Package design influences on consumer-brand relationships and price perception
Tolboom, M.E.; Smit, E.G.; Bronner, A.E.

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PACKAGE DESIGN INFLUENCES ON CONSUMER-BRAND RELATIONSHIPS
AND PRICE PERCEPTION

Maarten Tolboom, University of Amsterdam, the Netherlands
Edith Smit, University of Amsterdam, the Netherlands
Fred Bronner, University of Amsterdam, the Netherlands

Corresponding author:
Maarten Tolboom
University of Amsterdam
Department of Communication
Kloveniersburgwal 48
1012 CX Amsterdam
The Netherlands
Email: Maarten.Tolboom@tns-nipo.com
Tel: +31 20 5225 977
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ABSTRACT

This article compares the effects of package design on the consumer-brand relationship and price perception. In particular it analyses the effects of package design on two stages of the consumer-brand relationship: the initiation and the maintenance stage. The results show interesting differences between two relationship stages with regard to brand relationship quality (BRQ) and price perception. The study gives directions for the development of strong consumer-brand relationships by means of package design.

INTRODUCTION

Fournier (1994) launched the idea that consumers and brands can relate to each other. This is referred to as ‘brand relationship’ or ‘consumer-brand relationship’. Many authors (e.g. Winer, 2001; Blackston, 2000; Bhattacharya and Sen, 2003; Bendapudi and Berry, 1997; Bendapudi and Leone, 2002; Reichheld, 1996; O’Malley and Tynan, 2001; Morgan and Hunt, 1994) consider the consumer-brand relationship concept an important research topic because high quality relationships between consumers and brands are related with reduced marketing costs, customer retention, brand equity and higher profit. Hence the aim of brand managers should be to establish consumer-brand relationships. The same fundamental forces that drive interpersonal relationships are also believed to drive consumer-brand relationships (Fournier 1994, 1998; Bendapudi and Leone, 2002). These forces or fundamental characteristics are interdependence, temporality and perceived commitment (Hinde, 1997; De Wulf, Odekerken-Schröder and Iacobucci, 2001; Hendrick and Hendrick, 2000). Relationship development is described in the following sequential stages (Levinger, 1980; Dwyer, Schurr and Oh, 1987; Peelen, 1990): initiation, growth, maintenance, deterioration, and dissolution. Rusbult (1983), Rusbult and Buunk (1993), and Rusbult et al. (1994) conceptualize relationship commitment as the central relationship quality variable and consider it as an indicator of the strength of the bond between two parties in the relationship. Sternberg (1997) states that love or relationship quality in an interpersonal relationship consists of three components: intimacy, passion and commitment. In a similar way Fournier (1994, 1998) conceptualizes consumer-brand relationship quality (BRQ) as a construct with seven facets: (1) intimacy, (2) personal commitment, (3) passionate attachment, (4) love, (5) self-concept connection, (6) nostalgic connection and (7) partner quality (see figure 1). Tools to influence the BRQ are communication instruments such as TV commercials and free publicity (Tolboom, Smit and Bronner, 2008). Also a strong brand personality has a proven positive effect on the BRQ because consumers relate more easily to brands with outspoken personalities (Smit, Bronner and Tolboom, 2007). However, little research has been conducted about the different effects of package design and the development of consumer-brand relationships and BRQ with regard to the price perception of a product. The aim of the present study is to provide insight in these effects. Before going into the details of the study the literature is reviewed in the next paragraph to give a perspective on this topic.

<Figure 1 here.>
THEORETICAL BACKGROUND

The Impact of Package Design on BRQ and Price Perception

There are several marketing communication tools that can be used to communicate a message to consumers to influence the consumer-brand relationship (Peelen, 1989; Dwyer et al., 1987). One of them is package design (Peeters, 2008). The earlier mentioned fundamental aspect of interdependence of interpersonal relationships develops by means of communication (Hinde, 1997). For starting interactions between two persons the exchange of information is a necessary condition (Aron, Aron, Tudor and Nelson, 1991). The content of the message is a key element with regard to the impact on BRQ (Nicholson et al, 2001). Positive or negative content or communication can influence the relationship in a positive or negative way (Altman and Taylor, 1973). With regard to the development of interpersonal relationships, the perceived attractiveness, or the appearance of the other party is an important element in the development of the relationship (Hinde, 1997). For brands, the attractiveness is determined by the brand design. A package communicates verbal and non verbal messages by means of logo, color, typography and photography which influence the price and quality perceptions, brand personality, market position, and organizational identity (Peeters, 2008). Brand design is expected to determine the attractiveness in the relationship between consumers and brands and can be an important element in the development of that relationship. This leads to the following hypotheses:

- (H1a) A package design which is positively evaluated by consumers has in general a positive impact on the BRQ.
- (H1b) A higher BRQ level increases the price consumers are willing to pay for a product.

The Impact of Package Design on BRQ in Different Relationship Stages

The level of involvement influences the way in which consumers process the information in that message (Eagly and Chaiken, 1993; Petty and Cacioppo, 1986; Rossiter, Percy and Donovan, 1991). Involvement refers to the bond between person and object and will be stronger when the interactions between person and object are more frequent (Zaichowsky, 1986). Oliver (1999) states that consumers perceive brand information different depending on the level of loyalty. Involvement and loyalty resemble the BRQ concept. The former suggest that consumers in the maintenance stage of the relationship (brand users) perceive brand information different than consumers in the initiation stage (non users) because these are consumers where the relationship is already established and they have higher levels of BRQ than consumers in the initiation stage of the relationship (non users). A similar phenomenon occurs in interpersonal relationships. The impact of the communication on interpersonal relationships is different in the initiation stage compared to the maintenance stage (Altman and Taylor, 1973; Buunk and Van Yperen, 1991). Showing that you understand the other party by sending the right messages stimulates the development of the relationship (Barber, 1983; Barnes, 1993) and the attractiveness of the other party is especially important in the initiation stage of the relationship because relationship has to develop into a more mature phase (Hinde, 1997). If the communication message contains too much information or the attractiveness of the relationship is negative in the initiation stage, the quality of the relationship, and as a result the development of the relationship could be harmed (Barber, 1983; Baumeister and Leary, 1995). The former theories suggest that the exchange of information is especially important in the early stages of the relationship and is evaluated more critical than in later stages where the relationship is already established. Therefore the following is hypothesized:

- (H2) Package design has more impact on BRQ in the initiation stage of the relationship than in the maintenance stage of the relationship.
METHOD

Research Design
The study was performed with two different target groups (brand users and non brand users) in different relationship stages. The relationship stages are made operational as follows. Brand users are in the maintenance stage of the relationship and non users in the initiation stage (e.g. Bendapudi and Berry, 1997; Dowling 2002; Dwyer et al. 1987). The independent variable consisted of a picture of a package design of a liquid soap brand which was evaluated on several attributes by both target groups. The study utilizes interviews with brand users (n=104) in the maintenance stage and non-users (n=103) in the initiation stage of the consumer brand relationship and all participants were invited to fill out a web based survey. The target group non users didn’t contain former brand users because these were excluded from the survey by means of a control question.

Data Collection
Users and non users were selected from the access panel of the market research agency TNS NIPO, which consists of 200,000 potential Dutch respondents. The participants on the access panel are screened using a variety of research instruments. They are selected for studies on a rotating basis which minimizes participant fatigue and are rewarded for their participation (Bronner, Tchaoussoglou and Ross, 2003). Respondents in both samples share the same consumer profile and are identical with regard to the demographics age, education, social class, gender and income.

Dependent Variables
The dependent variables are the evaluation of the package design, price perception and brand relationship quality (BRQ). The evaluation of the package design is measured with items based on the most common elements of design which are symbol or logo; color; shape; typography; and image or photography (Dowling, 1994; Underwood, 2003; Wheeler, 2003). Because of the specific characteristics of the package design of the brand in the current study, these elements were partly redesigned for the purpose of this study (see table 2, appendix). Shape is measured with the attribute ‘overall evaluation of the package design’ (single item). Color is measured with the attribute ‘attractiveness of the color’ (single item). Logo and typography are measured with the attribute ‘attractiveness of the name’ (single item) because the brand name combined with the typography forms the logo for the brand used in the current study. Image or photography is measured with the attribute ‘modernity of the package’ because the picture on the package can determine if consumers evaluate a package as modern or not (single item). Furthermore, the evaluation of the package design is measured with items on the following attributes which are brand fit (single item, see table 2 in the appendix) and in-home fit (3 items, see table 3 in the appendix). These attributes are added because interpersonal theory states that the outer appearance of a partner is also evaluated in terms of ‘fits with me, fits with him/her’ (Hendrick and Hendrick, 2000). In case of brands, the outer appearance is the package design. Price is measured with a single item on a 19 point scale and measures the willingness to pay an amount between €0.89 and €2.69 (see table 4, appendix). BRQ measurement is based on Fournier (1994). In a previous study this scale was translated, combined with the four-item trust scale of Chaudhuri and Holbrook (2001) and used in an online study with ten different brands (Tolboom, 2004; Smit, Tolboom and Franzen, 2004). The resulting 8 item scale was used in the current study (see table 1 in the appendix).

RESULTS

The Impact of Package Design on the Consumer-Brand Relationship and Price Perception
If the several package design attributes are evaluated positive, a positive influence is expected on BRQ and the price consumers are willing to pay for the product in both the initiation stage and the maintenance stage of the consumer-brand relationship. To be more specific, the higher the package design evaluation scores, the higher the BRQ. The results show (see table 5, appendix) that this is true for the total sample for several aspects of the package design, i.e. overall evaluation, attractiveness of the name and in-home fit. In the initiation stage (i.e. non users), the overall evaluation and the in-home fit of the package design had a significant influence. In the maintenance stage (i.e. users), the overall evaluation, the attractiveness of the color, the attractiveness of the name and the in-home fit of the package design had a significant influence on BRQ. As remarked before, a positive influence is also expected between BRQ and the price consumers are willing to pay for the product because high BRQ levels are believed to increase the willingness to pay higher prices for the product, consumers become less price sensitive. The results show (see table 7, appendix) that this is true for respondents high and low on BRQ in both the initiation stage and the maintenance stage of the consumer brand relationship.

**The Impact of Package Design on BRQ in Different Relationship Stages**

Package design is expected to have more impact on BRQ in the initiation stage of the relationship compared to the maintenance stage of the relationship. The results disconfirm this expectation (see table 5, appendix). The overall evaluation, the attractiveness of the color, the attractiveness of the name and the in-home fit of the package design have more influence in the maintenance stage of the relationship than in the initiation stage. Package design has the most influence in the maintenance stage, but the difference is relative small for the overall evaluation. The impact of in-home fit on BRQ is different in the relationship stages (see table 6, appendix). In-home fit bathroom and toilet correlate significantly with BRQ in the maintenance stage. In-home fit kitchen, bathroom and toilet correlate significantly with BRQ in the initiation stage of the relationship.

**In sum**

In sum, the results confirm the first hypothesis, a package design which is positively evaluated by consumers has in general a positive impact on the consumer-brand relationship with regard to BRQ and a higher BRQ level increases the price consumers are willing to pay for a product. The second hypothesis is disconfirmed; package design doesn’t have more impact on BRQ in the initiation stage of the relationship compared to the maintenance stage of the relationship.

**DISCUSSION**

**Package design affects consumer-brand relationship development**

First of all, the results suggest that package design can stimulate the development of the consumer-brand relationship. Furthermore, the results also suggest that package design has an important indirect influence on price sensitivities of consumers via BRQ which means that package design is an important tool to manage the consumer-brand relationship and the return of investment. Package design as such is an important element in marketing communication strategies and can be used to positively influence the BRQ levels of the consumer-brand relationship. Package design can be designed in such a way that it contributes to a stronger brand personality (Peeters, 2008); than the influence on BRQ will be even stronger because consumers relate more easily to brands with outspoken personalities (Smit, Bronner and Tolboom, 2007).

**The influence of package design differs between the consumer-brand relationship stages**

In some cases consumers who start to like the brand or evaluate the performance of a product positively can be considered as a success. Because interpersonal relationship theory (Barber,
1983; Barnes, 1993) teaches that every close, intimate relationship starts with simple things such as a good first impression of the other party before the next interaction is considered. The results show package design doesn’t have more impact in the initiation stage compared to the maintenance stage. However, it does have impact in both stages only it is stronger in the maintenance stage of the consumer-brand relationship. It suggests that package design is important in both stages of the relationship and it doesn’t rule out the possibility that the first good impression in the initiation stage on potential users of the brand is very important. The relative small differences between the two stages with regard to the overall evaluation suggest that an attractive package design is important in every stage of the relationship. The results also suggest that users of the brand in the maintenance stage of the relationship evaluate package design in a different way compared to the initiation stage. In home fit bathroom and toilet correlate significantly with BRQ for brand users in the maintenance stage and in home fit kitchen, bathroom and toilet correlate significantly with BRQ for potential users in the initiation stage. This result suggest that it is possible to design packages in such a way that it attracts potential clients in the initiation stage of the relationship or that it attracts brand users in the maintenance stage of the relationship depending on the objective of the brand manufacturer. It also suggests that package design can be improved and can be fit to the needs of consumers in the different relationship stages if these needs are known to the manufacturer because these needs can differ. If it does, it would be wise to take these differences into account when designing packages.

Spiral process

A difficulty with the current study is the question of causality. Is the BRQ positively influenced by the package design or is the package design evaluated in a positive way because of higher BRQ levels? A relationship is a cumulative spiral process and it develops, i.e. the relationship quality improves and the bond between two parties becomes stronger and stronger over time (Hinde, 1997; Hendrick & Hendrick 2000) which makes it plausible that positive package evaluations affect BRQ positively and a higher BRQ level leads to a more favorable evaluation of the package design which leads to a higher BRQ level and so on which makes it difficult to answer the question of causality. However, interpersonal research also showed that the perceived attractiveness of the other party is a crucial factor to start the first interaction of the relationship. This defines the beginning of the initiation stage and from there the relationship develops by means of repeated interactions into a more mature phase, with every interaction the relationship quality level rises (Hinde, 1997). From this perspective, the brand manager should always strive to design a package as attractive as possible to improve the chance that another consumer-brand relationship is started and a potential user becomes a dedicated brand user.

Limitations

One of the limitations of the study is the selection of only package design as a marketing strategy to influence the consumer brand relationship. Other marketing variables which can carry brand related content such as print, internet can also affect the consumer-brand relationship. The second limitation is the examination of only one brand in one category, liquid hand soap. The impact of package design can differ between different brands in other categories (e.g. food brands, services brands, consumer durable brands like cars et cetera). The third limitation is the fact that the effects of the experimental condition only in the initiation and maintenance stage of the relationship were examined. The growth, deterioration, and dissolution phase were not examined. Further research is needed to vary more on different communication or other marketing strategies with respect to the influence on the several stages in the development of the consumer-brand relationship.
REFERENCES


FIGURE 1: FOURNIER’S BRQ MODEL

(Source: Fournier 1994, 1998)
### TABLE 1: BRQ MEASUREMENT*

<table>
<thead>
<tr>
<th>Facets</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passionate attachment</td>
<td>Something would definitely miss in my life when X would not exist anymore</td>
</tr>
<tr>
<td>Intimacy</td>
<td>It feels like I know X for a long time</td>
</tr>
<tr>
<td>Self connection</td>
<td>X and I have lots in common</td>
</tr>
<tr>
<td>Nostalgic connection</td>
<td>X will always reminds me of a certain period in my life</td>
</tr>
<tr>
<td>Love</td>
<td>If it is about a liquid hand soap products, X is my most favorite brand</td>
</tr>
<tr>
<td>Partner quality</td>
<td>X has always been good to me</td>
</tr>
<tr>
<td>Personal commitment</td>
<td>X can always count on me</td>
</tr>
<tr>
<td>Trust</td>
<td>I trust X</td>
</tr>
</tbody>
</table>

*Cronbach’s alpha=.93 (M=3.1;SD=1.28)

### TABLE 2: PACKAGE DESIGN MEASUREMENT

<table>
<thead>
<tr>
<th>Items</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall evaluation</td>
<td>Please look good at this package. If you take everything into account, which rating between 1 and 10 would you give to this package?</td>
</tr>
<tr>
<td>Attractiveness color</td>
<td>To what extent do you think that the color of this package is attractive?</td>
</tr>
<tr>
<td>Attractiveness name</td>
<td>To what extent do you think that the name of this package is attractive?</td>
</tr>
<tr>
<td>Modernity package</td>
<td>To what extent do you think that this package is modern?</td>
</tr>
<tr>
<td>Brand fit package</td>
<td>To what extent do you think that this package fits &lt;brand x&gt;?</td>
</tr>
</tbody>
</table>

### TABLE 3: IN HOME FIT MEASUREMENT

<table>
<thead>
<tr>
<th>Scale*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In home fit</td>
<td>To what extent do you think that this package fits in your kitchen?</td>
</tr>
<tr>
<td></td>
<td>To what extent do you think that this package fits in your bathroom?</td>
</tr>
<tr>
<td></td>
<td>To what extent do you think that this package fits in your toilet?</td>
</tr>
</tbody>
</table>

*Cronbach’s alpha=.85 (M=2.77;SD=0.96)

### TABLE 4: PRICE SENSITIVITY MEASUREMENT

<table>
<thead>
<tr>
<th>Single item</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price sensitivity</td>
<td>Below you find some prices for &lt;brand x&gt;. Please indicate for which price you think that this product in this package is expensive?</td>
</tr>
</tbody>
</table>
### TABLE 5: EXPLAINING BRQ BY PACKAGE DESIGN ATTRIBUTES

<table>
<thead>
<tr>
<th>Dependent variables:</th>
<th>BRQ total</th>
<th>BRQ maintenance stage</th>
<th>BRQ initiation stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall evaluation</td>
<td>.19*</td>
<td>.24º</td>
<td>.23º</td>
</tr>
<tr>
<td>Attractiveness color</td>
<td>.08</td>
<td>.22º</td>
<td>.01</td>
</tr>
<tr>
<td>Attractiveness name</td>
<td>.21**</td>
<td>.23º</td>
<td>.11</td>
</tr>
<tr>
<td>Modernity package</td>
<td>.01</td>
<td>.06</td>
<td>.17</td>
</tr>
<tr>
<td>Brand fit</td>
<td>.02</td>
<td>.13</td>
<td>.12</td>
</tr>
<tr>
<td>In home fit</td>
<td>.23**</td>
<td>.28*</td>
<td>.26*</td>
</tr>
</tbody>
</table>

ANOVA  
F(6,185)=8.20**  
F(6,94)=5.10**  
F(6,84)=3.52**

Regression analysis, method Enter, standardized Beta coefficients are reported, º p < .10, * p < .05, ** p < .01.

### TABLE 6: CORRELATION IN-HOME FIT AND BRQ

<table>
<thead>
<tr>
<th>In-home fit</th>
<th>BRQ total</th>
<th>BRQ maintenance stage</th>
<th>BRQ initiation stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-home fit kitchen</td>
<td>.28**</td>
<td>.19</td>
<td>.32**</td>
</tr>
<tr>
<td>In-home fit bathroom</td>
<td>.35**</td>
<td>.39**</td>
<td>.31**</td>
</tr>
<tr>
<td>In-home fit toilet</td>
<td>.40**</td>
<td>.39**</td>
<td>.39**</td>
</tr>
</tbody>
</table>

Pearson correlation coefficients; **Correlation is significant at the .01 level.
# TABLE 7: PRICE SENSITIVITY DIFFERENCES *

<table>
<thead>
<tr>
<th></th>
<th>Low level BRQ</th>
<th>High level BRQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance stage</td>
<td>11.22</td>
<td>12.79</td>
</tr>
<tr>
<td>Initiation stage</td>
<td>11.27</td>
<td>12.84</td>
</tr>
</tbody>
</table>

* Mean scores on 19-point scale in € (1= €0.89, 19= €2.69); Significant difference (**p<.001) in the same row between price sensitivity based on the Paired Samples Test; Maintenance stage t(99)=30.186**; Initiation stage t(100)= 30.571**.