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**‘I love my Jeep, because it’s tough like me’,  
The effect of product-personality congruence on  
product attachment**

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### **Biographical notes**

Pascal Govers is Assistant Professor Marketing at Nyenrode University, where she teaches Research Methodology and Multivariate Data Analysis. She has a MSc in psychology and her research interests involve the “irrational” aspects of consumer behaviour, mostly directed towards symbolic consumption. Her current research includes the understanding and measurement of product personality. She developed a scale to assess the personality of durable consumer products. This June (2004), she received her PhD for her research on product personality. She presented her research at several international conferences on marketing, personality, and product design, and co-authored a chapter on the role of product appearance in a recently published book on Product Development and Marketing.

Ruth Mugge is a PhD student at Delft University of Technology. After obtaining her Masters Degree at the Faculty of Industrial Design Engineering in 2001, she started her PhD project on the topic of product attachment. The research objective of this project is to explain and stimulate the emotional bond a person can experience with his/her product. She presented her research at several international conferences on psychology, marketing, and product design, and co-authored a chapter on the role of product appearance in a recently published book on Product Development and Marketing. In addition, she teaches industrial design to undergraduate students.

# **‘I love my Jeep, because it’s tough like me’, The effect of product-personality congruence on product attachment**

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## **Abstract**

Product attachment is defined as the emotional bond a consumer experiences with an object. This study examines the influence of congruity between the personality of a person and the personality of his/her product (i.e., product-personality congruence) on product attachment. Respondents indicated stronger attachments to products that were congruent with the owner’s personality. This suggests that designers can stimulate product attachment by designing a product with a pre-determined personality that matches the personality characteristics shared by the members of the target group.

Key words: product attachment, emotional bonding, product personality, self-congruence

## **Introduction**

People own many products for the functional or symbolic benefits they provide. Generally, these products are easily discarded and replaced, sometimes even while the product is still functioning properly. On the contrary, most people also own products that they refuse to discard, although they may have lost their instrumental value (Schultz, Kleine, and Kernan 1989). They care for these objects in special ways and have developed a long-lasting relationship with them. They have become emotionally attached to these products.

Product attachment is defined as “*the emotional bond experienced with a product*” (Schifferstein and Pelgrim 2003). This definition implies that an emotional tie exists between the owner and his/her object and that the specific product has a deep and important meaning to the owner. When a person is attached to an object, (s)he is more likely to handle the product with care, to repair it when it breaks down, and to postpone its replacement as long as possible. Product attachment can thus result in a longer usage period.

Product attachment exists next to the product's utilitarian benefits (Schifferstein, Mugge, and Hekkert 2003). Utilitarian benefits are those benefits that are derived from fulfilling the product's basic function. Products to which a person becomes attached provide him/her with additional benefits that are not (necessarily) present in other products within the product category.

For designers of consumer durables, it is interesting to know why people become attached to some of their products and to find out whether they can stimulate the experience of attachment through the product design. Past research has argued that there are several reasons for people to become attached to their products (e.g., Csikszentmihalyi and Rochberg-Halton 1981; Richins 1994; Schultz *et al.* 1989; Wallendorf and Arnould 1988). One of these reasons is self-expression. Products that are in some way similar to one's identity can provide the symbolic function of self-expression. We say that these products are self-congruent.

### **Self-congruity**

Self-congruity refers to the fact that consumers prefer products associated with an image that is similar to their self-concept (e.g., Belk 1988; Malhotra 1988; Sirgy 1982). Sirgy (1982) suggested in his self-congruity theory that consumers make a psychological comparison between their self-concept and the image of a product. If a person identifies with this product image, (s)he will experience high self-congruence which positively influences product evaluation. The effect of self-congruence is assumed to originate from our need to express a consistent and positive view of our self. Products can serve as means by which an individual can symbolically display his/her self-concept to oneself and to others (Sirgy 1982).

Based on the theory of self-congruity, Aaker (1999) proposed that consumers prefer self-congruent brands. She found confirming evidence for a congruity effect for brands.

Consumers evaluate brands with a matching personality more positively than incongruent brands. In line with the concept of brand personality, the concept of product personality was introduced (Jordan 1997; Govers 2004). Product personality differs from brand personality, in that it refers to a specific product variant, and not to a global brand. It is defined as "*the set of human personality characteristics used to describe a specific product variant*". For example, a product variant can be cute, tough, or silly. Research also found supporting evidence for a product-personality congruence effect.

This paper contributes to the research on product attachment by investigating product-personality congruence as a determinant of product attachment in an experimental setting. We focus on product personality, because this concept is believed to be a meaningful tool for designers of consumer durables (Jordan 2002). Designers can translate personality characteristics into the product form in a way that consumers understand (Govers, Hekkert, and Schoormans 2003). As self-congruent products can express aspects of one's self-concept, we believe that product-personality congruence influences the experienced attachment to a product. Accordingly, we hypothesize:

**H1:** High product-personality congruence results in a higher degree of product attachment than low product-personality congruence.

### **This study**

This study uses a scenario-approach to manipulate product-personality congruence. A scenario is a "*short story about hypothetical characters in specified circumstances to which the interviewee is invited to respond*" (Finch 1987, p. 105). Scenarios are useful for the study of attachment, because they allow studying processes that develop over a long period of time. In addition, they allow focusing on the topic of interest, while controlling for additional variables that would interact in a real-life situation. This selective representation of the real world can help to disentangle the complexities and conflicts present in everyday life (Hughes and Huby 2002). The critique that scenarios do not represent real-life situations is countered by the fact that a large degree of correspondence was found between the emotions experienced in a real-life setting, and the emotions respondents in a scenario-setting believed they were likely to experience (Robinson and Clore 2001). Accordingly, scenarios are often used within research on post-purchase affect.

In this study, respondents are presented a color picture of a product and a scenario in which the personality of a hypothetical person is portrayed. To create conditions of high and low product-personality congruence, the personality of the product was either congruent or incongruent with the personality of the person in the scenario. The stimuli personalities are based on dimensions from human personality. Human personality can be described using five dimensions: agreeableness, extroversion, conscientiousness, neuroticism, and openness to experience (e.g., McCrae and John 1992). Past research suggested that three of these dimensions (agreeableness, extroversion, and conscientiousness) are also relevant to products

(Govers 2004) and brands (Aaker 1997). From these three dimensions, extroversion and conscientiousness were chosen, because these dimensions are recognized best by observers (Kenny, Albright, Malloy, and Kashy 1994). Recognition of the personality of the person in the scenario, as well as the personality of the product is essential to the success of our manipulation.

In the following section, two pre-tests and the main study are reported. The pre-tests are performed to check whether the personality of the stimuli persons are perceived as intended (pre-test 1) and to select a congruent and an incongruent stimuli product (pre-test 2).

## **Method**

### *Pre-test 1: Stimuli persons*

The scenarios that were used to depict the two stimuli persons portrayed a 27-year-old woman named Susan, and described her as either extrovert or conscientious by unfolding her traits and hobbies (see Appendix). To make the scenarios as realistic as possible, the scenarios were based on the items from several human personality tests.

To test the internal validity of the two scenarios, the scenarios were rated on character traits that are typical for the two dimensions. Respondents ( $n = 27$ ) each rated one scenario.

Extroversion was measured with five items: (1) “not cheerful”/“very cheerful”, (2) “not sociable”/“very sociable”, (3) “not exuberant”/“very exuberant”, (4) “not defiant”/“very defiant”, and (5) “not conspicuous”/“very conspicuous”, ( $\alpha = .81$ ). Conscientiousness was measured with five items: (1) “not precise”/“very precise”, (2) “not neat”/“very neat”, (3) “not consistent”/“very consistent”, (4) “not serious”/“very serious”, and (5) “not trustworthy”/“very trustworthy”, ( $\alpha = .92$ ). All items were measured using five-point scales.

The results showed that the personalities were perceived as intended. The person in the extrovert scenario had a mean score of 4.20 ( $n = 18$ ) on the extrovert items and the person in the conscientious scenario had a mean score of 4.46 ( $n = 19$ ) on the conscientious items.

Given the fact that we used five-point scales, these were relatively high means and, therefore, the scenarios were considered internally valid. Furthermore, the person in the extrovert scenario was perceived as significantly more extrovert than the person in the conscientious scenario ( $M_E = 4.20$ , vs.  $M_C = 3.21$ ,  $t(35) = 4.78$ ,  $p < .001$ ), whereas the person in the conscientious scenario was perceived as significantly more conscientious than the person in the extrovert scenario ( $M_C = 4.46$ , vs.  $M_E = 2.88$ ,  $t(34) = -11.66$ ,  $p < .001$ ).

### *Pre-test 2: Stimuli products*

To select the stimuli products, we tested a set of five color pictures of toasters. The toasters were approximately similar in price. Ninety-two respondents each rated one toaster on traits relating to extroversion ( $\alpha = .88$ ) and conscientiousness ( $\alpha = .77$ ) (see test of stimuli persons). The toasters and their mean scores on the extroversion ( $M_E$ ) and conscientious ( $M_C$ ) traits are presented in table 1. The results showed that toaster 2 provided the highest mean on the extroversion traits ( $M_E = 4.10$ ), whereas toaster 4 provided the highest mean on the conscientious traits ( $M_C = 4.16$ ). These toasters were used as stimuli.






	Toaster 1	Toaster 2	Toaster 3	Toaster 4	Toaster 5
					
$M_E$	2.96	4.10	3.68	2.38	3.19
$M_C$	3.40	3.08	3.37	4.16	3.71
$n$	18	18	18	19	19

Table 1, Mean scores of the toasters

### *Respondents and design*

For the main study, 180 respondents were selected from a consumer household panel. One hundred and thirty-three respondents (58 males and 75 females) returned their questionnaire, a response rate of 74%. The ages of the respondents ranged from 23 to 70 years, with an average age of 49. Respondents were rewarded with a financial compensation.

The study has a 2 (personality of the person: extrovert vs. conscientious) x 2 (product personality: extrovert vs. conscientious) between-subjects full factorial design. Four experimental conditions were generated, two resulting in high product-personality congruence and two resulting in low product-personality congruence (see table 2). Each respondent was assigned randomly to one of the four conditions.

Personality of the person	Product personality	
	<i>Extrovert toaster</i>	<i>Conscientious toaster</i>
<i>Extrovert person</i>	High product-personality congruence	Low product-personality congruence
<i>Conscientious person</i>	Low product-personality congruence	High product-personality congruence

Table 2, Overview of experimental conditions

### *Procedure*

Respondents were sent a questionnaire including the scenario and a color picture of a toaster. The toaster was presented as owned by the person in the scenario (Susan). Respondents were instructed to read the scenario carefully and to form an impression of the person described. Subsequently, they were asked to take a look at the picture and to indicate the expected level of product attachment.

### *Measures*

Product attachment was measured with four items (Schiffstein and Pelgrim 2003): (1) “*This toaster has no special meaning to Susan (-)*”, (2) “*This toaster is very dear to Susan*”, (3) “*Susan has a bond with this toaster*”, and (4) “*Susan is very attached to this toaster*”, ( $\alpha = .88$ ). All items were measured using five-point Likert scales (1 = “disagree”, 5 = “agree”).

## **Results**

### *Manipulation check*

To check whether the four conditions were perceived as intended, we conducted a manipulation check. To minimize demand characteristics, this manipulation check was performed as a separate test. This separate test ( $n = 46$ ) had a 2 (personality of the person: extrovert vs. conscientious) x 2 (product personality: extrovert vs. conscientious) factorial design. One written description and pictures of the two toasters were presented to each respondent. Product-personality congruence was measured with four items using five-point scales: (1) “*This product is (not) like Susan*”, (2) “*Susan (does not) identify herself with the product*”, (3) “*This product matches (does not match) with Susan’s personality*”, and (4) “*This product is (in-) consistent with the way Susan sees herself*” ( $\alpha = .94$ ). The results showed a significant interaction effect between personality of the person and product



personality ( $F(1, 88) = 120.56, p < .001$ ). As shown in figure 1, the two conditions with a person and toaster having the same personality indeed resulted in the experience of high product-personality congruence ( $M_{EE} = 3.61$  and  $M_{CC} = 4.01$ ), whereas the conditions with a person and toaster having dissimilar personalities resulted in the experience of low product-personality congruence ( $M_{EC} = 2.23$  and  $M_{CE} = 2.01$ ).

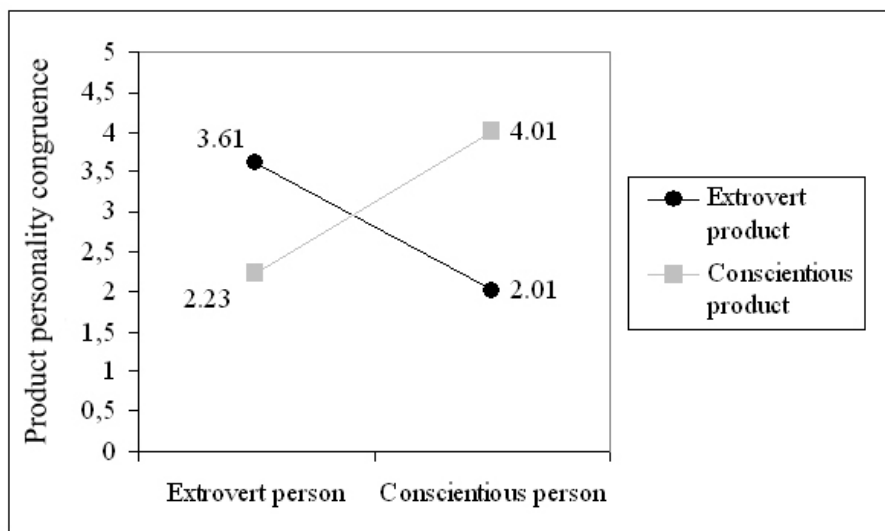


Figure 1, Manipulation check of product-personality congruence

### *Test of the hypothesis*

It was expected that high product-personality congruence would result in a higher degree of product attachment than low product-personality congruence. To test this hypothesis, a 2x2 ANOVA was conducted with product attachment as the dependent variable. The results showed a significant interaction effect between personality of the person and product personality ( $F(1, 129) = 9.34, p < .01$ ). Respondents who read about the extrovert person, and were presented the extrovert toaster, predicted a higher degree of product attachment as compared to those who were presented the conscientious toaster ( $M_{EE} = 2.63$  vs.  $M_{EC} = 2.24$ ). The respondents who read about the conscientious person and were presented the conscientious toaster also predicted a higher degree of product attachment as compared to those who were presented the extrovert toaster ( $M_{CC} = 2.95$  vs.  $M_{CE} = 2.25$ ). Figure 2 illustrates these findings.

These results confirm our hypothesis. High product-personality congruence results in a higher degree of product attachment than low product-personality congruence. No main effects were found ( $p > .20$ ).

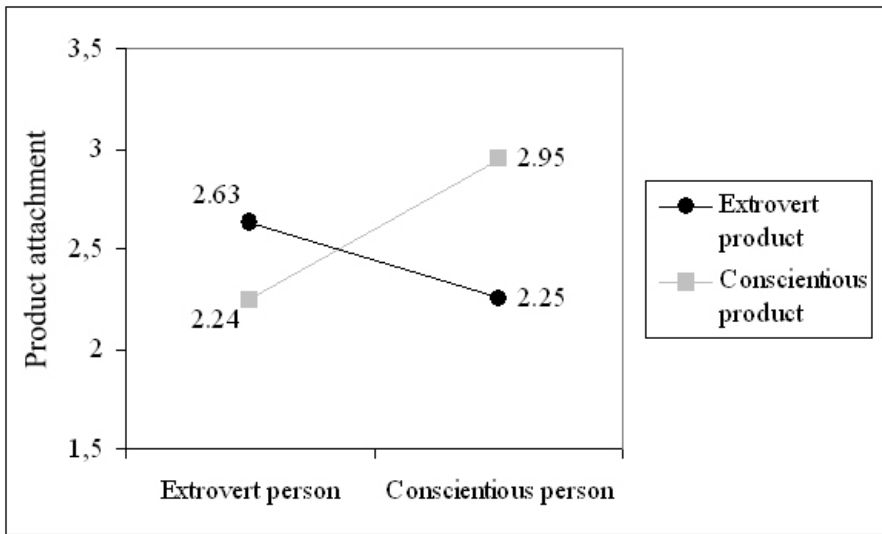


Figure 2, Effect of product-personality congruence on product attachment

### Discussion and conclusion

The purpose of this study was to extend the stream of research on product attachment by examining congruity between a person and a product as a determinant of product attachment in an experimental study. The choice for an experimental study is in line with Belk's (1992) suggestion to use quantitative research in addition to qualitative research to detect broad patterns of object attachment. Self-congruence was manipulated using product-personality congruence. Our findings reveal that people become more attached to products with a personality that is similar (high product-personality congruence), than to products with a personality that is dissimilar (low product-personality congruence) to their own personality. These findings correspond and extend the literature on self-congruency (Belk 1988; Malhotra 1988; Sirgy 1982). Products with personality associations similar to the personality of the owner allow him/her to show the world who (s)he is. Consequently, the product gains symbolic meaning to the owner, due to which the owner becomes more attached to the product.

An attractive strategy from the viewpoint of sustainability, is to increase the experienced product attachment. A stronger emotional bond between people and their products will extend the psychological lifespan of products. As a consequence, the disposal tendency will also decrease. Designers can contribute to a sustainable society by stimulating product attachment. A possible approach is designing a product with a pre-determined personality

that matches the personality characteristics shared by the members of their target group. However, in order to design products with a pre-determined personality, it is important to know which appearance characteristics consumers associate with a particular personality characteristic. For that reason, Govers (2004) developed a scale to assess the complete product personality of product variants. The product personality scale enables designers to determine the personality profile of different product variants which allows them to gain insight into the product characteristics associated with a personality characteristic.

### *Limitations and future research*

This study has several limitations. First, the results are solely based on the product category of toasters. A toaster is a utilitarian product, for which symbolic benefits are less important than for hedonic products (Hirschman and Holbrook 1982). Yet, we find an effect of product-personality congruence on product attachment for a utilitarian product like toasters. This implies that a similar, or even stronger, effect exists for more symbolic product categories. It will be interesting for future research to examine this.

A second limitation of this research is that for the personality of the person only two personality dimensions were examined, whereas a person's personality consists of a profile on five, very broad dimensions (McCrae and John 1992). We recognize the potential disadvantages of investigating a complex construct as personality in this simplified manner. More research on product-personality congruence is necessary to understand the personality dimensions used for products and how these relate to the dimensions of human personality.

The present study is restricted to appearance as a means for designers to incorporate personality in products. Whereas past research has shown that product form is indeed important for a product's personality (Govers *et al.* 2003; Jordan 2002), other aspects of the product design may be relevant as well. Sound, texture, smell, and the consumer-product interaction may also influence and enhance the desired product personality. It is important for a designer to achieve correspondence between all relevant product characteristics to create a product with a consistent personality (Janlert and Stolterman 1997; Norman 2004). For example, a car that looks tough, such as a Jeep, should also make a tough sound. Otherwise, the overall toughness of the car is significantly reduced during use. Moreover, creating a product personality through the consumer-product interaction enables designers to design a product that adjusts its personality based on changes in the consumer's mood. For example, a

product can react to the consumer in a cheerful and vivid manner when the consumer feels happy and in a gloomy and quiet manner when (s)he is sad. Future research should try to address the (combined) effect of other product characteristics on product-personality congruence and product attachment.

## **Appendix: Scenarios**

### *Extrovert person*

Susan is 27 years old and married to Stephan. She works as a pr-employee for a large media-concern. For her job, she always has to look representative, but actually she thinks a suit is far too decent. She prefers wearing clothes in which she catches the eye, especially when she goes out. She must not think of going through life as a dull person. When she enters a room, she will not remain unnoticed; she herself will take care of that with her enormous enthusiasm and liveliness. According to Stephan, the sun starts shining when she walks in, but some people can irritate themselves of her exaggerated presence. However, for her hobby her need for attention is very convenient: she is a singer in a band. She also spends a lot of time on her social life: she has many friends and likes to be in the company of people. "The more, the merrier" is one of her mottos. Her friends would describe her as a special young woman who is always in for everything and who does not mince her words. Her ideal holiday is an active one, but it should be in a crowded area; it is nothing like her to stay in a remote cabin in the woods.

### *Conscientious person*

Susan is 27 years old and married to Stephan. She works as a lawyer for a large law firm. For her job she always has to look representative and she loves that; a suit is one of favorite outfits. Her job is very demanding, but she is very ambitious, so she does it with pleasure. Her goal is to be at the top of the lawyer's world in five years, and she works hard to achieve that goal. In her spare time, she likes to cook and read a good book. She also likes to go on holiday; she then maps out the route in advance and makes lists of all the things she should take along. Her house always looks very neat and tidy; everything has its own place so she can quickly find things. Stephan always calls her a fusspot, because she is always very punctual and scrupulous. She personally thinks that it is not so bad, she just likes to dot the i's and cross the t's. Her friends would characterize her as a real go-getter, someone who they can rely on and who always keeps her promises. They often ask her for help with difficult decisions, because she is good in weighing the pros and cons against each other.

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