

# CONSUMER BRAND RELATIONSHIPS: AN INVESTIGATION OF TWO ALTERNATIVE MODELS

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*Published in Journal of the Academy of Marketing Science (2008), Vol. 36(4).*  
DOI 10.1007/s11747-008-0115-z

## **Abstract**

Many studies have proposed the use of the relationship metaphor to enhance the understanding of the relationship between consumers and brands. However, few studies have empirically tested consumer-brand relationship models. In this paper, the authors argue that the success of developing empirical models of consumer-brand relationships depends on the adequacy of the metaphoric transfer. The authors compare two models of consumer-brand relationships—the brand relationship quality (BRQ) model and the relationship investment (RI) model on the basis of empirical fit and model interpretation. They modify both models to better accommodate less involving relationships and test them in two studies. The findings suggest that the modified RI model offers a straightforward interpretation of consumer–brand relationships that vary in intensity. The results from the BRQ model are less clear, though further refinements of the model demonstrates the increased potential of the BRQ model compared with traditional attitude models to explain relationships between consumers and brands.

**Keywords:** Consumer-brand relationships, metaphoric transfer, model comparison, habit persistence

The metaphor of human relationships has long inspired research on marketing relationships and, more recently, research on consumer-brand relationships (Blackston 1992; Fournier 1998). Metaphors create meaning through the understanding of one phenomenon by means of another in a way that encourages discovery of what is common (Morgan 1983); thus, the consumer–brand relationship in itself suggests that there are relationship qualities between consumers and brands. The transfer of the human relationship metaphor to a consumer-brand setting represents a one-sided metaphor transfer in that the new perspective represents an extension of the source category (i.e., marriage) to a new domain (consumer-brand relationship) (Faconnier and Turner 1998). The human relationship metaphor of marriage functions as the source input and provides structure and content for the understanding of consumer-brand relationships. The mapping of these two domains may link prototypical elements such as partners, commitment, interdependency, love, and common dwellings. To the extent that this mapping provides new and useful meanings, the metaphoric transfer should prove successful and thus should be considered a fertile tool in theory development (Hunt and Menon 1995) and for generating new ideas (Seijts and Latham 2003).

The relationship metaphor is proposed to enhance the understanding of brand loyalty and facilitates in-depth knowledge about consumers' needs, thus assisting firms in developing better products and improving marketing activities (Monga 2002). Furthermore, a brand relationship perspective may enhance the understanding of the roles of brands in consumers' lives. For example, brands may play a significant role in people's lives by serving as an important vehicle to communicate and share with others through self-presentation (Aaker 1999; Swaminathan, Page, and Gürhan-Canlie 2007) and participation in brand communities (O'Guinn and Muniz 2001). Furthermore, brand love modifies the influence of attitude strength on loyalty (Batra,

Ahuvia, and Bagozzi 2008). The richness of a brand relationship perspective provides researchers with increased opportunities to conceptualize and investigate ties between consumers and brands.

Although several studies have used a quantitative approach (e.g., Aaker, Fournier, and Brasel 2004; Kaltcheva and Weitz 1999; Monga 2002; Park and Kim 2001), the dominant approach to the exploration of consumer–brand relationships has been through descriptive and interpretative depth interviews (Fournier 1998; Ji 2002; Kates 2000; Olson 1999). This research focus varies from that of transferring specific dimensions of relationships, such as brand love (Carroll and Ahuvia 2006; Pawle and Cooper 2006) and intimacy (Stern 1997), to the consumer-brand setting to that of developing comprehensive models of consumer-brand relationships (Fournier 1998; Stokburger-Sauer et al. 2007).

The purpose of this study is to assess the metaphoric transfer of the human relationship metaphor to the consumer-brand context and the implications of this transfer with regard to empirical testing. In particular, we examine and compare two consumer-brand relationship models- namely, the brand relationship quality (BRQ) model (Fournier 1998) and the relationship investment (RI) model (Rusbult 1980a). The reasons for choosing these two specific models are as follows: First, the two models share a similar background in that they are both based on theories on close relationships found in social psychology. Therefore, the models are comparable in the sense that they adopt concepts from the same source domain.

Second, the BRQ and RI models are probably the most frequently applied relationship models in empirical brand management research. The BRQ-model has been used for investigating brand extension success (Park and Kim 2001), online brand relationships (Thorbjørnsen et al. 2002), and gender differences in brand relationships (Monga 2002); it has also been applied and tested in the contexts of consumer brands (Smit, Bronner, and Tolboom 2007), restaurant brands (Ekinci, Yoon, and Oppewal 2004), and coffee chain stores (Chang and

Chieng 2006). Similarly, the RI model has been used for investigating consumer brands (Geyer, Dotson, and King 1991; Sung and Campbell 2007) and online settings, for predicting brand Web site usage (Li, Brown, and Wetherbe 2006) and for explaining effects of mobile services (Nysveen et al. 2005). Moreover, Sung and Campbell (2007) explicitly tested the applicability of using the RI model in brand settings through both survey based, and experimental research approaches. They argued that the study results provide strong support for the RI model in predicting consumer-brand relationship ties.

Third, although the degree of specification varies between the models, both models are comprehensive, intending to provide an overall structure of consumer-brand relationships. As such, they offer and integrate several different constructs that are proposed to assess the quality of consumer-brand relationships.

Fourth, there are several noticeable differences between the BRQ and the RI models, making them viable candidates for comparison. The BRQ model was developed specifically to assess the strength of consumer-brand ties (Fournier 1998), whereas the RI model was originally developed to understand satisfaction and commitment in romantic relationships (Rusbult 1980a) and friendships (Rusbult 1980b). Although the models originated in theories of interpersonal relationships, they vary both with regard to model structure and how the relationship metaphor is transferred to a consumer-brand setting. As we argue subsequently, this could influence both the conceptual and the empirical assessment of these models.

Fifth, although both models have been subjected to empirical tests, several concerns with regard to the empirical assessments of consumer-brand relationship models might have prevented these models from living up to their full potential. Explanations for the limited success of consumer-brand relationship models are as follows<sup>1</sup>:

1. Typically, consumer-brand relationship models do not provide clear guidelines for empirical testing or in terms of model specification. For example, conceptual models include several relationships among constructs, but the direction of the various paths is often not specified (see Fournier 1998).

2. Consumer-brand relationship models are typically derived from social psychological theories advanced to explain close relationships, such as those between married couples. These models may not be directly applicable to less involving relationships (Tynan 1997). Although consumer-brand relationships can be important and nontrivial, in most cases, they will not qualify as the most important part of people's lives. Thus, consumer-brand relationships models should also preferably address less involving relationships, and the empirical studies must be designed accordingly.

3. The transfer of interpersonal relationship concepts to marketing might be problematic if the content and meaning of these concepts in the source domain deviate too much from the target context (Bengtsson 2003). In turn, this could result in constructs that are difficult to interpret in a consumer-brand setting and/or questionnaire items that are difficult to interpret and thus are ambiguous.

These three points reflect problems associated with metaphoric transfer (Hunt and Menon 1995), and the use of the human relationship metaphor to understand consumer-brand relationships is not undisputed (Bengtsson 2003; O'Malley and Tynan 1999). O'Malley and Tynan (1999) argued that the use of the metaphor of "marriage" as the source domain to understand consumer-brand relationships narrows rather than broadens the conceptualization of exchange. Furthermore, several of the concepts borrowed from interpersonal relationship theory do not appear to be directly transferable to the consumer-brand context (Bengtsson 2003).

Although both the BRQ and RI models borrow from the interpersonal psychology literature, their concepts and structure from the source domain vary. In the subsequent section, we argue that these differences likely influence the success of the metaphoric transfer.

## **THE BRQ MODEL**

The BRQ model contains several relationship dimensions that influence relationship stability and durability (Fournier 1998). The BRQ construct is a consumer-based measure of the strength and depth of consumer-brand relationships and it is conceptualized to contain six different sub-dimensions, or facets: love/passion, self-concept connection, commitment, interdependence, intimacy, and brand partner quality. Figure 1 presents the structure of the BRQ model.

[Figure 1 about here]

The relationship dimensions were identified through several depth interviews, but their theoretical origin can be traced to various interpersonal theories. The origin of the behavioral interdependency dimension can be found in interdependence theory (Kelley and Thibaut 1978), and the self-concept connection construct can be found in the self-expansion model (Berscheid and Reis 1998). Love/passion is a central concept in theories of attraction (Berscheid and Reis 1998), and personal commitment is the central construct of the investment model (Rusbult 1980a). Thus, the BRQ construct appears to be rich in integrating several theoretical approaches of interpersonal relationships. However, given this diversity of theoretical approaches, it might be difficult to establish a coherent structure between the dimensions in the BRQ model. Hunt and Menon (1995) argued that for a metaphoric transfer to be successful, the connections or relationships among important concepts must be retained. In the case of the BRQ model, a problematic issue is that the theories used to develop the relationship dimensions are not

necessarily integrated in the source domain. It is difficult to establish a coherent structure among the BRQ dimensions, which in turn will lead to problems with empirical testing of the model. Thus, empirical testing of the BRQ model requires solutions to several unresolved issues.

A first step is to establish the relationship between the relationship dimensions and the BRQ construct. In her presentation of the BRQ model, Fournier (1998) emphasized that the model was preliminary and left undefined particular linkages between BRQ facets and consumer or brand actions and between BRQ facets and various outcome variables. In addition Fournier (1994) makes several conflicting statements regarding the relationship between BRQ and the BRQ dimensions. We believe that the confusion regarding the internal structure of the BRQ model might be attributed to its origination from various theoretical sources, and thus an internal structure is not specified. Consequently, several models corresponding to different internal structures can be inferred.

Fournier's (1998) definition of BRQ as a higher-order construct that accounts for the relationship facets implying that BRQ influences the levels of the relationship dimensions suggests that the sub-dimensions function as indicators of overall relationship quality. Empirically, the model can be specified as a second-order factor model, suggesting a reflective measurement model. From a measurement perspective, this implies that the relationship dimensions should correlate because they stem from a common source. From a managerial perspective, this implies that marketers should attempt to influence BRQ directly, which subsequently should lead to a change in the relationship dimensions. Consequently, a higher BRQ should be followed by higher levels for all relationship dimensions. The implications of this model are less actionable because, the model is not specific with respect to what the manager should do to influence BRQ directly. As Fournier (1998) states, the BRQ model evolves from meaningful brand and consumer actions, but it leaves undefined particular linkages between such

actions and BRQ. Several empirical studies implicitly use a reflective approach in specifying the BRQ model. However, instead of accommodating the hierarchical second-order factor structure, BRQ is conceptualized as one first-order factor that includes items from the various BRQ dimensions (Chang and Chieng 2006), two first-order factors (Smit et al. 2007), or a reduced set containing fewer BRQ dimensions (Ekinci et al. 2004; Kressmann et al. 2006; Park, Kim, and Kim 2002) than those that Fournier (1998) suggested.

A second conceptualization would be to suggest that the sub-dimensions influence BRQ. Fournier (1994) also allowed for a multi-component view in which quality could emanate from different sources and, thus, that certain relationships types could be high on one facet but low on another. An increased level for one or more of the sub-dimensions should result in an increased BRQ level, suggesting that BRQ is a consequence of the sub-dimensions. Thus, a focus on improvement of, for instance, the quality dimension should result in higher BRQ, all else being equal. This model appears more appealing from a management perspective in that it offers more guidelines on how BRQ can be influenced. However, it is problematic in that the same level of BRQ might stem from different configurations of relationship dimensions. For example, two identical BRQ scores may reflect relationships heavily influenced by either brand-partner quality or commitment. It is questionable whether these two configurations would have similar consequences. It seems likely that the effect on the dependent variables would vary depending on the configuration of the BRQ score, implying that identical BRQ scores may have different effects on relationship consequences. Empirically, this model implies a formative account for BRQ (Park et al. 2002), and thus there is no requirement that the relationship dimensions should be correlated. Still, BRQ mediates the effects on the outcome variables, but the model becomes more specific in terms of how to influence BRQ.



To accommodate the need to assess the effects of different configurations, a third alternative would be to treat the BRQ dimensions as unique constructs not mediated by a higher-order construct and to investigate their contributions directly. Indeed, Fournier's (1998) own classification of the different ties between consumers and brands suggests that different configurations result in different consequences. This implies that BRQ takes the role of a "tool-box," and the BRQ dimensions are used as a set (Edwards 2001). For example, a relationship characterized by high levels of partner quality and behavioral interdependence and low levels of the other relationship dimensions would probably result in a lower repurchase likelihood and tolerance for deviations than a relationship characterized by high levels of commitment but lower partner quality, even though the overall BRQ value based on a formative specification might be identical. The profile model can handle this in that the individual contributions of the BRQ dimensions can be assessed directly. As previously mentioned, this conceptualization would be in line with Fournier's (1998) typology of consumer-brand relationships. Empirically, this suggests a "regression model" in that all the relationship dimensions have a direct influence on the endogenous constructs.

The BRQ model does not specify any structural paths between the relationship dimensions other than their common association with BRQ. The lack of internal relationships among the different dimensions is contrary to what is proposed in the literature on both business to business relationships and interpersonal relationships. For example, previous studies have found a relationship between intimacy and commitment and between brand-partner quality and commitment (Garbarino and Johnson 1999; Morgan and Hunt 1994; Rusbult 1980a). Aaker et al. (2004) proposed that partner-quality mediates the effects on commitment, intimacy, and self-concept connection. A better understanding of how the relationship dimensions are related might improve marketing managers' ability to influence different aspects of consumer-brand

relationships and, perhaps, to contribute to a better understanding of how relationships are formed and developed.

A successful metaphoric transfer also requires that important concepts are translated and transferred into the adopting discipline (Hunt and Menon 1995). As previously mentioned, the relevance of several of the BRQ dimensions has been addressed in the marketing literature. For example, the roles of love/passion and interdependence have been questioned in a consumer-brand setting (Bengtsson 2003). Consequently, problems with regard to measurement of these dimensions might be expected if the concepts are not well understood in the new setting.

## **THE RI MODEL**

The RI model is an extension of the interdependency model that Kelley and Thibaut (1978) proposed. The interdependency model outlines two sources of dependence: satisfaction with the present relationship partner and the quality of alternatives. Satisfaction level refers to the sum of positive versus negative affect toward the relationship partner, and the quality of alternative partners refers to the subjective evaluation of the quality of a partner versus the quality of the best alternative partner. The subjective evaluation of the quality of alternatives is based on a “comparison level for alternatives” of what a person could be expected to obtain and receive in some other, alternative relationship (Brehm 1985). In the interdependency model, satisfaction is proposed to have a positive influence on relationship stability, and quality of alternatives is proposed to have a negative influence on relationship stability. The RI model extends the interdependency model by including an additional source of dependence, relationship investment, and commitment as a mediating construct. Figure 1 depicts the model. In addition to being one of the most frequently applied and cited relationship models in interpersonal relationship research, the RI model has been applied in contexts such as college student commitment (Hatcher, et al.

1992), job commitment (Farrell and Rusbult 1981), buyer-seller relationships (Moon and Bonney 2007) and consumer-brand relationships (Geyer et al. 1991; Nysveen et al. 2005; Sung and Campbell 2007).

The model contains four basic constructs that contribute to the prediction of relationship stability: commitment and three bases of dependence (satisfaction, quality of alternatives and investment size). Commitment is the intent to persist in a relationship, including long-term orientation toward the relationship, and feelings of psychological attachment. Satisfaction and the quality of alternative partners are similar to their counterparts in the interdependency model. The third source of dependence is the investment of resources in the relationship (Rusbult 1980a). Relationship investment resembles specific assets in the channels literature (Heide and Stump 1995) and refers to the magnitude and importance of the resources that are attached to a relationship, resources that would be lost if the relationship were to end. Some investments are direct, such as time and money, whereas other investments might be indirect and come into existence when originally extraneous resources such as mutual friends, personal identity, or shared material possessions and intellectual life, become attached to the relationship (Rusbult, Martz, and Agnew 1998). Consumers invest time and personal efforts in learning and using new product features and software, and they invest money in buying complementary products and services. The value of these investments is lost if the relationship ends, thus increasing consumer sunk cost and influencing brand commitment. For example, consumer acquisitions of an Apple printer and Apple T-shirt and a subscription to MacWorld magazine can be considered relationship investments (Sung and Campbell 2007). Furthermore, past positive statements about Apple can be considered an investment that increases brand commitment through processes of identity reinforcement and self-concept connection. Thus, both self-concept connections and

behavioral interdependence in the BRQ model can be considered forms of relationship investment.

According to the RI model, a person's commitment to a relationship should increase to the extent that he or she is satisfied with the relationship, has no good alternatives, and has a lot invested in the relationship. Commitment is the mediating variable between the three dependence sources and other relationship outcomes, such as probability of persistence (Rusbult et al. 1998). This structural conceptualization is in line with existing models and theorizing in marketing, in which there is considerable agreement that commitment is best regarded as a mediating construct that is derived from factors such as satisfaction and trust and that directly influences consumer behavior (Dwyer, Schurr, and Oh 1987; Morgan and Hunt 1994; Sung and Campbell 2007).

In terms of metaphoric transfer, the RI model has two particular advantages over the BRQ model. First, it is based on the same structure as specified in the source domain, and second, most of the concepts are well established in the marketing field. The latter point in particular might limit the value of the RI model as a new, fresh perspective on how consumers relate to brands.

## **CLOSE VERSUS WEAK RELATIONSHIPS**

As previously discussed, the relationship theories we present might be well suited to describe and predict close ties between relationship partners. However, in most situations, consumer-brand relationships would not be of such a close nature. In the subsequent sections, we discuss refinements of the relationship models to increase their ability also to explain less involving relationships. The first refinement pertains to the structure of the models, and the second involves the addition of habit as an alternative explanation for relationship outcomes in the relationship models.

## **Structure of Relationship Models**

A problematic issue associated with both the reflective and the formative account of the BRQ model and the RI model is the reliance on complete mediation to explain the effects on the endogenous constructs.<sup>2</sup> This problem pertains to both difficulties in achieving acceptable fit in empirical tests and the limiting of the potential of the models to predict relational ties. The central role assigned to the BRQ construct in the BRQ model and to commitment in the RI model limits the degrees of freedom in terms of predicting different types of relationship ties; only the sign and the strength of the influence of these constructs (BRQ and commitment) are used for prediction. Although it is possible to distinguish the effect of a close relationship from that of a casual one on the basis of a high positive path from BRQ (in the reflective and formative model) and from commitment (RI model) to repurchase likelihood, it is not easy to distinguish between more intermediate forms. Given that the primary focus of interpersonal relationship research is on close and intimate relationships, perhaps this is not as salient a limitation in the research in which these models originated. However, we believe that it is a more serious limitation for understanding consumer–brand relationships that typically would not be of a close nature (O'Malley and Tynan 1999). Therefore, consumer–brand relationship models should also be able to describe less intimate relationships. This is further emphasized by the motivation for advocating relationship models, because a major reason for them is argued to be the ability to predict and understand different relationship ties (Fournier 1998; Fournier and Yao 1997).

The previously addressed BRQ dimensions as a set model does not specify mediation and thus might be useful for assessing less involving relationships because it allows for several types of ties between brands and consumers. For example, it can be used to represent Fournier's (1998) consumer-brand relationship typology because it allows for the possibility that different

configurations of relationship dimensions result in different consequences depending on how the relationship is formed.

Similarly, we propose an alternative model based on the RI model to accommodate investigation of less involving relationships. By relaxing the original structure of complete mediation and instead focusing on a partial mediation model that allows for both direct and indirect paths from the dependence sources, we obtain a model that is better suited for studying less involving relationships. Because the RI model is based on the interdependency model, the alternative model combines these two models. The interdependency model does not include commitment as a mediating construct, but rather proposes that both satisfaction and quality of alternatives have direct effects on the endogenous constructs. Consequently, the alternative model suggests that satisfaction and quality of alternatives have both direct and indirect effects (mediated by commitment) on endogenous constructs, whereas relationship investments should be completely mediated by commitment. Thus, this model accommodates more superficial relationships based on direct effects, whereas effects from close relationships should be mediated by commitment.

### **Behavioral Frequency: An Alternative Explanation**

The previously presented models all suggest that the outcomes are consequences of relational bonds between consumers and brands. However, outcome variables, such as repeat purchase, might also be a result of habit persistence (Seetharaman and Chintagunta 1998). Behavioral frequency has previously been used as an independent determinant of intention in the theory of trying (Bagozzi and Warshaw 1990). To the degree that BRQ and commitment reflect frequency of past purchases and/or experiences, the constructs should be correlated because people are likely to form favorable attitudes toward the behavior or attitude object based on frequent past

behavior (Eagly and Chaiken 1993). This viewpoint is consistent with self-perception theory (Bem 1972). However, there might also be an alternative mode for the intention based on habit (Ouelette and Wood 1998). This mode would be reflected in the degree of independent predictive power added by behavioral frequency beyond the BRQ or commitment, and thus it suggests a “mindless” account for relationship stability. Previous studies have found that behavioral frequency has an independent role in explaining intentions (Ouelette and Wood 1998). Thus, it might be useful to consider both a mindless account for intentions because behavioral frequency can affect intentions directly without being mediated by BRQ and commitment (Aarts and Dijksterhuis 2000) and a more mindful mode in which the influence from behavioral frequency is mediated by commitment. This model specification resembles the one Bentler and Speckart (1979) used, including both direct paths from past behavior to future behavior and indirect paths (previous behavior mediated by intention) to assess the roles of cognition and behavior in determining future behavior.

To accommodate habit as an alternative determinant of intention we include behavioral frequency as an additional construct to the two relationship models. This allows for an assessment of the depth of the consumer-brand relationship in that the models offer an alternative explanation for the outcome variables. To the extent that behavioral frequency has a substantial independent predictive ability of the outcome variable relative to that of BRQ or commitment, the relationship appears not to be particularly “deep.” This also allows for an assessment of weaker relationships. Therefore, we add behavioral frequency to all the BRQ models. Similarly, we add behavioral frequency to the RI models. To accommodate both accounts of the influence of behavioral frequency (mindful and mindless), we propose that it influences both commitment and outcomes in the partially mediated RI model (Model 5 in Table 1). Thus we subject five models to empirical testing (Figure 2).

[Figure 2 about here]

We refer to the BRQ dimensions as a set model (Model 3) as the BRQ regression model (see Figure 2). This model specification does not necessarily require a regression specification; that is, it is not uncommon to find that dimensions (in this context, the BRQ relationship dimensions) are dichotomized and subsequently combined to form a typology. However, such a procedure represents a substantial information loss as well as a potential for misinterpretation in situations involving correlated dimensions (MacCallum, et al. 2002). A regression model avoids information loss and maintains sufficient interpretability; thus, it is the preferred specification of the BRQ dimensions as a set model.

We conduct a comparison of the models on the basis of the following criteria: empirical fit and model interpretation. We assess empirical fit by comparing overall model fit and the ability to explain outcome variables. Model interpretation refers to the degree to which the models offer straightforward interpretations. This criterion refers not only to that the estimates offer a sensible interpretation (e.g., signs in expected directions, solutions that do not indicate severe problems with multi-collinearity, no negative error variances; Bagozzi and Yi (1988)) but also to the related theoretical interpretation in that the central constructs should relate as expected to the different outcome variables. Furthermore, the models should offer reasonable guidelines as to how managers can influence consumer-brand relationships.

## **METHOD**

We conducted two studies to examine the consumer-brand relationship models. The first study targeted several brand communities under the assumption that participants in these communities are highly involved consumers and are most likely to have relatively close ties to brands (O'Guinn and Muniz 2001). The second study replicates and extends Study 1.



## STUDY 1

When selecting brands, we preferred multiple product categories over a single category for securing variation in product characteristics, brand characteristics, and type of community members involved. An essential criterion in selecting product categories was that the categories should be typically “high involving”-that is, categories with strong consumer-brand relationships between dedicated users and their preferred brands. In addition, the product categories should contain multiple brands with openly accessible, active, and well-functioning online communities. After a systematic and extensive search, we chose the categories of cars, cameras, computers, PDAs (personal digital assistants), and programmable remote controls. Within each category, we selected brands according to the prevalence of brand-dedicated activity in online brand communities. We used the number of existing postings and the frequency of posting as proxies of community activity. From our analysis of brand community activity, we chose the following brands:<sup>3</sup>computers: Apple, IBM, and Compaq (n = 60); PDAs: Palm Pilot, Compaq, Casio, HP, Sony, and Psion (n = 415); remote controls: Philips Pronto Edit, and Sony RM (n = 78); cameras: Pentax, and JVC (n = 36); and cars: Toyota Rav, BMW, Nissan, and Vauxhall (n = 87).

An invitation to participate in the survey was posted on different international bulletin boards (brand communities) on the Internet with discussion threads dedicated to the chosen brands. Respondents were invited to complete a 10 session (Web pages) questionnaire that reflected their experience with the focused brand. Each respondent responded only to one brand (the brand represented by the brand community). The posted invitation contained a link to an online questionnaire. In the invitation, it was made clear that the survey was conducted by business school researchers and that the study itself was independent of commercial interests and the sponsors of the relevant communities. Respondents were offered an opportunity to win a gift

certificate at Amazon.com in return for their participation. Of the 1260 participants who responded to the initial invitation (clicked on the link), 678 questionnaires were usable. The majority of the rejected responses (542) were due to an incomplete questionnaire (most respondents navigated away from the survey Web site). We also rejected 19 questionnaires because they involved more than one response from the same respondent (identical IP addresses and/or name) and 21 responses because of careless responding (more than 20 subsequent identical questionnaire answers). Of the final sample of 678 respondents, 91 percent were male, and the average age was 34 years. Furthermore, a majority of respondents were from North America (80 percent), were highly experienced users of the product category (Mean = 5.7 on a 7-point scale), and were frequent contributors to the relevant online brand community (44 percent posted messages more than once a week).

## **Measures**

We tested the measurement model that included constructs from both the BRQ model and the RI model using LISREL 8.51 (Jöreskog et al. 1999). The BRQ measures were based on the original scale presented by Fournier (1994); we refined the scale further using several new items that Thorbjørnsen et al. (2002) introduced to improve convergent and discriminant validity of the BRQ dimensions (see Appendix A). The final questionnaire contained 30 items to capture the BRQ dimensions. In the final and revised measurement model, the indicators of the BRQ dimensions were reduced from 30 to 20 because of low factor loadings or high cross-loading modification indices. We measured behavioral frequency with three items. The items are similar to those found in Verplanken and Orbell's (2003) Self-Report Habit Index.

We measured both relationship investment and quality of alternatives with four indicators adapted from the work of Rusbult (1980a) and Rusbult et al. (1998). We measured two of the

latent variables-commitment and partner quality/satisfaction-identically for the different models. The conceptual contents of partner quality (BRQ model) and satisfaction (RI model) are similar (both refer to the quality, need fulfillment, and reliability of the partner). Thus, we did not distinguish between these constructs in the survey to enhance comparability between models. Commitment is also conceptually similar in the different models, and we measured it with the same indicators in both models. Repurchase likelihood contained two questions. According to relationship theory, high-quality relationships should encourage supportive responses among relationship partners, even if those responses involve a degree of financial, social, or psychological risk (Fournier 1994). Brand support captures these supportive customer responses. All questions employed 7-point Likert scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (see Appendix A).

The measurement model including all constructs received satisfactory fit ( $\chi^2 = 1630.90$ ,  $df=539$ ; root mean square error of approximation [RMSEA] = .055; comparative fit index [CFI] = .99; and goodness-of-fit index [GFI] = .88). All constructs were reasonably reliable, exceeding the recommended criterion of .5 for average variance extracted (AVE; Bagozzi and Yi 1988). Furthermore, we tested convergent and discriminant validity and found them to be acceptable according Anderson and Gerbing's (1988) recommended approach. However, according to the criteria Fornell and Larcker (1981) proposed, there are some problems with discriminant validity between repurchase likelihood and brand support (due to the high intercorrelation between repurchase likelihood and brand support; see Appendix A), repurchase likelihood and commitment, and brand support and commitment (the AVEs for repurchase likelihood and brand support are somewhat lower than the squared correlation between these constructs and commitment). Several of the BRQ dimensions were highly correlated (see Appendix A), similar

to results found in previous studies (Fournier 1994; Kim, Lee, and Lee 2005; Thorbjørnsen et al. 2002; Wilson, Callaghan, and Stainforth 2007).

## Results

To set the scale for the BRQ construct in the reflective model, we first specified a second-order factor model that included all the BRQ dimensions. This model was estimated in isolation to avoid interpretational confounding (Burt 1976). The BRQ construct explains a high proportion of the variance of the BRQ dimensions because of the high correlation among these dimensions. We then fixed the paths from the BRQ construct to the values based on the first run to fix the location of the BRQ construct, and we estimated the paths to the endogenous constructs. Table 1 presents the results.

[Table 1 about here]

The overall fit of the model appears to be acceptable given the values of both the RMSEA (.068) and the CFI (.98), which suggest a reasonable fit. The BRQ construct has a relatively strong influence on repurchase likelihood and brand support. Behavioral frequency has a significant, positive influence on repurchase likelihood and brand support. However, the increase in squared multiple correlations for structural equations (SMCSE) for brand support by including brand frequency versus not including it was not impressive (from .79 to .80), whereas the SMCSE for repurchase likelihood increased from .53 to .61. Furthermore, when we constrained the paths from BRQ to repurchase likelihood and from behavioral frequency to repurchase likelihood to be equal, this did not result in a significant change in model fit, suggesting that the effects are equal. However, BRQ has a significantly more positive influence than behavioral frequency on brand support.

The formative BRQ model appears in Table 2. We deemed the fit of the model to be reasonable. The BRQ construct does a good job in explaining repurchase likelihood and brand support. However, the interpretation of the BRQ construct is not straightforward. The coefficients for the paths from the dimensions to the BRQ construct are not as expected, with several non-significant paths (intimacy and self-concept connection) and one negative path (passion). Given the relatively high correlation between the dimensions (see Appendix A), this resembles a classic problem with multi-collinearity in regression and suggests that the interpretation of the BRQ construct is ambiguous. Behavioral frequency has a positive influence on repurchase likelihood (the SMCSE for repurchase likelihood increased from .62 to .64 when we included brand frequency). Similar to the effects for the BRQ reflective model, the effects on repurchase likelihood from BRQ and behavioral frequency were equal, whereas BRQ had a more positive influence than behavioral frequency on brand support.

[Table 2 about here]

The regression model appears in Table 2. This model fits well and also explains substantial proportions of the variance of the endogenous constructs. The model offers increased diagnostic insight into the different relational ties compared with the previously presented models in that it proposes several different paths to repurchase likelihood and brand support. However, the results suggest a multi-collinearity problem. As expected, commitment has a strong positive influence on repurchase likelihood and brand support. However, it is difficult to explain the negative influence of passion on repurchase likelihood and brand support. It seems likely that these results are subject to indeterminacy caused by multi-collinearity. Furthermore, only 6 of the 12 paths involving the BRQ dimensions are significant. Thus, the diagnostic value even of the model is less than satisfactory. Again, behavioral frequency has a positive influence on repurchase likelihood (the SMCSE increased from .64 to .69).

The RI model proposes several structural relationships between the dependency sources and the endogenous constructs with commitment as a mediating construct. Table 3 presents the results for the two RI models. The complete mediation model does not fit the data well and explains less variance in the endogenous constructs as compared to the other models. However, the model offers a straightforward interpretation. Partner quality/satisfaction and relationship investment both have a positive influence on commitment, whereas quality of alternatives has a negative influence. Furthermore, behavioral frequency has a positive influence on commitment (the SMCSE for commitment increased from .71 to .74 when we included behavioral frequency). Finally, commitment has a more positive influence than behavioral frequency on both repurchase likelihood and brand support.

[Table 3 about here]

The partially mediated RI model receives a reasonable fit and does also explain a fair amount of the variation in the endogenous constructs. Commitment serves as a mediator of effects from the dependency sources on repurchase likelihood and brand support. However, commitment is reduced to a partial mediator in that some of the influence from the dependency sources is not mediated. Note that the influence of partner quality/satisfaction is almost completely mediated by commitment, with the exception of the effect on brand support. The positive direct effect on brand support suggests that consumers might speak positively about a brand without having a strong ongoing relationship. Table 3 also reveals that there are some substantial negative effects of the quality of alternatives on repurchase likelihood and brand support, in addition to the effect mediated by commitment. Finally, some of the findings with regard to behavioral frequency are notable. We previously argued for the different roles of behavioral frequency. First, frequency should have a positive effect on commitment because people are likely to form favorable attitudes toward an attitude object based on frequent past

behavior. This corresponds to a mindful affect from behavioral frequency. Second, the direct influence from behavioral frequency to repurchase likelihood suggests stable behavior not mediated by commitment; rather, it offers a mindless account for repurchase likelihood. The effects from commitment to repurchase likelihood and from behavioral frequency to repurchase likelihood were equal. However, commitment has a more positive influence than behavioral frequency on brand support.

The empirical tests of the models reveal that both RI models result in interpretable solutions, but the partial mediation model receives significantly better model fit. Overall, there are no significant differences in the models' ability to explain variance in the endogenous constructs. Appendix B provides more specific information on the empirical comparison of the various models.

## **Discussion**

Study 1 tests a set of consumer-brand relationship models from both a conceptual and an empirical perspective. Table 4 presents a comparison of the different models with regard to empirical and theoretical interpretation. The tests of the different consumer-brand relationship models revealed that all models explain a substantial part of the variance in repurchase likelihood and brand support. However, the models differ with regard to interpretability; that is, the conceptual comparison reveals that the models differ in their explanation of relationship ties. Both the BRQ regression model and the partial mediation RI model explain the various relationship ties better than the other models, which are limited because of their reliance on mediation. In addition, the test of the models suggests that behavioral frequency contributes to explain outcome variables, such as repurchase likelihood. Thus, the models have the potential to explain less involving relationships, such as consumer-brand relationships. Furthermore, the

partial mediation RI model enables the testing of two roles of behavioral frequency: mere habit persistence and commitment. Finally, in line with the conclusion regarding the various models' potential to explain different types of relationship ties, the practical implications also suggests that the BRQ regression model and the partial mediation RI model are the most promising candidates among the tested models. The following discussion addresses the implications for both the BRQ model and the RI model.

[Table 4 about here]

### *The BRQ model*

The model comparison reveals somewhat conflicting results for the BRQ models. The regression model appeared to fit the data well and explained a substantial amount of the variance of several endogenous constructs; however, because the relationship dimensions were highly correlated, the results were not easily interpretable. Both the number of insignificant paths and the occurrence of negative paths reduced the value of the model. Conversely, the reflective BRQ model accords with the observation that the relationship dimensions are highly correlated, but it does not perform as well with regard to model fit. The observation that the BRQ dimensions are highly correlated is not consistent with Fournier's (1998) consumer-brand relationship classifications. An explanation for the different results obtained in her qualitative studies (Fournier 1994, 1998) and the quantitative studies (Fournier 1998; Thorbjørnsen et al. 2002) might be found in the wording and the contents of the questionnaire items (see Appendix A). The wording of the items is in accordance with a relationship perspective. As discussed previously, the appropriateness of several of the BRQ dimensions in a consumer-brand setting has been questioned. In their recent study using fMRI scanning, Yoon et al. (2006) found that consumers do *not* process semantic judgments about brands and products in the same manner as judgments about people. Both Bengtsson (2003) and Shimp and Madden (1988) have been skeptical about



the transferability of concepts such as love/passion and intimacy from the interpersonal domain to a consumer-brand setting. Consumers might find it difficult to respond to questions related to passion, such as “I feel that this brand and I were really ‘meant for each other.’” Consequently, they might fall back on some kind of general impression in responding to these items. For example, the responses might also reflect general liking, and therefore high correlations among BRQ dimensions would be a typical result. This would then suggest that a common factor accounts for a substantial part of the variance. To assess this possibility, we employed the unmeasured latent method factor approach that Podsakoff et al. (2003) suggested. Thus, we set all the BRQ items to load on a general BRQ factor in addition to their specific BRQ dimensions. Appendix A provides the measurement model, and Table 5 presents the results from the structural model.

[Table 5 about here]

The findings suggest that the general BRQ factor has a substantial positive influence on both repurchase likelihood and brand support. Furthermore, the fairly strong additional effects from commitment on repurchase likelihood and brand support provide indications of fairly strong relationships. Given that the general BRQ factor and the commitment constructs are uncorrelated (a necessary condition for identifying the model), the findings with regard to commitment suggest an additional explanatory power to that of the general BRQ factor. This specification also explains the negative effect from passion on both repurchase likelihood and brand support. First, the positive influence of the general BRQ factor is stronger than the negative effect of passion. Second, the passion items have high loadings on the general BRQ factor (see Appendix A), and therefore the overall effect of the passion items is positive. This approach offers an interpretable solution. However, the specification of the general BRQ factor suggests that the meaning of this factor should be interpreted similarly to that of an exploratory factor.

*The RI model*

The complete mediation model did not fit the data well. However, the partial mediation model both fits and has the ability to explain different types of relationship ties. The partial mediation model suggests that there are substantial negative direct effects from quality of alternatives on repurchase likelihood and brand support that are not mediated by commitment. The findings suggest that the insulation offered by a consumer–brand relationship is not necessarily sufficient if there are good alternatives available. Furthermore, there was a significant, positive direct effect of partner quality/satisfaction on brand support that was not mediated by commitment. Behavioral frequency has both an indirect effect (through commitment) and a direct effect on repurchase likelihood. The indirect effect accords with the interpretation that behavioral frequency can be viewed as a form of relationship investment. Conversely, the direct effects suggest that some of the influence of behavioral frequency also represents habit persistence and does not necessarily represent a strong relationship foundation. This might be an even more substantial factor for less involved consumers. Thus, the addition of behavioral frequency might improve the value offered by consumer–brand relationship models in explaining relationship ties or, more precisely, the lack thereof between consumers and brands that otherwise might be confounded with committed relationships. Consequently, from this comparison, the partial mediation variant of the RI model appears to be the most promising candidate for further research.

There are several limitations associated with Study 1. First, although the sampling procedure for this study is innovative, it also requires highly involved respondents. Thus, the final sample contains a bias toward more involved consumers. This limits our ability to generalize the results. Second, although the study includes several product categories, the included categories

are all traditional products that are typically not purchased frequently, thus limiting the role of habit persistence. Third, the study contains a bias toward male respondents. As mentioned previously, Monga (2002) found that the degree of perceived reciprocity from brands differed between men and women. To the extent that this difference interacts with particular constructs in the various consumer-brand relationship models, it might affect the comparison. Fournier (1994; 1998) developed the BRQ model on the basis of depth interviews with three women. Thus, the bias toward men in this sample might hurt the BRQ model more than the RI model.

## **STUDY 2**

To address limitations raised in Study 1, we conducted a follow-up study. Whereas Study 1 targeted consumers with strong ties to their preferred brands (recruited from online communities), Study 2 did not select respondents according to their previously demonstrated brand attachment. Rather, Study 2 was based on representative samples from a consumer panel. Furthermore, Study 2 involved two samples. The first sample focused on the product category of frozen pizza, and the second sample focused on a TV channel. To further explore habit persistence, we chose categories of frequently bought or used products. Furthermore, the chosen product categories represent a presumably low-involving, fast-moving consumer good (frozen pizza) and a service with high potential for personification (TV channel). Finally, the study focused on the leading brand in each category.

Both samples were recruited from an online consumer panel of a Norwegian research institute. The consumer panel contain 62,000 respondents between the ages of 15 and 85. At the time of the study (late 2007), the panel was representative of the adult population in terms of demographic variables, though high-income and high-education groups were marginally over represented. We used brand awareness as the screening criterion, and we excluded respondents

who were not familiar with the focal brand from the study. Of the 714 respondents who were invited to participate in the study on frozen pizza, 277 completed the questionnaire, for a response rate of 38.8 percent. The average age of the respondents was 49, and 47.5 percent were female. Of the 717 respondents who were invited to participate in the study of the TV channel, 256 completed the questionnaire, for a response rate of 35.7 percent. The average age of the respondents was 48, and 59.8 percent were female. According to demographic variables, both samples were representative of the population.

Study 2 also involved several modifications of Study 1. First, to address the issue of transferability of concepts, Study 2 also contained two modified scales for passion and intimacy based on the work of Shimp and Madden (1988). Shimp and Madden pointed out the problem of transferring constructs directly with regard to adopting Sternberg's triangular theory of love to the study of consumer-object relationships. They developed several alternative measures corresponding to concepts such as intimacy (liking in a consumer-object setting) and passion (yearning in a consumer-object setting). Second, we added several additional outcome variables, such as word of mouth (WOM) intentions and behaviors (Brown; et al. 2005). Third, we included a version of Verplanken and Orbeill's (2003) Self-Report Habit Index, expanding the domain of the construct to include both behavioral frequency and habit automaticity. This enables further assessment of the "mindfulness" and "mindlessness" of behavioral frequency in that automaticity is an additional dimension reflecting a "mindless" account. Finally, Study 2 also includes general attitude measures.

Appendix A provides the final measurement model and an overview of the included items. We deemed the model fit to be reasonable. All constructs were reliable with AVE above the recommended .5 level.<sup>4</sup>

Before presenting the comparison between the BRQ model and the RI model, we briefly address an observation regarding skewness and kurtosis of the passion and intimacy scales as compared with the yearning and liking scales. Whereas the passion and intimacy scales had only small degrees of skewness and kurtosis in Study 1 (containing highly attached respondents), Study 2 revealed excessive levels of both skewness and kurtosis for both samples.<sup>5</sup> However, the yearning and liking scales performed much better with regard to skewness and kurtosis. This finding lends support to Shimp and Madden's (1988) claim that yearning and liking are more natural representations of passion and intimacy in consumer settings, particularly for relationships that are neither intense nor strong. Therefore, we use yearning and liking rather than passion and intimacy in the subsequent analyses.

Our comparison of the BRQ model and the RI model is based on the BRQ regression model and the partial mediation RI model. Similar to the findings in Study 1, the BRQ model demonstrates high predictive ability of the endogenous constructs (see Appendix A). Again, however, the findings reveal problems with regard to the interpretation that could be attributed to the high correlation among the BRQ dimensions. To overcome this problem, we employed a procedure that corresponds to the directly measured latent method factor (Podsakoff, et al. 2003). Similar to Study 1, we allowed all BRQ items to load on a general factor. However, Study 2 included three attitude items, and we used these to set the scale for the general factor. A major advantage of this approach is that the general factor would be interpreted as a general attitude factor. Thus, the explanatory power of the BRQ dimensions beyond that of a traditional attitude model can be assessed, as well as the quality of the specific items, because the proportion of the variance explained by the specific BRQ dimensions can be compared with that of the general attitude dimension. Appendix A presents the measurement model, and Table 6 depicts the structural model.

[Table 6 about here]

Table 6 shows that the attitude construct has a substantive positive influence on all endogenous constructs, with the exception of brand support advertising in the TV channel category. In general, attitude has a stronger influence on the endogenous variables in the frozen pizza category than in the TV channel category. Furthermore, commitment appears to have an additional positive influence on repurchase likelihood, willingness to pay a higher price, brand recommendation, and WOM intention beyond that of brand attitude for the frozen pizza category; it also suggests that consumers have relationships to the frozen pizza brand. Yearning also has an additional positive influence on brand recommendation and WOM intention for the frozen pizza category, and self-concept connection appears to be particularly important in explaining WOM behavior for both categories. Liking is important for trying out new products for both categories. Overall, the results reveal that the relationship perspective has something to offer in explaining the endogenous constructs for frozen pizza. A striking difference in the results between the frozen pizza and the TV channel sample is that commitment plays a less significant role in explaining the endogenous constructs for the TV channel than for frozen pizza. Instead, the habit constructs (behavioral frequency and habit automaticity) and liking play a more significant role. In the TV channel category, the negative coefficient from partner quality to repurchase likelihood must be interpreted from the perspective of the substantial loadings on brand attitude found for the partner quality items (see Appendix A). Taken together, the results suggest less intense relationships between consumers and the TV channel than between consumers and frozen pizza.

Table 7 presents the results for the RI model. The RI model explains a large proportion of the variance of repurchase likelihood and WOM intention. From the different studies, overall, the assessment of the RI model reveals a notable finding with regard to the influence of commitment on repurchase intention. Whereas commitment had a strong influence on repurchase intention for

the highly involved sample in Study 1 (standardized coefficient = .44), the influence is much less substantial in the frozen pizza category and is not significant in the TV channel category. Given that the effect mediated by commitment reflects relationship strength, the RI model appears to reveal different relationship ties. Furthermore, Table 7 reveals that satisfaction in particular is a much more important driver of repurchase likelihood in Study 2 than in Study 1. Again, this is an indication of more transactional rather than relational consumer-brand ties. Table 7 also reveals some notable findings with regard to habit persistence. In Study 1, behavioral frequency had a positive influence on commitment. On the basis of self-perception theory (Bem 1972; Eagly and Chaiken 1993), we argued that respondents used frequent past behavior to form commitment to the attitude object. We referred to this as a mindful mode because the influence of behavioral frequency was mediated by commitment. However, as Table 7 shows, commitment does not mediate the influence of behavioral frequency in Study 2. Instead, behavioral frequency has a direct positive influence on repurchase intention, brand support for new products, and WOM intention. The direct measure of the mindless mode (habit automaticity) does not appear to influence the dependent constructs, with the exception of brand support advertising.

[Table 7 about here]

## **DISCUSSION**

Studies 1 and 2 offer an extensive test of the BRQ model. From comparisons of different models and different samples, the BRQ model reveals some problematic aspects. Overall, although the model is capable of explaining a substantial proportion of the variance in important outcome constructs, the interpretation of the model is problematic. Furthermore, other empirical assessments of the BRQ model have reported high correlations among the BRQ dimensions (Chang and Chieng 2006; Fournier 1994; Smit et al. 2007; Thorbjørnsen, et al. 2002). We

proposed that the reason for this finding might be attributable to the role of the metaphoric transfer with regard to the BRQ model. Although the transfer of new concepts to a new domain is an important source of creativity and an important tool for expanding our knowledge, we showed that there are two problematic aspects with the transfer of the inter-personal constructs in the BRQ model to a consumer-brand setting.

The first aspect pertains to the transfer of the constructs. It is not necessarily straightforward to apply a construct from one domain to another. In Study 2, we substituted two of the BRQ dimensions (passion and intimacy) with two alternative constructs (yearning and liking) according to recommendations found in the marketing literature. Although both yearning and liking seemed to contribute to a more interpretable solution, the inclusion of these constructs did not solve the problem. Furthermore, the distributional properties of the items in the original BRQ model revealed that this might have a potential for explaining strong relationships, but the potential for explaining weak relationships appeared to be limited. However, the BRQ regression model revealed interpretational problems in all samples.

The second aspect is the internal structure among the BRQ dimensions found in the source domain. The BRQ model borrows constructs from several theoretical perspectives. Therefore, the integration of the BRQ dimensions is problematic.

To overcome some of these problems, we proposed an alternative structure that included a general factor (unmeasured or directly measured; Podsakoff et al. 2003), which enabled us to account for the high inter-correlation among BRQ dimensions while maintaining the specific dimensions. From this procedure, we could both assess the quality of individual items (this was not emphasized because of space limitations) and directly demonstrate the value of the BRQ relationship model in that it offers additional explanatory power to that of a traditional brand attitude model. The findings revealed that in Study 1, the passion items in particular had low



loadings on the passion construct and high loadings on the general BRQ construct, and therefore the appropriateness of these items might be questioned. In Study 2, we substituted these with the yearning items; the findings suggested that though most items had high loadings on the attitude construct, they also had substantial loadings on their respective BRQ dimension. The structural analyses demonstrated that the modified BRQ models based on this approach were able to reveal differences with regard to consumer–brand ties. Thus, we believe that this is a promising path to explore for future analysis of the BRQ model.

The partial mediation RI model performed well. It seems to be able to differentiate between strong and weak relationships. The role of commitment as a mediating construct is central to this interpretation. That is, we found that commitment mediated a substantial part of the effect in Study 1 for the highly attached consumers; in contrast, commitment mediated only a small part of the effect for the respondents in the frozen pizza category and not at all for those in the TV channel category in Study 2. For these less involved respondents, the direct influence from satisfaction on repurchase intention was important, suggesting a weak relationship based more on a transactional focus. Thus, the RI model appears to have potential in explaining both weak and strong relationships.

Furthermore, behavioral frequency adds to the explanatory potential of the RI model. For highly involved consumers with strong relationships to the brand, behavioral frequency had a positive influence on commitment. This is consistent with self-perception theory and suggests a mindful account for behavioral frequency. For less involved consumers, however, behavioral frequency did not affect commitment. Because we found only direct influences on the endogenous constructs, this finding suggests a more mindless account for behavioral frequency.

## **Limitations**

Studies 1 and 2 employed a cross-sectional design typical of most research on marketing relationships. The use of longitudinal designs seems to be a logical extension of the research on consumer–brand relationships. Longitudinal designs have the potential to advance knowledge on how consumer–brand relationships evolve and develop. Aaker et al.’s (2004) study represents an example of this kind of research, focusing on the development of several of the relationship dimensions found in BRQ. The RI model could also be used in a longitudinal design. Indeed, a longitudinal structure of the RI model could advance knowledge of biased brand perceptions and the role of increasing relationship investments. For example, an examination of the effect of commitment at  $t_i$  on the availability of alternatives at  $t_{i+1}$  could shed light on biased brand perceptions, and an examination of the effects of relationship investment and commitment at  $t_i$  on relationship investments at  $t_{i+1}$  could be of interest to assess development of consumer-brand relationships.

The focus of this paper is on empirical assessment. Given that a substantial part of the consumer–brand relationship literature is based on qualitative assessments, our conclusions might not be similar to what would be expected in a comparison based on a qualitative approach.

## **Conclusion**

The recent focus on consumer-brand relationships has revitalized research on consumer loyalty and related constructs (Fournier 1998). The most influential perspective on consumer-brand relationships is the BRQ model that Fournier (1998) proposed. Fournier claims that the model offers increased insight into the ties between consumer and brands compared with the traditional brand loyalty perspective. The findings of the current studies indicate that the BRQ model does not completely live up to its promise. However, from our modifications in line with

procedures proposed to assess method factors (Podsakoff et al. 2003), the BRQ model offers additional explanatory power compared with traditional attitude models.

The RI model (Rusbult 1980a) that suggests partial mediation appears to be a promising candidate for further research. The model demonstrated good fit to observed data and explained a substantial amount of variation in endogenous constructs. The easy and interpretable structure provides relevant information for brand managers, and the model also offers several managerial implications. The structure of the RI model provides insight into drivers of commitment to brands. In particular, the model offers managers potentially important information for analyzing brands' vulnerability to new entrants or changes initiated by existing competitors. For example, if the main dependency source explaining commitment to the brand is found in the lack of good alternatives, the brand might not experience much protection from new entrants. Conversely, if consumer investments in a particular brand are mainly responsible for explaining commitment to the brand, the competitive insulation appears to be substantial. Depending on the diagnosis, the brand manager might explore different marketing solutions. Managers of brands with several good alternatives could focus on non-comparable attributes to inhibit comparisons in their communication to existing consumers. Conversely, in this situation, the challenging brand would be better off focusing on aspects that facilitate comparison. In a situation with few good alternatives, the situation is likely reversed. Similarly, in situations in which the consumer has made significant investments in a brand, competing brands must either aim to devalue the already-made investments or offer compensation for brand switching. The potential for success with these strategies can be dramatically reduced if the consumer is committed to a brand, because he or she is less likely to process information regarding alternatives. The partial mediation model provides additional insight into the role of commitment. To the extent that commitment mediates all the effects from the dependency sources, it would be an indication that

the consumer might be both difficult to convince and difficult to reach because high levels of commitment frequently are associated with selective attention and information gathering.

Conversely, strong direct effects suggest that consumers might be easier to convince with regard to switching alternatives.

The inclusion of behavioral frequency adds additional information regarding the ties between brands and consumers. First, the model would be more relevant for addressing less involved relationships. Second, managers might find that consumers characterized by habit persistence are as equally difficult to reach as highly committed consumers. However, if they actually process information, these consumers are more likely to switch brands than highly committed consumers.

TABLE 1. Estimates of the Reflective BRQ Model

Endogenous Constructs	BRQ	Behavioral Frequency	SMCSE
Repurchase Likelihood	.71 (.07) <i>10.10</i> <b>.50</b>	.52 (.07) <i>7.13</i> <b>.79</b>	.61
Brand Support	.80 (.04) <i>19.33</i> <b>.79</b>	.16 (.04) <i>3.75</i> <b>.16</b>	.80
Relationship dimensions			
Commitment	1.41* <b>.93</b>		.86
Intimacy	1.15* <b>.73</b>		.53
Self Concept Connection	1.37* <b>.82</b>		.68
Partner Quality	.96* <b>.80</b>		.64
Passion	1.35* <b>.83</b>		.69
Behavioral Interdependencies	1.21* <b>.83</b>		.70
Model fit	$\chi^2 = 1493.65$ (df=361), RMSEA=.068 [.065,.072], CFI=.98, GFI=.86		

NOTE: Unstandardized coefficients. Standard errors are in parentheses. T-values are in italics. Standardized coefficients are in bold. All loadings from the latent constructs to the measures are fixed to the values previously established in the measurement model (see Appendix A). \*Path coefficients fixed according to a previous run to establish the loadings for the second-order construct. This model included only the BRQ dimensions. The fit was deemed to be satisfactory ( $\chi^2 = 792.72$ ,  $df = 164$ ; RMSEA = .075 [.070,.081]; CFI = .98; GFI = .90). Estimated correlation between BRQ and behavioral frequency equals .62 (SE = .03).

TABLE 2. Estimates of the Formative BRQ Model and the Regression BRQ Model

	BRQ	COM	INTI	SELF	PQ	PASS	BINT	BF	SMCSE*	
Endogenous Constructs										
Formative BRQ Model:										
BRQ		2.05 (.59) <i>3.51</i> <b>.71</b>	.13 (.15) <i>.89</i> <b>.05</b>	.05 (.15) <i>.30</i> <b>.02</b>	1.00**   <b>.29</b>	-.99 (.35) <i>-2.84</i> <b>-.37</b>	.65 (.26) <i>2.48</i> <b>.22</b>			.79
Repurchase Likelihood	.23 (.05) <i>4.51</i> <b>.69</b>							.39 (.06) <i>6.35</i> <b>.29</b>		.64
Brand Support	.22 (.05) <i>4.66</i> <b>.95</b>							.10 (.04) <i>2.76</i> <b>.11</b>		.81
Regression BRQ Model:										
Repurchase Likelihood		.74 (.11) <i>6.40</i> <b>.79</b>	.03 (.05) <i>.50</i> <b>.03</b>	-.06 (.06) <i>-1.06</i> <b>-.07</b>	.07 (.08) <i>.84</i> <b>.06</b>	-.28 (.08) <i>-3.36</i> <b>-.32</b>	.07 (.07) <i>1.01</i> <b>.08</b>	.28 (.06) <i>4.91</i> <b>.28</b>		.69
Brand Support		.39 (.07) <i>5.94</i> <b>.59</b>	.03 (.03) <i>.99</i> <b>.05</b>	.03 (.03) <i>.83</i> <b>.05</b>	.26 (.05) <i>5.33</i> <b>.32</b>	-.21 (.05) <i>-4.25</i> <b>-.33</b>	.16 (.04) <i>3.81</i> <b>.24</b>	.06 (.03) <i>1.75</i> <b>.08</b>		.86

NOTE: Unstandardized coefficients. Standard errors are in parentheses. T-values are in italics. Standardized coefficients are in bold. SMCSE\* Reduced form. COM = commitment, INTI = intimacy, SELF = self-concept connection, PQ = partner quality, PASS = passion, BINT = behavioral interdependencies, BF = behavioral frequency. \*\* Fixed to 1. Because of identification problems, covariances between the BRQ dimensions and behavioral frequency are fixed to the values found in the measurement model (see Appendix A). Formative BRQ model fit:  $\chi^2 = 1176.35$ ,  $df = 345$ ; RMSEA = .060 [.056,.063]; CFI = .99; GFI = .89. Regression BRQ model fit:  $\chi^2 = 1093.84$ ,  $df = 314$ ; RMSEA = .061 [.057,.064]; CFI = .99; GFI = .90.

TABLE 3. RI Models

Endogenous Constructs	Commitment	Partner Quality / satis- faction	Quality of Alter- natives	Relationship investments	Behavioral frequency	SMCSE*
Complete mediation model:						
Repurchase Likelihood	.74 (.04) <i>18.75</i> <b>.78</b>					.46
Brand Support	.58 (.03) <i>19.62</i> <b>.89</b>					.59
Commitment		.61 (.05) <i>12.79</i> <b>.49</b>	-.22 (.05) <i>-4.83</i> <b>-.14</b>	.30 (.04) <i>8.37</i> <b>.30</b>	.22 (.04) <i>5.29</i> <b>.21</b>	.74
Partial mediation model:						
Repurchase Likelihood	.40 (.06) <i>6.93</i> <b>.44</b>	.10 (.06) <i>1.61</i> <b>.09</b>	-.25 (.06) <i>-4.52</i> <b>-.17</b>		.31 (.05) <i>6.00</i> <b>.31</b>	.60
Brand Support	.26 (.03) <i>7.66</i> <b>.40</b>	.34 (.04) <i>8.63</i> <b>.41</b>	-.22 (.03) <i>-6.48</i> <b>-.21</b>		.09 (.03) <i>3.21</i> <b>.13</b>	.81
Commitment		.57 (.05) <i>11.34</i> <b>.45</b>	-.16 (.05) <i>-3.29</i> <b>-.10</b>	.36 (.04) <i>9.14</i> <b>.35</b>	.19 (.05) <i>4.18</i> <b>.18</b>	.68

NOTE: Unstandardized coefficients. Standard errors are in parentheses. T-values are in italics. Standardized coefficients are in bold. SMCSE\* Reduced form. Complete mediation model fit:  $\chi^2 = 932.72$ ,  $df = 217$ ; RMSEA = .070 [.065,.074]; CFI = .97; GFI = .89. Partial mediation model fit:  $\chi^2 = 723.83$ ,  $df = 211$ ; RMSEA = .060 [.055,.065]; CFI = .98; GFI = .91.

TABLE 4. Comparison of Model Interpretation among the Different Models (Study 1)

Comparison criteria	BRQ reflective model (Model 1)	BRQ formative model (Model 2)	BRQ regression model (Model 3)	RI, complete mediation (Model 4)	RI, partial mediation (Model 5)
Statistical interpretation	Straight forward No out of range or counterintuitive paths	Problematic Several negative and insignificant paths from the BRQ dimensions to the BRQ construct.	Problematic Many insignificant paths and also several surprising signs suggesting problems with multicollinearity	Straight Forward No out of range or counterintuitive paths	Straight forward No out of range or counterintuitive paths
Theoretical interpretation					
Potential to explain various ties between consumers and brands	Limited. Given that only the BRQ construct affects outcome variables the model has a somewhat limited potential in explaining many different types of ties.	Limited.	Large. The model is potentially able to explain many different types of ties.	Limited. Given that Commitment mediates the effects from the dependency sources limits potential for explaining many different types of ties.	Reasonably large. The model specifies both direct and indirect effects that allows for an assessment of a number of different relationship ties.
Role of Behavioral Frequency	Single role. Add frequency as an independent determinant of outcome variables that might potentially explain inertia as a rival explanation to BRQ.	Single role.	Single role.	Single role. Adds frequency as an extra source to explain Commitment.	Dual roles. Includes frequency as both an extra source to explain Commitment and as an indication of inertia.
Practical implications	Limited. The abstract nature of the second order BRQ construct reduces the practical guidelines offered by the model	Several. The model might potentially offer several interesting practical guidelines as to how one could influence BRQ. The reliance on complete mediation limits the potential of insight into how to deal with different types of ties.	Many. May potentially offer a number of guidelines with regard to how to deal with different types of ties.	Several. The model might potentially offer several interesting practical guidelines as to how to influence Commitment. The reliance on complete mediation limits the potential of insight into how to deal with different types of ties.	Many. The model might potentially offer several interesting practical guidelines as to how one could influence Commitment. May potentially offer a number of guidelines with regard to how to deal with different types of ties.



TABLE 5. Estimates of Regression BRQ Model with a General BRQ Factor (Study 1)

	COM	INTI	SELF	PQ	PASS	BINT	BF	BRQ gen
Repurchase	.53	-.03	-.12	.14	-.30	.09	.48	.60
Likelihood	(.10)	(.07)	(.07)	(.09)	(.08)	(.08)	(.08)	(.06)
	<i>5.23</i>	<i>-.45</i>	<i>-1.86</i>	<i>1.69</i>	<i>-3.64</i>	<i>1.03</i>	<i>5.69</i>	<i>9.80</i>
[.69]	<b>.37</b>	<b>-.02</b>	<b>-.09</b>	<b>.10</b>	<b>-.21</b>	<b>.06</b>	<b>.34</b>	<b>.42</b>
Brand	.29	-.01	-.01	.32	-.22	.18	.13	.61
Support	(.06)	(.04)	(.04)	(.05)	(.05)	(.05)	(.05)	(.04)
	<i>4.93</i>	<i>-.21</i>	<i>-.15</i>	<i>6.51</i>	<i>-4.48</i>	<i>3.58</i>	<i>2.60</i>	<i>14.78</i>
[.87]	<b>.28</b>	<b>-.01</b>	<b>-.01</b>	<b>.32</b>	<b>-.21</b>	<b>.17</b>	<b>.13</b>	<b>.60</b>

NOTE: Unstandardized coefficients. Standard errors are in parentheses. T-values are in italics. Standardized coefficients are in bold. [SMCSE]. COM = commitment, INTI = intimacy, SELF = self-concept connection, PQ = partner quality, PASS = passion, BINT = behavioral interdependencies, BF = behavioral frequency, BRQ gen = general factor brand relationship quality. Model fit:  $\chi^2 = 832.27$ ,  $df=339$ ; RMSEA = .046 [.042,.050]; CFI = .99; GFI = .92.

TABLE 6. Structural BRQ Model with General Attitude (Pizza/TV, Study 2)

	COM	YEA	SELF	PQ	LIK	BINT	BF	AUTO	Att gen
Repurchase Likelihood [.73]/[.85]	<b>.44/.15</b>			<b>ns/-.11</b>			<b>ns/.31</b>	<b>ns/.26</b>	<b>.58/.43</b>
Brand sup Ad [.23]/[.20]								<b>ns/.41</b>	<b>.42/ns</b>
Brand sup New prod [.34]/[.32]	<b>ns/.20</b>				<b>.52/.33</b>		<b>ns/.29</b>		<b>.48/.22</b>
Brand sup Price [.48]/[.34]	<b>.31/ns</b>		<b>ns/.27</b>						<b>.54/.29</b>
Brand sup Rec [.71]/[.58]	<b>.15/ns</b>	<b>.29/ns</b>			<b>ns/.31</b>				<b>.71/.55</b>
WOM intention [.70]/[.61]	<b>.33/ns</b>	<b>.16/ns</b>							<b>.70/.54</b>
WOM Behavior [.61]/[.55]			<b>.35/.29</b>			<b>ns/.38</b>	<b>.34/ns</b>		<b>.45/.64</b>

NOTE: Pizza/TV. Only significant coefficients are displayed. Standardized coefficients. [SMCSE]. COM = commitment, YEA = yearning, SELF = self-concept connection, PQ = partner quality, LIK = liking, BINT = behavioral interdependencies, BF = behavioral frequency, AUTO = habit automaticity, Att gen = general attitude factor. Model fit Pizza:  $\chi^2 = 1288.95$ ,  $df = 723$ ; RMSEA = .057 [.051,.062]; CFI = .98; GFI = .80. Model fit TV:  $\chi^2 = 1190.67$ ,  $df = 723$ ; RMSEA = .051 [.046,.057]; CFI = .99; GFI = .81.

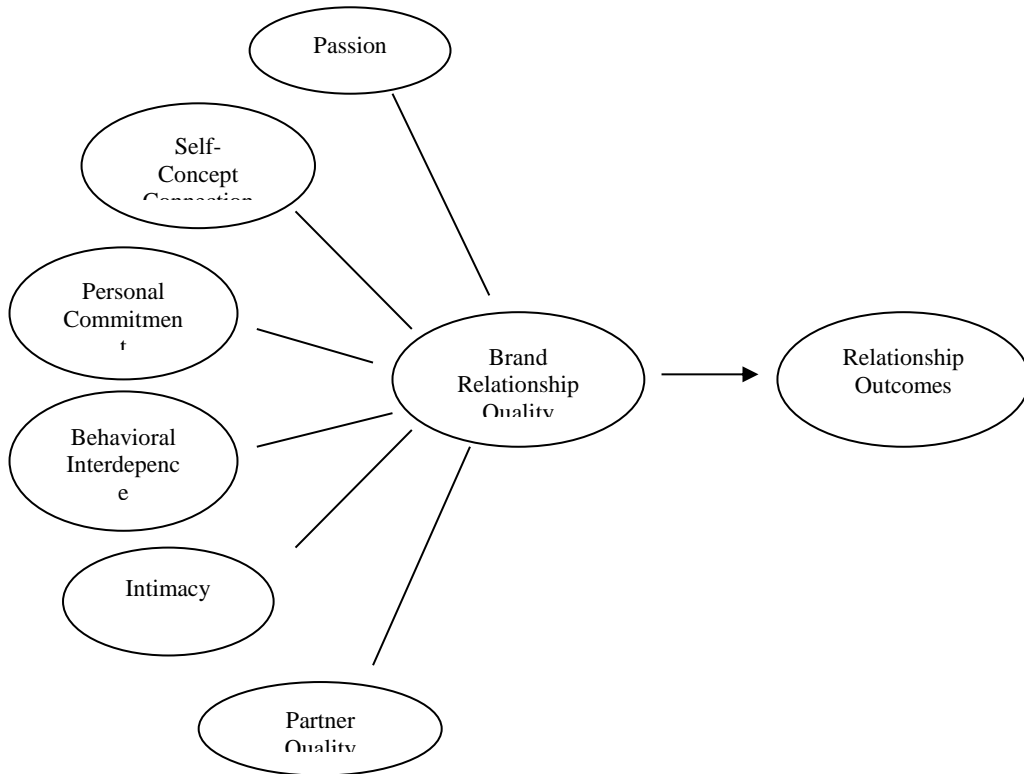
TABLE 7. Partial Mediation RI Model (Study 2)

	COM	SAT	QoA	RI	BF	AUTO	SMCSE Pizza / TV
Repurchase Likelihood	.21 <sup>a</sup> (.09) <i>2.34</i> <b>.17</b>	.37 (.05) <i>7.37</i> <b>.34</b>	-.29 (.06) <i>-4.61</i> <b>-.27</b>		.29 (.07) <i>4.18</i> <b>.27</b>	.09 (.06) <i>1.56</i> <b>.10</b>	.74 / .85
Brand sup Ad	.50 (.13) <i>3.83</i> <b>.35</b>	.04 (.07) <i>.51</i> <b>.03</b>	.18 (.10) <i>1.85</i> <b>.15</b>		-.02 (.12) <i>-.19</i> <b>-.02</b>	.25 (.10) <i>2.54</i> <b>.24</b>	.14 / .17
Brand sup New prod	.22 (.14) <i>1.55</i> <b>.15</b>	.16 (.08) <i>2.02</i> <b>.13</b>	.06 (.11) <i>.56</i> <b>.05</b>		.34 (.11) <i>3.01</i> <b>.27</b>	-.01 (.10) <i>-.09</i> <b>-.01</b>	.13 / .23
Brand sup Price	.57 (.09) <i>6.39</i> <b>.58</b>	-.18 (.05) <i>-3.63</i> <b>-.22</b>	-.12 (.06) <i>-1.89</i> <b>-.14</b>		.03 (.07) <i>.49</i> <b>.04</b>	.06 (.06) <i>1.03</i> <b>.08</b>	.30 / .36
Brand sup Rec	.55 (.12) <i>4.58</i> <b>.34</b>	.31 (.07) <i>4.56</i> <b>.23</b>	-.04 (.09) <i>-.42</i> <b>-.03</b>		.41 (.11) <i>3.87</i> <b>.31</b>	-.08 (.09) <i>-.88</i> <b>-.06</b>	.50 / .48
WOM intention	.46 (.11) <i>4.23</i> <b>.29</b>	.12 (.06) <i>2.02</i> <b>.09</b>	-.40 (.08) <i>-4.97</i> <b>-.30</b>		.40 (.09) <i>4.37</i> <b>.31</b>	-.06 (.08) <i>-.72</i> <b>-.05</b>	.60 / .59
WOM behavior	.34 (.07) <i>4.90</i> <b>.37</b>	.01 (.04) <i>.25</i> <b>.01</b>	.02 (.05) <i>.43</i> <b>.03</b>		.27 (.07) <i>3.79</i> <b>.35</b>	.02 (.06) <i>.36</i> <b>.03</b>	.46 / .35
COM		.10 (.04) <i>2.83</i> <b>.12</b>	-.28 (.04) <i>-6.74</i> <b>-.33</b>	.71 (.07) <i>10.30</i> <b>.57</b>	.00 (.04) <i>.11</i> <b>.00</b>		.81 / .72

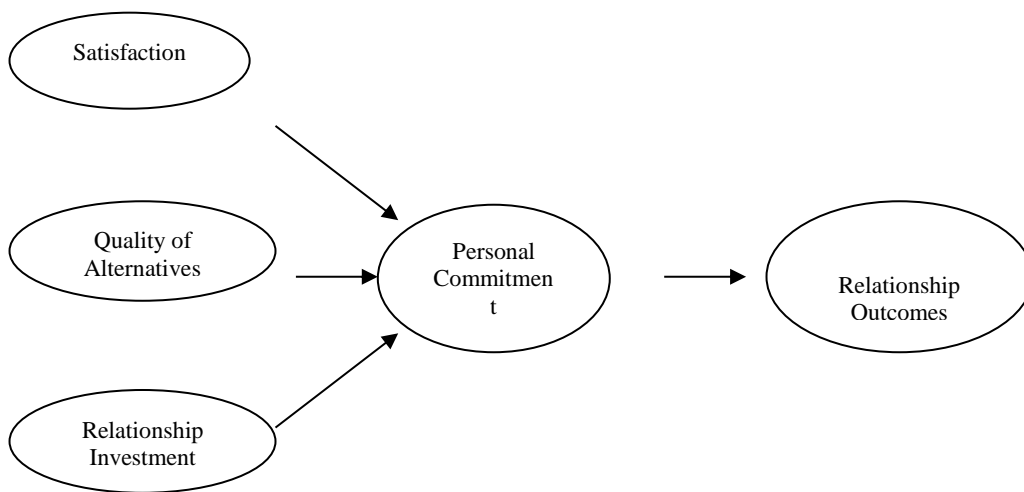
NOTE: Unstandardized coefficients. Standard errors are in parentheses. T-values are in italics. Standardized coefficients are in bold. SMCSE = Reduced form.  $\chi^2 = 2176.57$ ,  $df = 914$ ; RMSEA = .075 [.071,.079]; CFI = .97; GFI = .80. Factor loadings and intercepts are constrained to be equal across groups (strong factorial invariance), with the exception of <sup>a</sup>COM->repurchase likelihood: .01(.11), .11, .01 (for the TV sample) and the intercept of the second item (out of three) of the relationship investment construct. COM = commitment, SAT = satisfaction, QoA = quality of alternatives, RI = relationship investment, BF = behavioral frequency, and AUTO = automaticity.

FIGURE 1. The BRQ Model and the RI Model

## BRQ Model



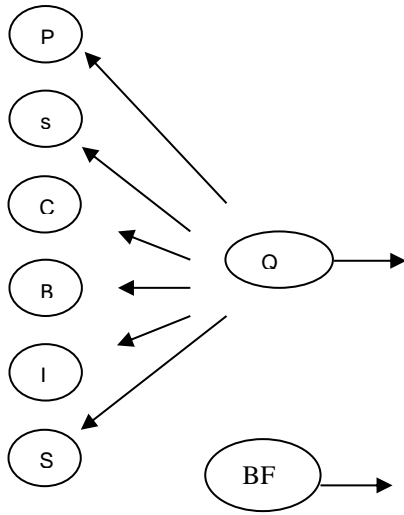
## RI Model



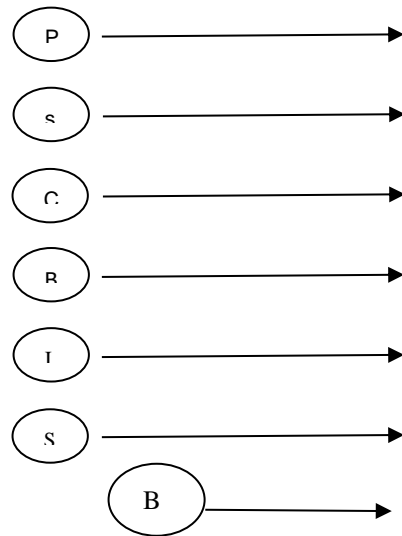
NOTE: Error terms are not included.

FIGURE 2. Visual Descriptions of the Tested Models.

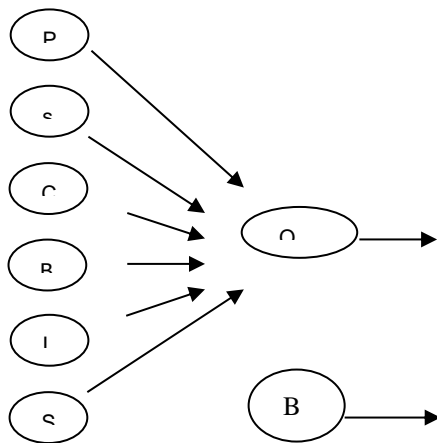
Model 1: BRQ Reflective model



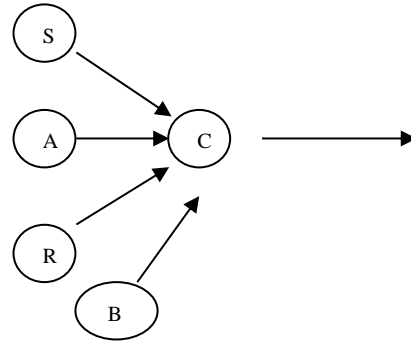
Model 3: BRQ Regression model



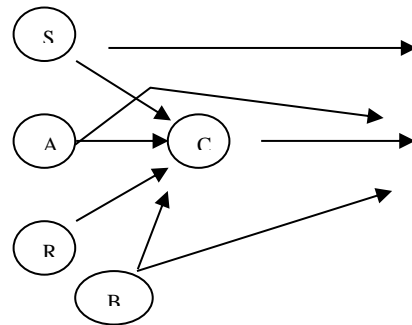
Model 2: BRQ Formative model



Model 4: RI model



Model 5: RI model, partial mediation



NOTE: Outcome constructs not listed. Error terms not listed. P = passion, SC = self-concept connection, C = personal commitment, B = behavioral interdependence, I = intimacy, S = partner quality/satisfaction, Q = brand relationship quality, A = quality of alternatives, R = relationship investments, BF = behavioral frequency.

## **APPENDIX B. EMPIRICAL COMPARISON OF THE CONSUMER-BRAND RELATIONSHIP MODELS (STUDY 1).**

Given that the variance-covariance matrices for the BRQ models and the RI models are not identical, we are not aware of a procedure to directly compare model fit of the BRQ models with that of the RI models. The RI models are nested and can be compared with each other using a chi-square difference test. Because, in general, the BRQ models are not nested, but rather use the same variance-covariance matrix, we employed the Akaike information criterion (AIC) and the second-order Akaike information criterion (AICc) to compare these models (Burnham and Anderson 1998). In addition, we report the expected cross validation index (ECVI; Browne and Cudeck (1989)). Table B1 presents the results from the model comparison.

Table B1 suggests that the BRQ reflective model (Model 1) is the worst of the BRQ models in terms of model fit. However, the solution is easily interpreted. The results are less clear with regard to the BRQ formative model (Model 2) as compared with the BRQ regression model (Model 3). The ECVI values for the two models are relatively similar with overlapping confidence intervals. The AIC suggests that the BRQ regression model (Model 3) outperforms the BRQ formative model (Model 2), whereas the AICc suggests the opposite. Furthermore, the RMSEA values are almost identical and do not lend substantial support to any of the two models in favor of the other. Both the BRQ formative model and the BRQ regression model are not easily interpretable. We argue, however, that the potential of the regression model is more promising than the formative model. As previously mentioned, the formative model relies on complete mediation, which in turn limits its potential to explain different relationship ties. Furthermore, there are many problems associated with the interpretation of formative models due to their estimation (Howell, Breivik, and Wilcox 2007) that significantly reduce the potential of the BRQ formative model.

TABLE B1. Comparison of Model Fit among the Different Models (Study 1)

Comparison criteria	BRQ reflective model (Model 1)	BRQ formative model (Model 2)	BRQ regression model (Model 3)	RI model, complete mediation (Model 4)	RI model, partial mediation (Model 5)
$\chi^2$	1493.65 ( <i>df</i> = 361)	1176.35 ( <i>df</i> = 345)	1093.84 ( <i>df</i> = 314)	932.72 ( <i>df</i> = 217)	723.83 ( <i>df</i> = 211)
RMSEA	.068 [.065,.072]	.060 [.056,.063]	.061 [.057,.064]	.070 [.065,.074]	.060 [.055,.065]
PNFI	.93	.89	.81	.82	.81
EVCI	2.34 [2.17,2.52]	1.92 [1.77,2.08]	1.89 [1.74,2.04]	1.55 [1.42,1.70]	1.26 [1.15,1.39]
AIC	1583.65	1298.35	1277.84	1050.72	853.83
AICc*	1832.01	1635.02	1785.61	1376.35	1212.57
Likelihood**	$w_{R1} < .01$ $w_{R1c} < .01$	$w_{R2} < .01$ $w_{R2c} \approx 1$	$w_{R3} \approx 1$ $w_{R3c} < .01$	Nested models, see the $\chi^2$ -difference test below	
$\chi^2$ - difference	Not applicable	Not applicable	Not applicable	208.89 ( <i>df</i> = 6) <i>p</i> < .0001	
Explanatory power***					
Repurchase Likelihood	.61	.64	.69	.46	.60
Brand Support	.80	.81	.86	.59	.81

NOTE: PNFI refers to parsimony normed fit index. \* AICc is preferred to AIC because the ratio of sample size to the number of estimated parameters is less than the recommended level of 40 for using AIC (Burnham and Anderson 1998). \*\*  $w_{Ri}$  refers to the Akaike weights (Burnham and Anderson 1998), which is the weight of evidence in favor of model *i* as being the best model of the models in the set. The weights are similar to probabilities. \*\*\* Based on the SMCSE reported previously (see Table 1 to Table 3).

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## ENDNOTES

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<sup>1</sup> Studies of consumer–brand relationships share the demanding methodological challenges associated with relationship studies in general and suggest at least a dyadic design. This is a potential explanation for lack of empirical research on consumer–brand relationships. However, most research involving relationships in marketing does not utilize dyadic designs, but relies on designs that only are suitable to reveal actor effects addressing relationship consequences from the perspective of only one partner and do not allow examination of partner effects addressing the influence of actions from the other party (Kenny and Cook 1999). Although a failure to recognize partner effects is a shortcoming of most studies on buyer–seller relationships, it is not as limiting with regard to the study of consumer–brand relationships. Because consumer–brand relationships largely rely on the perceptions of the consumer, an actor model might be a reasonable representation of the relationship. Findings in the interpersonal relationship literature suggest that assessments from the “weak link” partner—the one most likely to leave the relationship—are diagnostic in predicting relationship stability (Attridge, Berscheid, and Simpson 1995). Given that the consumer will qualify as the “weak link” partner in most consumer–brand relationships this suggests that reliance on consumer data only in assessing consumer–brand relationships might not be a serious limitation.

<sup>2</sup> The reflective BRQ model does not formally suggest complete mediation. However, the model suggests that the relationship dimensions do not have any additional influence on the dependent constructs other than their common association reflected in the second order BRQ construct. Thus, similar limitations as those addressed for the mediation models also apply for this model.

<sup>3</sup> The final analyses include two additional responses with missing observations on the product categories.

<sup>4</sup> Except for the relationship investment construct in the TV sample. However, AVE was .49, just below the recommended .5 level.

<sup>5</sup> The original measures of passion and intimacy did contain excessive kurtosis and skewness in both samples in study 2 (passion: skewness from 1.93 to 2.79; kurtosis from 3.21 to 7.89; intimacy: skewness from 3.60 to 3.84; kurtosis from 14.22 to 16.92 for the frozen pizza category; passion: skewness from 1.96 to 2.24; kurtosis from 3.64 to 5.07; intimacy: skewness from 2.14 to 2.40; kurtosis from 4.86 to 5.86 for the TV channel category). The yearning and liking scales demonstrated a much better performance both with regard to skewness and kurtosis (yearning: skewness from .81 to 2.42; kurtosis from -.40 to 5.94; liking: skewness from .15 to 2.56; kurtosis from -1.16 to 6.67 for the frozen pizza category; yearning: skewness from .78 to 1.42; kurtosis from -.27 to 1.05; liking: skewness from -.16 to 1.24; kurtosis from -.99 to .81 for the TV channel category). Also, the levels of skewness and kurtosis were high for the behavioral interdependence and self-concept connection for the frozen pizza category. Finally, one of the relationship investment items also possessed high skewness and kurtosis levels.