of satisfaction is based on the expectation-disconfirmation paradigm (E-D-paradigm) (e.g., Oliver 1980). According to this paradigm, the degree of satisfaction for a product is related to the confirmation or disconfirmation of prior expectations; that is the difference between the expected and the perceived performance of a product. When the product’s performance is acceptable, the cognitive evaluations of the product’s utility result in the experience of satisfaction. People experience more satisfaction for a product performing better than expected than for one performing according to expectations (Oliver 1980; 1997). Through the cognitive evaluations, the product’s utility directly affects the degree of satisfaction. In addition, Mano and Oliver (1993) found an indirect relationship through the affect elicited by the product. Their framework is based on the idea that satisfaction is not a purely cognitive evaluation. Emotional responses elicited through consumption of a product may affect the experience of satisfaction as well (Oliver 1997; Westbrook 1987; Westbrook and Oliver 1991). The utilitarian evaluations of a product can result in the experience of pleasure if the product performs extraordinarily well, and pleasure serves as a mediator for this effect on product satisfaction (Mano and Oliver 1993). In addition, people can derive pleasure from merely looking at a beautiful product (Creusen and Snelders 2002). Literature in the field of product design corroborates that pleasure is affected by...
utilitarian and appearance-related aspects of the product, and may positively affect satisfaction (e.g., Jordan 1998). In conclusion, we hypothesize that the determinant utility has a direct (via the cognitive evaluations of the E-D-paradigm) and an indirect effect (via the mediator pleasure) on satisfaction. Hence, pleasure serves as a partial mediator for the determinant utility (Mano and Oliver 1993). For the product’s hedonic features (e.g., product appearance), pleasure serves as a perfect mediator (Mano and Oliver 1993), because these features elicit affective responses, and no cognitive evaluations (via the E-D-paradigm). Figure 1 displays these relationships.

Utility and appearance do not only affect satisfaction, but are also reasons for people to consider a product as treasured (Kamptner 1995), special (Csikszentmihalyi and Rochberg-Halton 1981), important (Richins 1994), or favorite (Kleine, Kleine, and Allen 1995; Wallendorf and Arnould 1988). People become attached to products for the special meaning these products convey. To obtain a special meaning, a product should provide the owner with something exceptional over and above its utilitarian meaning (Mugge, Schoormans, and Schifferstein 2005). Accordingly, we suggest that products with superior utility and/or a superior appearance can stimulate product attachment. A product with superior utility offers extra utilitarian benefits (e.g., extra features, greater usability, or higher quality). Due to these superior benefits, the product may elicit a state of pleasure that other products do not elicit. As a result of the experienced pleasure, the product obtains a special meaning to the owner, which can result in the development of an emotional bond to this product. On the contrary, products with average utility and average appearance do not evoke pleasure and are replaced much easier, because most other products in the category provide the same utilitarian and appearance-related benefits. Consequently, these products are less likely to result in product attachment.

Based on these arguments, we believe that pleasure serves as a perfect mediator for the effects of utility and appearance on product attachment (see Figure 1). In contrast to the direct effect of utility on satisfaction, no direct effect of utility is expected for attachment. When a product does not provide the owner with superior benefits, (s)he may be satisfied with it, due to the cognitive evaluations of the product’s utility (Oliver 1997), but the product does not elicit pleasure or evoke feelings of attachment. These arguments are summarized as follows:

**H1**: For a product with above average utility, the degree of product attachment (H1a) and the degree of satisfaction (H1b) are higher than for a product with average utility.

**H2**: For a product with above average appearance, the degree of product attachment (H2a) and the degree of satisfaction (H2b) are higher than for a product with average appearance.

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**FIGURE 1**
A Conceptual Model of Product Attachment and its Relationships to Satisfaction, Pleasure, Utility, Appearance, and Memories

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H3: Pleasure evoked by a product partially mediates the
effect of utility (H3a) and perfectly mediates the effect of
appearance (H3b) on the degree of satisfaction.

H4: Pleasure evoked by a product perfectly mediates the
effects of utility (H4a) and appearance (H4b) on the
degree of product attachment.

The preceding arguments suggest that product attachment and
satisfaction are both affected by the construct of pleasure, but are
not directly related.

MEMORIES

Products can remind the owner of a specific time, place, or
person and can thus help to maintain a sense of the past (Belk 1988;
1990). Wallendorf and Arnould (1988) have shown that in the USA
the explanation for valuing one’s favorite possessions is most often
related to the memories they evoke. Due to the physical association
between the product and a special person or place in the past, the
product has gained symbolic meaning for the owner (Belk 1988;
1990). Products can be associated with both positive and negative
memories. An example of the latter is a product that serves as a
memento from hard times. However, people are more likely to
become attached to possessions that are associated with pleasant
memories, because people want to preserve the happy moments in
life (Belk 1988; 1990). Accordingly, we focus on positive memo-
ries in this study.

Past research observed a relatively strong relationship be-
tween the positive memories associated with the product and the
experience of attachment (Kleine, Kleine, and Allen 1995;
Schifferstein, Mugg, and Hekkert 2004; Wallendorf and Arnould
1988). This may have consequences for the effects of other deter-
minants on the degree of product attachment. If the degree of
attachment is high due to the memories a product is associated with,
the other determinants may become less relevant. For example, a
person who has inherited a clock from his/her parents experiences
a strong attachment to this clock, because of the memories associ-
ated with it. The attachment is not likely to decrease when its
functionality decreases or when it is scratched. The clock still has
its most important asset: memories. The impact of utilitarian and
appearance attributes on product attachment is thereby reduced.

Because a product’s symbolic meaning is not directly related to
its performance, we expect that the memories associated with a
product do not affect the degree of satisfaction. Accordingly, we
hypothesize:

H5: When positive memories are associated with a product,
the degree of product attachment is higher than when no
memories are associated with the product.

H6: Positive memories associated with a product moderate
the effects of the product’s utility (H6a) and the product’s
appearance (H6b) on product attachment. When positive
memories are associated with a product, people experi-
cence product attachment regardless of the product’s
utility or the product’s appearance. When no memories
are associated with the product, people experience a
higher degree of product attachment when the product’s
utility or appearance is above average than when it is
average.

METHOD

To investigate the effects of pleasure—as a result of the product’s
utility or appearance—and memories on product attachment and on

satisfaction, we use written scenarios. A scenario or vignette is a
“short story about hypothetical characters in specified circum-
stances to which the interviewee is invited to respond” (Finch 1987,
p. 105). Scenarios are useful for the study of product attachment,
because they allow studying processes that develop over a long
period of time in a limited time span. In addition, they allow
focusing on the topic of interest, while controlling for additional
variables that would interact in a real-life situation (e.g., type of
product, financial aspects). This selective representation of the real
world can help to disentangle the complexities and conflicts present
in everyday life (Hughes and Huby 2002). An investigation on the
validity of the use of scenarios has demonstrated a large degree of
correspondence between the emotions experienced in a real-life
setting and the emotions subjects believed they were likely to
experience in a scenario-setting (Robinson and Clore 2001). Hence,
scenarios can play a useful role in theory construction and scenarios
are often used within research on post-purchase affect (e.g., Tsilos
and Mittal 2000).

Subjects and Design

One hundred and sixty students volunteered to participate in the
study (51% male, mean age=20). Eight experimental conditions
were generated following a 2 product’s utility: average vs. above
average) × 2 (product’s appearance: average vs. above average) × 2
(memories associated with product; present vs. absent) between-
subjects full factorial design. Each subject was assigned randomly
to one of the eight conditions, resulting in a total of 20 subjects in
each condition.

Stimulus Material and Procedure

The subjects were instructed to read the presented scenario1
carefully. The scenario portrayed a female person (named Susan),
who owned a mobile phone. To operationalize the product’s utility,
the scenario illustrated certain aspects of the mobile phone’s
functions (e.g., 150 h. vs. 400 h. standby time; Internet functions
absent vs. present) and its ease of use (needed to become accus-
tomed to operation vs. straightforward operation). The determinant
memories was operationalized by describing the manner in which
the mobile phone was obtained (received as a gift from parents for
graduation vs. an ordinary purchase). Appearance was
operationalized using a set of pictures. Although several fundamen-
tal rules, such as unity, proportion (e.g., “the Golden Section”),
and symmetry affect aesthetic appreciation (Veryzer and Hutchinson
1998), past research showed that individual differences exist for
what people judge as a superior appearance, dependent on the
person, culture, and fashion (Bloch 1995; McCraken 1986). There-
fore, a scenario in which the product’s appearance is related to
the owner’s taste seems preferable to study the effects of appearance.
In the scenarios, a person’s taste for the appearances of consumer
durables was defined by presenting color pictures of four products
that the person liked for their design and color. Three designers of
consumer durables had selected these products as being similar in
style of design by mutual agreement. Two color pictures of mobile
phones were selected, for which the styles of design were either
similar or dissimilar to the four products (see Figure 2). The two
selected mobile phones were similar in price. We expected the
subjects in the “similarity” group to perceive the phone’s appear-
ance as superior to that in the “dissimilarity” group, because only in
the “similarity” group the mobile phone’s design matched that of

1Due to space limitations, the full text of the scenarios is not
presented in the paper. Interested readers can request the scenarios
from the authors.
the four products and, therefore, this phone fitted the person’s taste better than the phone in the “dissimilarity” group.

Subsequently, multi-item measures of expected product attachment (4 items, \( \alpha = .78 \)), satisfaction (4 items, \( \alpha = .77 \)), pleasure (3 items, \( \alpha = .78 \)), as well as the product’s utility (4 items, \( \alpha = .77 \)), its appearance (4 items, \( \alpha = .94 \)), and the presence of memories (3 items, \( \alpha = .83 \)) were obtained. The last three served as manipulation checks. The items were drawn from prior studies on product attachment (Mugge, Schifferstein, and Schoormans 2004; 2006; Schifferstein, Mugge, and Hekkert 2004). The items were presented in random order.

RESULTS

Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was performed in LISREL 8.72 on the 11 items of product attachment, satisfaction, and pleasure to establish the convergent and discriminant validity of the measurement scales. The three-factor solution resulted in an adequate fit \( (\chi^2=67.77, df=41, p=.005; \text{GFI}=.92; \text{CFI}=.98; \text{RMSEA}=.068) \). Although the chi-square was significant, it was smaller than the rule of 2.5 times the degrees of freedom as suggested by Bollen (1989). Both the GFI and the CFI satisfied the minimum requirements of .90 (Bollen 1989). Moreover, the RMSEA was below the value of .08 (Browne and Cudeck 1993). Convergent validity was indicated by the fact that the items loaded significantly on their corresponding latent construct (all ‘t’s>2.0). Discriminant validity among the scales was assessed in two steps. First, one baseline model (in which the correlations between all pairs of constructs were freely estimated) was estimated. Next, we compared this model to three alternative models, in which the correlations between pairs of constructs were constrained to unity (Anderson and Gerbing 1988). In each case, the constrained model exhibited a statistically significant increase in chi-square (mean \( \chi^2=50.33, df=1, p<.05 \)), providing evidence of discriminant validity (Bagozzi and Phillips 1982).

Manipulation and Confounding Checks

Three separate \( 2 \times 2 \times 2 \) ANOVAs were performed using the measurement scales for utility, appearance, and memories as the dependent variables and the three manipulations as the independent variables. Subjects in the “above average utility” condition perceived the utility of the product as better than those in the “average utility” condition \( (M_{ut}=5.95 \text{ vs. } M_0{ut}=4.44; F(1, 145)=155.76, p<.001) \). In the “above average appearance” condition, subjects perceived the appearance of the product as better than those in the “average appearance” condition \( (M_{app}=5.74 \text{ vs. } M_0{app}=3.06; F(1, 151)=228.77, p<.001) \). Subjects in the “memories” condition perceived the product more as a reminder of past experiences than those in the “no memories” condition \( (M_{mem}=4.43 \text{ vs. } M_0{no}=3.06) \).

FIGURE 2

Pictures used for the Appearance Manipulation
mem=2.84; \(F(1, 150)=61.37, p<.001\). No other effects were found (\(p>.05\)), providing evidence for the discriminant validity of our manipulations.

**Effects of Utility, Appearance, and Memories**

To test hypotheses 1, 2, 5, and 6, two separate \(2 \times 2 \times 2\) ANOVAs were run with either product attachment or satisfaction as the dependent variable and utility, appearance, and memories manipulations as the independent variables.

The results revealed a main effect of utility on product attachment (\(F(1, 149)=14.73, p<.001\)) and satisfaction (\(F(1, 149)=82.44, p<.001\)). When the product functioned above average, the subjects reported higher degrees of product attachment (\(M_{+ut}=4.54\) vs. \(M_0\, ut=3.91\)) and satisfaction (\(M_{+ut}=5.71\) vs. \(M_0\, ut=4.58\)) than for a product with average utility. These results support hypotheses 1a and 1b.

Furthermore, significant main effects were found for appearance on the dependent variables product attachment (\(F(1, 149)=10.54, p<.002\)) and satisfaction (\(F(1, 149)=16.67, p<.001\)). Subjects reported higher degrees of product attachment (\(M_{+app}=4.49\) vs. \(M_0\, app=3.96\)) and satisfaction (\(M_{+app}=5.39\) vs. \(M_0\, app=4.89\)) for the product with above average appearance, than for the product with average appearance. These findings support hypotheses 2a and 2b.

A main effect of memories on product attachment was also found (\(F(1, 149)=30.02, p<.001\)). As hypothesized, the subjects in the “memories” conditions reported more attachment (\(M_{mem}=4.67\) vs. \(M_{no mem}=3.78\)) than those in the “no memories” conditions, supporting hypothesis 3. No effect of memories was found for satisfaction (\(F(1, 149)<1\)).

The results yielded a significant memories \(\times\) appearance interaction for the dependent variable product attachment (\(F(1, 149)=3.96, p<.05\)). Among the subjects in the “no memories” conditions, those presented with the product with above average appearance reported more product attachment than those presented with the average appearance (\(M_{no mem, + app}=4.21\) vs. \(M_{no mem, 0\, app}=3.36\); \(t(76)=3.20, p<.001\)). However, among the subjects in the “memories” conditions, there was no significant difference between these groups (\(M_{mem, + app}=4.77\) vs. \(M_{mem, 0\, app}=4.57\); \(t(76)=1.96, p>.05\)). Although, the hypothesized memories \(\times\) utility interaction (\(F(1, 149)=19.6, p<.05\)) was not significant, independent t-tests provided some support for hypothesis 6a as well. For the “no memories” conditions, subjects who read about the product with above average utility reported more product attachment than those who read about the product with average utility (\(M_{no mem, + ut}=4.19\) vs. \(M_{no mem, 0\, ut}=3.36\); \(t(76)=3.20, p<.001\)). However, among the subjects in the “memories” conditions, no significant difference between the two “utility” conditions was found (\(M_{mem, + ut}=4.87\) vs. \(M_{mem, 0\, ut}=4.47\); \(t(77)=1.86, p>.05\)).

**Mediation Analysis**

Baron and Kenny’s (1986) framework for mediation was used to investigate the role of pleasure in mediating the effect of utility and appearance on product attachment and satisfaction (hypotheses 3a, 3b, 4a, and 4b). Baron and Kenny’s (1986) test for mediation hinges on three statistical outcomes. First, the effect of the independent variables (i.e., utility and appearance) on the dependent variables (i.e., product attachment and satisfaction) must be significant without incorporating the effect of the mediator (i.e., pleasure), as was shown in the previous section.

Second, the effect of the independent variables on the mediator variable must be significant. This was tested by performing a 2 \(\times\) 2 \(\times\) 2 ANOVA using the scores on the pleasure scale as the dependent variable and utility, appearance, and memories manipulations as the independent variables. This ANOVA supported the role of pleasure as a mediator by revealing significant main effects of utility (\(M_{+ut}=4.97\) vs. \(M_{0\, ut}=3.97\); \(F(1, 151)=46.62, p<.001\)) and appearance (\(M_{+app}=4.73\) vs. \(M_{0\, app}=4.21\); \(F(1, 151)=12.47, p<.01\)) on the mediator pleasure. No effect of memories was found (\(F(1, 151)<1\)).

Third, when the mediator variable is added to the original analysis as a covariate, the effect of the covariate on the dependent variables must be significant. Two separate ANCOVAs were performed with either product attachment or satisfaction as the dependent variable, and with utility, appearance, and memories manipulations as the independent variables. In both analyses, pleasure was included as a covariate. Pleasure significantly affected both product attachment as well as satisfaction (\(F(1, 148)=47.43, p<.001\) and \(F(1, 148)=59.50, p<.001\), respectively).

The analyses revealed that the previously significant main effect of utility on product attachment was no longer significant, when pleasure was included as a covariate (\(F(1, 148)<1, p>.20\)). This finding demonstrated that pleasure perfectly mediated the effect of utility on product attachment, supporting hypothesis 4a. For satisfaction, the main effect of utility was reduced (\(\Delta \eta^2=50\%\)), but remained significant (\(F(1, 148)=31.41, p<.001\)) when we added pleasure to the analysis as a covariate. This suggested both a direct and an indirect effect (through pleasure) of utility on satisfaction. Thus, partial mediation was observed for the effect of utility on product satisfaction, supporting hypothesis 3a.

The main effect of appearance on product attachment and satisfaction was reduced (\(\Delta \eta^2=68\%\) and \(\Delta \eta^2=61\%\), respectively) when pleasure was included as a covariate, but remained significant for satisfaction (\(F(1, 148)=5.93, p<.02\)) and marginally significant for product attachment (\(F(1, 148)=3.14, p=.08\)). These results partially support hypotheses 3b and 4b: Pleasure appears to serve as a partial mediator for the effect of appearance on satisfaction, whereas perfect mediation was expected. For attachment, the main effect of appearance was only marginally significant and the effect size was not completely reduced. The reduction in effect size was similar to that for satisfaction. Based on these results, we interpret the mediation for product attachment also as partial.

**Relationships between Product Attachment, Satisfaction, and Pleasure**

To test the relationships between product attachment, satisfaction, and pleasure, we estimated a structural model in LISREL 8.72 using the 11 items to measure these three constructs. The model resulted in a satisfactory fit to the data (\(\chi^2=71.39, df=42, p=.003; \text{GFI}=92; \text{CFI}=95; \text{RMSEA}=0.07\)). The model supported our expectations: Pleasure had a significant positive effect on product attachment (\(\gamma=.71, p<.01\)) and on satisfaction (\(\gamma=.85, p<.01\)). A second model was estimated to explore the relationship between product attachment and satisfaction. Specifically, we estimated whether satisfaction had a direct effect on product attachment in addition to the effect of pleasure. The results showed that the fit of this model was not significantly better (\(\Delta \chi^2=3.62, df=1, p>.05\)) than the original model and that satisfaction had no direct effect on product attachment (\(\gamma=-.43, p>.05\)).

**GENERAL DISCUSSION**

This paper explores the relationships between product attachment, satisfaction, the pleasure evoked by a product’s superior utility and/or superior appearance, and the memories associated with the product. For the most part, the data appear consistent with the proposed conceptual model. Specifically, we find that product attachment and satisfaction are both affected by utility and appear-
Product Attachment and Satisfaction: The Effects of Pleasure and Memories

Our results suggest that product attachment is conceptually distinct from satisfaction on at least two accounts. First, the mediation processes through the mediator pleasure are different: The product’s utility has a direct (via the E-D-paradigm) as well as an indirect effect (via the mediator pleasure) on satisfaction, whereas the effect on product attachment is only indirect (via the mediator pleasure). These results support the notion that satisfaction is an evaluative judgment of the product’s performance that develops as a result of both cognitive evaluations and affective reactions elicited in consumption (Mano and Oliver 1993). In contrast, product attachment is an emotion-laden bond that develops if the product has a special meaning to the owner (Schifferstein, Mugge, and Hekkert 2004; Wallendorf and Arnould 1988). An average performing product can result in the experience of satisfaction, because it is adequate and performs according to expectations. However, a person is not likely to become attached to a product just because it performs adequately, if it has nothing special.

Second, product attachment is directly related to memories, whereas satisfaction is not. If a product is associated with memories, the product helps the person to maintain his/her sense of past, due to which it gains a special, symbolic meaning. A product’s symbolic meaning is related to product attachment, but is not directly related to its performance and, hence, does not affect the degree of satisfaction. Furthermore, the memories associated with a product moderate the effect of appearance on product attachment (Schifferstein, Mugge, and Hekkert 2004; Wallendorf and Arnould 1988): When positive memories are associated with a product, the impact of the product’s appearance on product attachment is reduced. This study provided only partial support for the moderating effect of memories on utility (hypothesis 6a). Nevertheless, in another study, we did find a significant memories x utility interaction effect (Mugge 2007, Study 1). In this study, a scenario of a person and his photo camera was presented. However, this photo camera was not merely a gift for one’s graduation, but was also a reminder of a special weekend with the person’s father. As a result of this relatively stronger memories manipulation, the interaction effect was more likely to occur.

Our results suggest that pleasure is only a partial mediator for the effect of appearance on product attachment as well as on satisfaction, whereas perfect mediation was expected. A possible explanation for these findings for product attachment may lie in the role the product’s appearance plays in maintaining a person’s identity (e.g., Burroughs 1991). Products possess symbolic self-defining functions, which consumers use to define and maintain their identities. Consumers tend to prefer products and product appearances that are congruent with their self-concept (Srigley 1982). Past research concluded that expressing a person’s identity is also a determinant of product attachment (Kleine, Kleine, and Allen 1995; Schultz, Kleine, and Kernan 1989; Wallendorf and Arnould 1988). As a result, a product’s appearance may not only have an indirect effect on the degree of product attachment through the mediator pleasure, but also through self-expression. For satisfaction, the finding that pleasure serves as a partial mediator for appearance seems inconsistent with the results of Mano and Oliver (1993), who found perfect mediation. However, Mano and Oliver (1993) investigated affect, of which pleasure is only one component. Probably, other emotional reactions (e.g., surprise) may serve as additional mediators for the effect of appearance on product satisfaction.

Implications

This study explores the concept of product attachment and shows that it is distinct from satisfaction. For companies, understanding the concept of product attachment is valuable for several reasons. First, experiencing product attachment can increase consumers’ loyalty to the brand (Davis 2002). In other words, the attachment to a product may be transferred to the brand, resulting in brand attachment. This can affect consumers’ future purchases, because consumers will be more eager to buy other products bearing the same brand. Moreover, attached consumers are likely to be more vocal in recommending the same product or brand to others.

Product attachment may also contribute to a sustainable society, because consumers tend to keep products to which they experience attachment for a longer period of time (Mugge, Schoormans, and Schifferstein 2005). Many products are disposed of while they are still functioning properly (DeBell and Dardis 1979). From a sustainability perspective, the early replacement of consumer durables is often undesirable, because it produces waste and uses up scarce resources.

If a company wants to stimulate the attachment that consumers experience to their products, our results suggest that they should introduce products with a superior utility or appearance. Furthermore, managers may stimulate the formation of product-related memories through their marketing efforts. In addition, Mugge et al. (2005) have proposed to stimulate attachment through the use of materials that wear gracefully in time. As a result of the wear and tear process, the product will reflect the shared history with the owner, and becomes associated with certain memories.

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