

Composite Branding Alliances: An Investigation of Extension and Feedback Effects

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ABSTRACT

This research in two experiments investigates the effectiveness of a composite brand in a brand extension context. A composite brand name combines two existing brands, in different positions as header or modifier, and uses this as the brand name for a new product (*e.g.*, *Slim-Fast Chocolate Cakemix by Godiva*). The study in Experiment 1 specifically examines the effect of attribute level complementarity between two constituent brands with respect to the following: 1) the manner in which consumers form a concept (*i.e.*, attribute salience and performance levels) of a composite brand extension; 2) the respective roles for each constituent brand in consumers' formations of the composite concept; and 3) whether the composite brand extension is a more viable branding strategy than a direct extension (*i.e.*, *Slim-Fast chocolate cakemix*) in facilitating favorable reactions to the extension product and in generating positive feedback effects upon the original constituent brands. The study in Experiment 2 explores the impact of attitudinal favorability toward the modifier brand versus attribute level complementarity on the effectiveness of the composite brand extension strategy. The results in both experiments revealed important benefits to the composite brand extension strategy when attribute levels are complementary.

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INTRODUCTION

A brand name is a basic element of a firm's market offering, one that facilitates consumers' understandings of its characteristics. It serves as an encoding and retrieval cue for brand-related information (Cohen and Basu 1987). It signals the often intangible product properties that must otherwise be learned through experience or taken on faith (Erdem 1993). It also serves as a powerful heuristic cue for evaluation and choice decisions (Jacoby, Olson, and Haddock 1973; Park and Lessig 1981). The brand name thus potentially has significant strategic impact upon long-term brand performance, going far beyond its role as a sub-element of the marketing mix (Park, Jaworski, and MacInnis 1986).

Strategic implications of branding strategies have, increasingly, been addressed in the broader context of *brand equity*. Previous research has dealt with line and brand extension decisions whose purpose is identifying when such decisions will induce favorable evaluations of extension products (Aaker and Keller 1990; Bousch and Loken 1991; Broniarczyk and Alba 1994; Dacin and Smith 1994; Minnesota Consumer Behavior Seminar 1987; Park, Milberg, and Lawson 1991) and whether or not such extensions result in negative feedback effects upon the original brand (Keller and Aaker 1992; Loken and Roedder John 1993; Romeo 1991). Such research has primarily focused upon issues of *fit* between the brand and extension product categories (*e.g.*, a *Honda* Lawnmower). Although additional branding ideas (Bridges 1990; Farquar 1989; Schmitt and Dube 1992) have been suggested previously, relatively little attention has been paid to other possible branding strategies that may offer cost efficiency and competitive advantage.

One such branding strategy is examined in the present study. It involves combining two existing brand names to create a composite brand for a new product. For instance, in the case of a fictitious example, *Slim-Fast chocolate cakemix by Godiva*, the two firms (brands) might ally themselves to enter a new product-market by sharing manufacturing and marketing expertise. We term this a ***composite brand extension*** (CBE) strategy. Examples of this branding strategy currently include "*Healthy Choice cereal by Kellogg's*" and "*Special K frozen waffles by Eggo*".

One can think of many reasons why firms or brands might form an alliance to market a new product using a CBE strategy. Consider *Slim-Fast chocolate cakemix by Godiva*. *Slim-Fast* diet food products are currently targeted to a mass market and already have extensive distribution. *Slim-Fast*, whose products have been associated more with dieting and weight loss, may find cakemix as a suitable product for its extension. It may, however, find the general perceptions of bland taste for its products as a main obstacle for market penetration in the cakemix category. *Godiva* chocolates' strength in delivering superior taste may highly complement *Slim-Fast's* products. This association may allow *Slim-Fast* to extend its name to other products with greater success than by a direct extension or sub-branding. By indirectly associating the *Slim-Fast* name with *Godiva*, it may also be possible to improve the original image of *Slim-Fast*. Due to its snobbish appeal to a select market, limited distribution outlets, and strong identification with boxed chocolates, *Godiva*, on the other hand, may not wish to market a new cakemix with mass appeal. It may nevertheless want to convey a healthier connotation by reducing the perception of high fat and calorie content through its association with a brand without such image. In addition, it may seek to generate additional revenue by licensing its name to other products. An alliance with *Slim-Fast* may help *Godiva* address such wishes. Finally, viewing a brand from a signaling perspective (Spence 1974; Wernerfelt 1988) suggests that two brand names may provide greater assurance about product quality than can one alone. The presence of the second brand on a product may signal buyers of the product that another firm is willing to place its reputation on the line. If such a relationship can be one in which both firms gain, an alliance makes sense.

This type of alliance may, however, raise questions concerning *Godiva's* brand image, such as possible negative feedback effects on the high status brand resulting from its combination with the (lower status) *Slim-Fast* name or from its association, albeit indirectly, with a product catering to a mass market. Customers may be confused about the combination of seemingly inconsistent characteristics of the two brands (*Godiva* as a brand primarily associated with expensive, high-calorie boxed chocolates and *Slim-Fast* as an inexpensive, low-calorie diet food). Such confusion, if it exists, could damage the images of both brands.

The potential benefits and risks involved in brand alliances need to be identified and approached both theoretically and tested empirically. Given the increasing attention by

marketing managers to the concept of "strategic alliances," this is a particularly important issue. "Brand alliances" may be the ultimate form of cooperation between two firms in the sense that they make their relation highly visible and possibly stake their reputations upon its outcome. Our limited knowledge of the benefits and risks may be leading to inappropriate alliances. Moreover, while favorable consumer evaluations may be obtained by providing information in advertisements regarding the bases for fit between a parent brand and its extension (Chakravarti, MacInnis and Nakamoto 1990), the effectiveness may be enhanced when the brand name itself also conveys information about the fit between the two. Considering the powerful role of consumers' intuitive beliefs in attribute inference making (Broniarczyk and Alba 1994), composite branding may serve such purposes well.

To study the potential impact of brand alliances on consumers, we conducted a series of pretests and two main studies. In Study 1 we examined the effect of attribute level complementarity between two constituent brands with respect to the following: 1) the extent to which recent theoretical developments, *e.g.*, "concept combination" theory, could prove useful in helping predict the concept of a composite brand from the concepts of its constituents; 2) the respective roles of each constituent (partner) brand in consumers' formations of a composite concept; and 3) the conditions under which the CBE may be more effective than a direct extension in extension evaluation and in generating positive feedback effects upon the original constituent brands. In Study 2 we explore the impact of attitudinal favorability toward the modifier brand versus attribute level complementarity on the effectiveness of the composite brand extension strategy.

STUDY 1

THEORY

General. While a brand may be understood in terms of a set of attributes, each at particular performance levels, an intriguing question concerns the process by which one forms a composite concept from two or more brands. Toward this end, the present study relies upon a theory of concept combination (Cohen and Murphy 1984; Hampton 1987; Medin and Shoben 1988; Murphy 1988) which has posited a process of composite concept formation and provided

empirical support. From the composite concept combination literature, we note two models which have been hypothesized to account for the composition process: the selective modification model (Smith, Osherson, Rips and Keane 1988). and the concept specialization model (Brachman 1979; Cohen and Murphy 1984; Finin 1980; Hampton 1987; Murphy 1988). The selective modification model was developed in the context of adjective-noun conjunctions (*e.g.*, blue ocean, red apple) while the latter was developed in the context of noun-noun conjunctions (*e.g.*, pet rock, apartment dog, ocean picture, *etc.*). Since the present study examines the noun-noun types of composite concept, we focus upon the concept specialization model to guide the present work (although the two models share many relevant characteristics). This model appears to be robust and possesses considerable empirical support. It not only explains the process of noun-noun but also of adjective-noun composite concepts (see Murphy 1988). The relationship between two independent concepts in the concept specialization model may be described in terms of the modifying concept (*i.e.*, the modifier) and the modified concept (*i.e.*, the header). The last concept in a noun-noun compound is generally the "header" and the earlier concept acts to modify it (Murphy 1988). To illustrate, in the case of the composite concept "apartment dog," *apartment* is the modifier and *dog* is the header. As will be elaborated shortly, header and modifier concepts interact to form a unique meaning for the composite concept (apartment dog is different from either apartment or dog).

While the present study is guided by the composite concept theory, as will be described in the hypothesis development section, there are several areas of difference relevant to the CBE application which the composite concept formation literature does not address. Specifically, since brands are the purposeful creations of firms, their meaning is affected by the marketing actions of those firms rather than arising more "naturally." The CBE application, thus, requires an adaptation of the composite concept models.

First, while determination of header and modifier concepts is reasonably straightforward in the composite concept examples used in the literature, it is not always as clear in the case of the CBE. Specifically, for adjective-noun composite concepts, adjectives always modify the noun as a header (Smith *et al.* 1988) and, as noted earlier, for noun-noun composite concepts the first noun modifies the second noun as a header (Murphy 1988). For the CBE whether consumers will interpret the noun preceding a preposition such as "by" or

"from" as a header or modifier may not be as clear. This is because the header and modifier in the CBE description may be determined partly by such criteria as linguistic usage precedence, the relative salience of the two brands, or which brand has more operative control of the product. Moreover, through advertising and packaging a firm can [at some cost] suggest the relationship it intends, even if this would contradict the conclusions a consumer may have reached without such information. Thus with verbal descriptions involving brands, simple rules may not adequately describe all cases. This is not to say, however, that the relative ordering does not matter; the "by" suggests that the brand following may act as an agent that modifies the brand preceding the preposition. While acknowledging multiple determinants for header and modifier roles, we identified based upon the pretest results (see the methods section) that in the context of the present study the relative ordering determines the header and the modifier position; the header is the noun preceding the preposition "by", and the modifier is the noun following.

Second, an issue may be raised concerning the degree of processing equivalence between composite concepts and CBEs, *i.e.*, how well the process of interpreting a CBE may be explained by composite concept theory. The two differ somewhat because a composite concept typically involves two concepts (e.g., apartment and dog) while the CBE involves three concepts (e.g., *Slim-Fast*, *chocolate cakemix*, and *Godiva*). We propose that interpreting the CBE involves an intermediate step before the composite concept formation process: a nested concept formation process ("idiomatic" concept formation, according to Murphy 1988). A nested concept formation process occurs when a value of the salient attribute of the nested concept assumes the value of the same attribute of the nesting concept. For this to occur, the nesting concept must have less variability on the attribute in question than does the nested concept. In effect, the nesting concept serves to identify the specific value of that attribute for the nested concept. Going back to our earlier example of *Slim-Fast chocolate cakemix by Godiva*, one may think of chocolate cakemix as being nested under the *Slim-Fast* concept. Because of its more general nature (*i.e.*, product category) the concept "*chocolate cakemix*" has greater variability on the attribute "*calorie*" than does the concept of *Slim-Fast* (*i.e.*, a specific brand within a product category). Thus, when *Slim-Fast* and *chocolate cakemix* are combined to form the concept of *Slim-Fast chocolate cakemix*, the value of the *calorie* attribute in *Slim-*

Fast (i.e., *low calorie*) serves to identify the specific value of that attribute for the *chocolate cakemix* concept. Therefore, the nested concept formation is characterized by a one-way value transfer from the nesting concept to the nested concept for salient attributes, but not the converse.

Once a nested concept is formed, it can then be combined with another independent concept, following the process of composite concept formation. Specifically, in the case of the composite concept the header and modifier concepts have their own attributes that differ in salience from each other, and the values of those salient attributes have similar variability, their values sometimes conflicting with each other (e.g., ocean land). In this case, an individual may not be able to simply define the attributes of the header concept using the values of the modifier concept since there already exist some fixed values for certain attributes in the header. For example, let us suppose that *Slim-Fast chocolate cakemix*, a nested concept, is combined with *Godiva* to create *Slim-Fast chocolate cakemix by Godiva*. In this example one may still consider *calorie* as a salient attribute. The values of this attribute for *Slim-Fast* and *Godiva* are relatively fixed in an opposing direction (low and high in *calorie*, respectively). An individual, thus, needs to come up with a reasonable way to resolve the conflict and to combine the different existing attribute information of the header and modifier such that the composite is understood in a coherent manner. As will be elaborated in the hypothesis development section, this conflict resolution involves a two-way interactive process of two independent concepts (i.e., a comparison of the relative salience of an attribute to the two brands, and an examination of their roles in the composite).

The above discussion suggests that when nested and independent concepts co-exist in a combination, an individual is more likely to process the nested concept first before combining it with another independent concept. This is expected because the nested concept formation process, in general, requires an individual to expend less cognitive effort than does the composite concept formation process. Accordingly, in evaluating the *Slim-Fast chocolate cakemix by Godiva* case, consumers may follow a sequence where *Slim-Fast* and *chocolate cakemix* are processed first to form the nested concept, *Slim-Fast cakemix*, and then that nested concept is modified by *Godiva* to form a composite concept. It should also be noted that the composite brand extension approached in this two-step process differs from the approach

taken by Schmitt and Dubé (1992). While their brand extension framework relies on concept combination theory, they approached the nested concept (e.g., Slim-Fast cakemix) from a concept combination theory perspective while the present study approaches the concept combination theory from the view of combining two independent concepts (see also Murphy 1988 for this distinction).

Third, the nature of the relationships between individual constituent brands, and between these and the extension product, needs to be operationalized more specifically in the case of the CBE. While the concept specialization model assumes a fit between individual concepts (*i.e.*, there exists a basis for relating the two), it does not deal with the strategic objectives that are often a part of brand alliances. The two brands should have a high degree of product-level fit with the extension product such that there is maximum transfer of relevant information from individual constituent brands to the extension product (Aaker and Keller 1990; Park *et al.* 1991). It would not make sense to utilize a CBE strategy where consumers do not understand the relationship between the characteristics of the two brand names and the characteristics of the extension product (*i.e.*, the brand names to extension product relationship). They also should be complementary to each other in their attribute salience and performance levels. Complementarity is judged to be present when (1) two brands have a common set of relevant (but not necessarily salient) attributes, (2) two brands differ in attribute salience such that attributes not salient to one are salient to the other, and (3) the brand for which the attribute is salient possesses a greater performance rating (on that attribute) than the brand for which the attribute is not salient. An alliance would make sense when the two brands are complementary in the sense that performance-level strengths and weaknesses of their relevant attributes mesh well (*e.g.*, *Godiva's* excellent taste compensating for the poorer taste perceptions of *Slim-Fast*; *Slim-Fast's* low calories offsetting somewhat the high calorie image of *Godiva* chocolates).

HYPOTHESES DEVELOPMENT

Concept Formation for the CBE. Although composite concept formation is based upon the combination of header and modifier concepts, the composite may be different from the sum of its parts (Hampton 1987; Lakoff 1985; Murphy 1988; Murphy and Medin 1985). While

both Hampton (1987) and Murphy (1988) shared a similar view regarding non-additive formation of attributes for the composite, Hampton (1987) specified the process by which attribute levels for a composite concept are formed: attribute-level selection for a composite concept is based upon a union rule, subject to necessity and impossibility criteria.¹ Specifically, according to this rule, if an attribute is (not) salient to both constituent concepts it also becomes (not) salient to the composite concept. However, if an attribute (*e.g.*, low calorie) is highly salient for one concept (*e.g.*, *Slim-Fast cakemix*) but not the other (*e.g.*, *Godiva*), then a maximum rule applies, where it also becomes salient to the composite concept (*e.g.*, *Slim-Fast Cakemix by Godiva*)². If an attribute is judged logically impossible for one constituent, then a minimum rule applies, and the salience of that same attribute for the other constituent will have no effect on its salience for the composite concept.³ For attribute salience in the mid-range, the combinatorial formula approximates an averaging rule, whereas at either end of the scale it allows the more extreme score to dominate. While the minimum and averaging rules are rather straightforward, the maximum rule requires further discussion and has important implications for evaluation of the composite brand.

Specifically, research on the nature and categorization of concepts suggests that there exists a set of core attributes in the concept that constitutes its definition and is the most essential and central set of attributes for understanding that concept (see Eysenck and Keane 1990; Miller and Johnson-Laird 1976). Core attributes of a concept are thus very difficult to change and are highly influential in changing the meaning of other concepts when they are combined. Therefore, attributes highly salient for the header concept (*i.e.*, its core attributes) should remain unaffected by the low salience of the same attributes of the modifier (Murphy 1988; Smith *et al.* 1988). If, however, an attribute is not salient for the header, but is salient for the modifier concept, the latter's attribute salience should influence upward the former's in the composite concept (Brachman 1979; Finin 1980; Murphy 1988). This leads to Hypothesis 1-a. Moreover, we also expect the same outcome with respect to perceived attribute performance levels (Hampton 1987) as attribute salience. When a composite concept takes on salient attributes, either from the header or modifier concept, we expect the composite concept to approximate the performance levels of those attributes (the maximum rule). Specifically, if the attribute is highly salient for the header concept, its perceived performance level will not

be affected by the performance level of the same attribute in the modifier concept. However, the performance levels of non-salient attributes in the header are influenced by the performance levels of the same salient attributes in the modifier concept (Thagard 1984). This leads to Hypothesis 1-b. Thus, we propose:

Hypothesis 1-a: When an attribute is highly salient to at least one of the constituent brands, it is also highly salient to the CBE, and

Hypothesis 1-b: When either one of the constituent brands is perceived to perform well on a highly salient attribute, the perceived attribute performance level of the composite brand is also high.

Differential Effect of Header and Modifier Brands. It was noted earlier that the salience and performance levels of an attribute of one constituent brand, when greater than that of the other constituent brand, influence the formation of the attribute salience and performance levels of the CBE (Hampton 1987). Therefore, it could not matter which brand serves as a header or modifier insofar as its effect upon perceived attribute salience and performance levels of the CBE is concerned. Yet, we might still expect a different influence from header and modifier brands on the CBE (*i.e.*, an asymmetric structure - Murphy 1988; Smith *et al.* 1988). To be more specific, according to Hampton (1988) and Storms, et al. (1993), formation of attribute information for a composite concept is based more upon the dominant concept than the dominated one; this is called a "dominance effect". Since, as indicated earlier, the extension product is identified with the header brand in the CBE, we expect the header to become more dominant in understanding the CBE than the modifier brand. It would still be understood as a member of the header category. The formation of attribute information for the CBE would, thus, be based more upon the header than the modifier brand, and this causes an asymmetric effect.

Referring to our example, "*Slim-Fast cakemix by Godiva*," this composite takes on the most salient attributes of *Slim-Fast*, the header brand. It becomes a low calorie, low fat, "diet" cakemix. One may also select the taste attribute from *Godiva* as an appropriate attribute to modify the meaning of *Slim-Fast* cakemix in order to produce a meaning of the CBE that is coherent to both constituent brands. While the taste attribute may thus become more salient in "*Slim-Fast cakemix by Godiva*," the CBE's most salient attribute is still its low calorie, diet

attribute. One may think of this CBE as a Godiva-like *Slim-Fast* cakemix (i.e., still *Slim-Fast*). Similarly, "*Godiva cakemix by Slim-Fast*" may be initially understood as a *Godiva* cakemix, rich in taste and luxury. While the low calorie attribute may be selected from the "*Slim-Fast*" concept to augment the characteristics of this cakemix, it is still a *Godiva* cakemix, possessing taste as its most salient attribute. Therefore, we expect the taste attribute in the example of "*Godiva cakemix by Slim-Fast*" to be more salient than in the example, "*Slim-Fast cakemix by Godiva*"; and the low calorie attribute should be more salient in the example, "*Slim-Fast cakemix by Godiva*," than in the example, "*Godiva cakemix by Slim-Fast*." Consequently, we expect that the attributes salient to a constituent brand will be more strongly associated with the composite brand in which the constituent brand serves as a header than the one in which it serves as the modifier. This reasoning gives rise to:

Hypothesis 2: An attribute regarded as highly salient and/or high performing in a constituent brand has a greater effect upon the corresponding characteristic of the composite brand when that constituent brand serves as the header than when it serves as the modifier.

Effectiveness of the CBE Strategy. According to Hypotheses 1-a and 1-b, a modifier brand highly complementary to the header brand in attribute salience and performance levels makes relevant but non-salient attributes of the header brand salient and replaces their weak attribute performance levels with its strong ones. Consumer reactions to the CBE should, therefore, be more favorable than their reactions to the direct extension of the original header brand (i.e., *Slim-Fast cakemix*). This leads to:

Hypothesis 3: When the modifier brand is highly complementary to the header brand in attribute salience and performance levels, a CBE strategy leads to more favorable reactions to the extension product than does a direct brand extension.

CBE and Feedback Effects. Given the advantages noted earlier for the CBE, a logical question is whether or not the CBE benefits (or possibly even harms) the original constituent brands, i.e., offers positive (or negative) feedback effects. In order to address this issue, we examine the relative roles of the two constituent brands in forming the composite concept.

According to the logic behind Hypothesis 3, the header should be more closely related to the composite brand, becoming more dominant than the modifier brand and bearing greater

similarity to the CBE. One may, thus, assume that the CBE is more directly associated with the header than with the modifier brand, i.e., being understood as a member of the header brand category. Because the modifier brand only alters some aspects of the header (Hampton 1987, 1988; Murphy 1988; Smith *et al.* 1988), a consumer is unlikely to associate the CBE directly with the modifier brand.

If the composite brand is primarily associated with the header brand, it may also affect the perceived attribute characteristics of the original header brand. Specifically, since the CBE differs from the original header brand in the salience of attributes as well as their performance levels, the attribute characteristics of the header brand may change, due to its association with the CBE through the process of **accommodation** (Crocker, Fiske and Taylor 1984; Rumelhart and Norman 1978). Given the higher performance levels of the CBE versus the header brand, this accommodation should then lead to positive changes in the original attribute characteristics of the header, such that it becomes more consistent with the positive information implied by a CBE.

While positive feedback effects on the header brand are likely, feedback effects on the modifier brand are more difficult to predict. It was noted earlier that the modifier brand would not be directly associated with the CBE, being relatively independent from the CBE. As such, one may not expect the same degree of feedback effects of the CBE on the modifier brand as on the header brand. Referring again to the example of "*Slim-Fast cakemix by Godiva*," one may expect Godiva to *simply* modify the taste performance of *Slim-Fast cakemix* while still perceiving *Godiva* to be a prestigious brand of boxed chocolates with its reputation for "good taste" intact. It may, however, be argued that the attribute characteristics of the modifier brand are still affected positively or negatively by the CBE, depending on the nature of attribute complementarity. For example, if the header brand were highly complementary to the modifier brand on some attributes where the former is weak (strong) and the latter is strong (weak), the attributes of the latter may be negatively (positively) affected through its sheer association with the former. Because of this conflicting possibility, we only predict positive feedback effects of the CBE on the header brand:

Hypothesis 4: When a modifier brand is highly complementary to a header brand in terms of attribute salience and performance levels, the CBE strategy leads to positive

feedback effects upon the header brand.

It should be noted that since previous hypotheses (Hypotheses 3 and 4) addressed the issues related to the CBE under the high attribute level complementarity condition, it is also of interest to investigate the same issues under a low complementarity condition. The present study, thus, examines those issues under such a condition (i.e., "*Slim-Fast cakemix by Chunky*"). Since it is rather straightforward to expect a lack of effectiveness of the CBE when the modifier brand is not complementary to the header, a formal hypothesis is not, however, offered.

METHOD

Development and Pretesting of Stimulus Materials. In order to find a reasonable extension product class and appropriate brands from which to form CBEs, a series of pretests were performed. Moreover, in order to test the hypotheses, nine between-subjects experimental groups and three control groups were involved in Study 1 (see Table 1). All subjects were graduate business students enrolled in a large northeastern university. Three stages of pretesting were required to develop appropriate stimulus materials and manipulations.

Pretest 1: The objective of this pretest stage was to identify appropriate brands and an extension product for the CBE and to generate a set of product attributes relevant to the three product classes involved in the study - the extension and two constituent products. Based on informal interviews with student subjects (n=5), we chose *Slim-Fast* dietfood since it was well known, with both weaknesses (e.g., taste) as well as strengths (e.g., low calories) in its associations. We chose cakemix as an extension product because it was perceived to fit well with *Slim-Fast* (a normally high caloric product category where a reduced calorie version might be plausible). Then, the *Godiva* (chocolates) brand was selected as another constituent brand for a CBE since it was believed appropriate to the cakemix product class in taste and at the same time to have compensating associations with *Slim-Fast* (e.g., good taste, richness, luxury, etc.). Given these choices as primary stimuli in this study, we conducted a pretest to verify the rationale used in their selection. First, one group (n=20) of subjects were asked to indicate on a 7-point scale (scale values in an ascending order) their degree of familiarity with the *Slim-Fast* and *Godiva* brands. Subjects exhibited high and equivalent familiarity with the

Slim-Fast ($\bar{x}=5.28$) and *Godiva* ($\bar{x}=5.21$) brands (both means were statistically indistinguishable and significantly greater than the 4.0 mid-point of the seven-point scale, $p<.05$, one-tailed test). Second, the same subjects were asked to indicate their attitudinal predispositions toward *Slim-Fast* and *Godiva* on two 7-point scales: ("likeability" and "favorability"). Attitude measures of the constituent brands were obtained to ensure that they were not highly unfavorable, because effectiveness of the CBE may be limited with highly unfavorable brands. Moreover, it was also thought that attitudes of the header brand should not be highly favorable in order to avoid any potential ceiling effect. Since the two items used were highly correlated ($r=0.94$), they were averaged to obtain a single measure of attitude toward the brands. This measure indicated that subjects had near neutral attitude toward *Slim-Fast* and highly favorable attitude toward *Godiva* ($\bar{x}=3.94$ and $\bar{x}=5.41$, respectively; $p<.01$).

Third, to examine the level of complementarity between the two brands, the same subjects were asked to provide salience and performance level ratings for each brand on each of a number of attributes, again using 7-point scales.⁴ In terms of attribute salience, all listed attributes were salient for at least one of the two brands, *Slim-Fast* and *Godiva* (significantly greater than the scale midpoint of 4.0, at $p<.05$). In terms of the attribute performance levels among those salient attributes, *Slim-Fast* and *Godiva* highly complemented each other. *Slim-Fast* was more positively associated with the salient "low calorie" and "low fat" attributes while *Godiva* was more positively associated with the salient "good taste," "richness," "attractive package," and "luxury" attributes (highly rated attributes were those with mean ratings significantly greater than 4.0 at $p<.05$; also see the results of Study 1 for added confirmation evidence).

Finally, to check the perceived fit between each brand and the cakemix product (*i.e.*, to determine whether cakemix would readily accommodate the primary characteristics of the *Slim-Fast* and *Godiva* brands), the same group of subjects were asked to rate the sensibility of cakemix products on a 7-point extendability scale as a potential extension of *Slim-Fast* ($\bar{x}=6.27$, greater than 4.0 at $p<.05$) and *Godiva* ($\bar{x}=5.89$, greater than 4.0 at $p<.05$). The results showed a high degree of perceived fit between each brand and the extension product class. They also suggest *Godiva's* good fit with *Slim-Fast* cakemix as a nested concept since *Godiva* is complementary to *Slim-Fast* and fit well with chocolate cakemix.

Pretest 2: The objective of this pretest was to identify the role of "by" used in this study to create composite brands. A group of Ss (n=34) were asked to judge the degree of association of the composite brands with the constituent brands on two 7-point scales (i.e., 1=*still Godiva* to 7=*still Slim-Fast*; 1=*associated more with Godiva* to 7=*associated more with Slim-Fast*), which were highly correlated ($r=0.95$). Those who were exposed to the "*Slim-Fast cakemix by Godiva*" composite associated it strongly with *Slim-Fast* ($\bar{x}=5.76$) and those exposed to the "*Godiva cakemix by Slim-Fast*" composite associated it strongly with *Godiva* ($\bar{x}=2.46$). In both cases the composite brand was more strongly associated with the brand positioned before "by" than the brand positioned after ($t=10.45$, $p<.01$). These results suggest that the composite brand is associated more closely with the header than with the modifier brand.

Pretest 3: The objective of this pretest was to select a brand as a modifier that is not complementary to a header. This was done in order to compare the influences of better and poorer modifiers in complementarity on consumer reactions to CBEs and their subsequent feedback effects. Since one of the CBEs examined in Study 1 was "*Slim-Fast cakemix by Godiva*," we decided to identify another CBE in which *Slim-Fast* serves as a header brand and another brand serves as a modifier which is not as complementary to *Slim-Fast* as was *Godiva*. We selected the *Chunky* (chocolate bar) brand as a modifier brand from among a limited number of candidate brands, based upon informal interviews with student subjects (N=6). It was thought to be well-known, possess good fit with cakemix products, and less able to compensate for the weaknesses of *Slim-Fast* than was the *Godiva* brand. We verified these conditions from a group of student Ss (n=22) using the same measures as were used in the earlier pretests. The result showed that Ss were quite familiar with the *Chunky* brand ($\bar{x}=5.12$; significantly greater than the scale midpoint, $p<.05$). The *Chunky* brand had few strong attribute associations and thus was less compensating for *Slim-Fast* weaknesses than was the *Godiva* brand.⁵ Ss also perceived cakemix products to be a reasonable extension for *Chunky* ($\bar{x}=5.95$, significantly greater than 4.0, $p<.05$). However, Ss were much more favorably disposed toward *Godiva* than *Chunky* ($\bar{x}=5.62$ and $\bar{x}=4.03$, respectively; $p<.05$). Empirically, there did not appear to be a modifier brand that was as weak as the header brand on salient attributes but much more favorable in attitudes than the header brand. In comparing the results

of the "*Slim-Fast cakemix by Godiva*" CBE with those of the "*Slim-Fast cakemix by Chunky*", this difference in attitudinal favorability should, however, be taken into consideration. Note that for all three brands (*Slim-Fast*, *Godiva*, and *Chunky*) the variation of subjects' familiarity scores was small ($s_x=0.23$, $s_x=0.27$, and $s_x=0.29$, respectively), which supports analyses based upon aggregate data.

Subjects. 342 graduate business students participated in Study 1. They were run in small groups and randomly assigned to one of the twelve conditions (three control groups and nine experimental groups) described in Table 1. Ss in direct or CBE conditions received only one proposed extension in order to preclude any confounding effect. Ss in control groups provided responses for the *Slim-Fast*, *Godiva*, and *Chunky* brands, in the absence of exposure to any direct extension or CBE.

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INSERT TABLE 1 ABOUT HERE

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Experimental Procedure and Measurement. Ss completed questionnaires which included a brief cover story explaining that the survey was designed to determine consumers' reactions to different types of products and brands (for control groups) or to different types of branding strategies (for experimental groups). Prior to opening the questionnaire, Ss were instructed not to go back to any previous page. Having read the appropriate cover story, subjects responded to a number of questions designed to provide information relevant to the hypotheses. Ss in control groups were asked first to indicate their degree of familiarity with the brand name on a 7-point scale (1=not at all to 7=very familiar), which served as a manipulation check.

To assess the attribute saliences of all constituent brands and both extensions (the direct extensions and the CBEs), Ss in all conditions were asked to indicate on a series of 7-point scales the degree to which the eight attributes (good taste, richness, low calorie, good value, low fat, attractive package, convenience, and luxury) were or would be important when evaluating brands (*e.g.*, *Slim-Fast* dietfood, cakemix).⁶ Ss were also asked to indicate on a series of 7-point scales how well the brand (*Slim-Fast* dietfood, *Slim-Fast chocolate cakemix by Godiva*, *etc.*) performed or would perform on the same set of attributes. Ss were then asked to rate the favorableness of their attitudinal/behavioral predispositions toward the direct and

composite brands on three 7-point scales: (1) "liking," (2) "favorableness," and (3) "likelihood of purchase". The three measures produced statistically indistinguishable evaluations and thus were averaged to form the attitudinal/behavioral reaction (Cronbach's alpha \bar{x} =0.92) reported in Tables 2 - 4.

In addition, those groups exposed to the CBEs received several other questions regarding their thoughts about the composite brands. Specifically, at the beginning of the questionnaire they were asked to write down thoughts that came to mind when they first learned of the composite brand. In order to examine feedback effects of the various brand extension strategies, each of the groups exposed to either direct extensions or the CBEs were also asked again to respond to the same attribute salience, performance level, and attitudinal/behavioral favorableness questions regarding one of the constituent brands (*i.e.*, *Slim-Fast* dietfood, *Godiva* chocolates, or *Chunky* chocolate bar) after their exposure to the direct extensions or CBEs. Upon completion of the questionnaires, Ss were debriefed with an explanation of the purpose of the study and thanked.

RESULTS

Data relevant to Hypotheses 1-4 are presented in Table 2.⁷ Mean ratings on the attribute salience and performance scales are presented in Tables 2B,C for both direct extensions of the constituent brands and for the CBEs. In this table, cakemix products are used as referents (rather than dietfood and candy, respectively) in order to hold effects due to product category constant.⁸ Note that the attributes in Tables 2, 3 and 4 are listed to facilitate comparisons between *the Slim-Fast* and *Godiva* columns. The first three attributes are either more salient or higher in performance ratings (or both) for *Slim-Fast* than for *Godiva* with the opposite being true for the last four attributes.

As was true with the results of pretest 1, the data in Study 1 confirmed attribute level complementarity between the two constituent brands, *Slim-Fast* and *Godiva*. Specifically, Tables 2B and 2C provide evidence that *Godiva* cakemix is complementary in ratings of attribute salience and performance levels to *Slim-Fast* cakemix, (*i.e.*, one brand is generally rated well where the other is weak and vice versa for several salient attributes- providing a manipulation check for attribute level complementarity). For example, in terms of the ratings

of performance levels for the salient attributes, *Godiva* is rated well on the "good taste", "richness", "attractive package", and "luxury" attributes and poorly on the "low calorie" and "low fat" attributes.

Recall Hypothesis 1-a which stated that when an attribute is salient to at least one constituent brand, it is also salient to the CBE. Results are presented in Table 2B. To test this hypothesis, the constituent brands are compared with the CBE in attribute salience. First, in the case of *Slim-Fast cakemix by Godiva*, the comparison between *Slim-Fast cakemix* and the CBE in attribute salience shows that *Godiva*, as a modifier, influences the CBE in those attributes for which the mean attribute saliences of *Godiva* are greater than those for *Slim-Fast* (e.g., "richness", "attractive package", and "luxury"; indicated by the "b" superscript in the *Godiva cakemix* column). This results in increased attribute salience ratings for those particular attributes in the *Slim-Fast cakemix by Godiva* CBE. Similarly, the comparison between *Godiva cakemix* and the CBE shows that the salience ratings for the attributes of *Godiva cakemix* that are low relative to *Slim-Fast cakemix* (e.g., "low calorie", "low fat", and "good value"; indicated by the "b" superscript in the *Slim-Fast cakemix* column) became significantly higher in the CBE when *Slim-Fast* was the header. As a result, the influences of *Godiva*, as a modifier, and *Slim-Fast*, as a header, are combined into the CBE for which an attribute is salient whenever it is salient to at least one of the constituent brands. The same results are obtained when the two constituent brands are compared for another CBE, *Godiva cakemix by Slim-Fast* in a similar way. For example, the attribute "low fat" which is not salient for *Godiva cakemix* ($x=3.00$), became highly salient for the CBE ($x=5.49$) presumably due to its high salience for *Slim-Fast cakemix* ($x=6.00$). In each instance when an attribute is salient to at least one of the constituent brands, it is also salient to the CBE. Hypothesis 1 is, thus, strongly supported.

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INSERT TABLE 2 ABOUT HERE

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Hypothesis 1-b predicted the same results for attribute performance ratings as for attribute salience ratings. Table 2C provides strong support for the prediction of performance ratings of the "*Slim-Fast cakemix by Godiva*" CBE. In every instance, when at least one constituent brand is perceived to perform significantly better on a salient attribute (using the

same logic discussed for Hypothesis 1, adapted to the performance level data in Table 2C), the composite brand also performs well on that attribute (see results for the attributes, "low calorie", "low fat", "good taste", "attractive package", "richness" and "luxury"). A similar pattern of the results also occurs for the CBE, *Godiva cakemix by Slim-Fast*. Hypothesis 1-b is, thus, also supported.

Hypothesis 2 predicted a greater effect of the header brand than of the modifier on the composite brand. Table 2C contrasts the mean attribute salience and performance levels of the constituent brands, *Slim-Fast* and *Godiva*, with those of the two CBEs formed from these constituents. Consistent with the hypothesis, attributes significantly better performing in one constituent brand over the other (indicated by the "b" superscript in the *Slim-Fast* or *Godiva* cakemix columns) turn out to be better performing in the CBE when that brand serves as the header rather than the modifier (indicated by the "c" superscript in the CBE columns). For example, "low calorie" is a high performing attribute for *Slim-Fast* ($\bar{x}=6.23$), but not for *Godiva cakemix* ($\bar{x}=2.00$). The "low calorie" attribute becomes a better performing characteristic of *Slim-Fast by Godiva* than when *Slim-Fast* serves as the modifier in *Godiva by Slim-Fast* ($\bar{x}=6.14$ and 4.92 , respectively; $p<.05$). The same pattern of results is revealed for other high performing attributes (e.g., see also "richness," "good value," "low fat," and "luxury") and also holds for attribute salience (see Table 2B). The only exception in the case of attribute salience is "attractive package," where results, while not significant, are in the hypothesized direction.

In addition, subjects' "thought responses" regarding the two CBEs offer further evidence regarding the role of header and a modifier brands in processing the CBE. Although these responses were of many different types due to the nature of the unstructured question, Study 1 identified two mutually exclusive categories relevant to the issue of the role of the constituent brands in the processing of the CBE.⁹ They are, as follows:

Category 1. Describing the extension product using either *Slim-Fast* or *Godiva* characteristics only (e.g., "low calorie cakemix" or "sweet and expensive cakemix"), or

Category 2. Describing the extension product in terms of a *Slim-Fast* cakemix with *Godiva* characteristics (e.g., "diet cakemix with good taste," "weight control with fine

taste, "it's good for health and tastes good") or *Godiva* cakemix with *Slim-Fast* characteristics (e.g., "quality dessert, but not high calorie," "good chocolate product with low calories," "rich but non-fattening").

All statements not assigned to either of these two categories above were assigned to an "other" category.¹⁰ An examination of the frequencies of occurrence of the above categories in both groups reveals an order and structure in their descriptions of the CBE. Specifically, the extension product was either solely described in terms of the header brand (see category 1 in the "*Slim-Fast cakemix by Godiva*" group) or primarily described in the context of the header brand, while incorporating characteristics of the modifier brand (see category 2 in both groups). That is, 26 statements in the "*Slim-Fast cakemix by Godiva*" group identified the extension product in terms of the *Slim-Fast* brand (11 and 15 statements for categories 1 and 2, respectively) while only 8 identified it in terms of the *Godiva* brand (4 and 4 statements for categories 1 and 2, respectively). In the "*Godiva cakemix by Slim-Fast*" group, 25 statements identified the extension in terms of the *Godiva* brand (5 and 20 statements for categories 1 and 2, respectively) while only 6 statements identified it in terms of the *Slim-Fast* brand (3 and 3 for categories 1 and 2, respectively). This frequency distribution pattern significantly differs from a chance level (Chi-square test, $\chi^2=4.60$, $p<.05$). The results are thus consistent with those from the pretest and suggest it is the header brand with which the extension product is identified.

It is particularly interesting to note that in both the *Slim-Fast cakemix by Godiva* and *Godiva cakemix by Slim-Fast* groups, no subject mentioned the fit between either the *Slim-Fast* or *Godiva* brand and the extension product. Ss appeared to process the extension product as a part of the header brand without much elaboration. The processing of the nested concept (e.g., *Slim-Fast cakemix*) does not seem to require much cognitive effort so long as there is some basis for fit between the two. Moreover, processing the extension product as an extension of the header brand is consistent with the rationale for Hypothesis 2. Finally, assuming the sequence of words in Ss' responses reflects actual thought processing, the results also suggest that Ss first form a single concept based upon the header brand and extension product before adjusting its meaning using the characteristics of the modifier brand, i.e., when the *Slim-Fast* brand serves as a header, the extension product was described first with *Slim-Fast* rather than

Godiva characteristics, and *vice versa*. This is consistent with the premise of the concept specialization model and the point made earlier that the header brand is processed first, before the modifier brand.¹¹

Hypothesis 3 predicted more positive effects on subjects' reactions to the extension product from a CBE strategy than direct brand extension. Table 2A provides evidence that the composite, *Slim-Fast cakemix by Godiva*, is viewed significantly more favorably (indicated by an "a" superscript) than is the direct extension, *Slim-Fast cakemix* (\bar{x} =5.32 versus 4.08, respectively). However, when comparing the subjects' reactions to the CBE, *Godiva cakemix by Slim-Fast* (\bar{x} =5.13), with that of the direct extension, *Godiva cakemix* (\bar{x} =5.11), we note (Table 2A) no significant added contribution from the modifier brand, *Slim-Fast*. While Tables 2B and 2C show high complementarity between *Slim-Fast* and *Godiva*, the effectiveness of the CBE was supported only for "*Slim-Fast cakemix by Godiva*" but not for "*Godiva cakemix by Slim-Fast*." This result suggests that even when the two brands are complementary in attribute salience and performance, the modifier does not facilitate favorable reactions to the CBE, depending on the nature (possibly, attitude favorability) of the modifier brand. Hypothesis 3, thus, received mixed results.

Although not being supported in terms of its overall effectiveness, the results of attribute level information for the "*Godiva cakemix by Slim-Fast*" CBE show interesting changes when compared to *Godiva cakemix*. For example, the modifier brand, *Slim-Fast*, influenced the attribute performance level ratings of *Godiva cakemix by Slim-Fast*, as shown in Table 2C (see "low calorie" and "low fat"). While such changes did not apparently extend to the S's favorable reactions, the *Slim-Fast* modifier apparently caused attribute-level changes. The importance of attribute-level complementarity for the attribute performance ratings as well as the overall effectiveness of the CBE is also supported when we examine the effectiveness of another CBE in which the modifier brand was similar to the header, *Slim-Fast*, in attitudinal favorability. Specifically, it was postulated before, although not as a formal hypothesis, that when both header and modifier brands are not complementary to each other (e.g., *Slim-Fast cakemix by Chunky*), no particular benefits from the CBE strategy may be obtained in comparison with a direct extension. Tables 2B and 2C provide the evidence for poor complementarity between this modifier brand, *Chunky*, and the header brand, *Slim-Fast*, on both attribute salience and

performance (all attributes are either statistically indistinguishable or favor the header brand). Table 2A shows that S's overall reactions to the composite brand *Slim-Fast cakemix by Chunky* ($\bar{x}=3.68$) is statistically indistinguishable from that for the direct extension, *Slim-Fast cakemix* ($\bar{x}=4.08$). Table 2B and 2C show that salience and performance ratings on all attributes are also statistically indistinguishable. While the two CBEs, *Godiva cakemix by Slim-Fast* and *Slim-Fast cakemix by Chunky*, have modifier brands that are similarly moderate in attitudes ($X=4.08$ and 3.74 , respectively; see Table 2A), only the *Godiva cakemix by Slim-Fast* CBE, which has high complementarity, showed improvement on attribute level salience and performance. Although this result is consistent with the expectation of the present study, a question still remains regarding the lack of the overall effectiveness of the *Godiva cakemix by Slim-Fast* CBE. In the discussion section we offer some speculations about this result.

INSERT TABLE 3 ABOUT HERE

Hypothesis 4 stated that the CBE strategy leads to positive feedback effects upon the header brand. Table 3A provides information regarding reactions to each of the constituent brands in their original product categories, from measures taken both before and after subjects were exposed to the CBE. Ss' reactions to the header brand, *Slim-Fast*, increased by a statistically significant amount after exposure to the CBE, *Slim-Fast cakemix by Godiva*, a finding which is consistent with Hypothesis 4, whereas their reactions to the modifier brand, *Godiva*, remained essentially unchanged after exposure to the CBE. For example, evaluations of *Slim-Fast dietfood*, measured after exposure to *Slim-Fast cakemix by Godiva*, increased significantly from the before measure ($\bar{x}=4.92$ versus 3.74 , respectively; $p<.05$) whereas evaluations of *Godiva* chocolates, measured both before and after exposure to the *Slim-Fast cakemix by Godiva* composite, remained statistically indistinguishable ($\bar{x}=5.47$ versus 5.37 , respectively). There appears to be no significant negative feedback effect on *Godiva*.

An examination of attribute performance level ratings (Table 3C) offers more specific information pertinent to the above result. The measures related to the header brand, *Slim-Fast dietfood*, either significantly increased or remained unchanged after exposure to the composite brand, *Slim-Fast cakemix by Godiva*. Generally, they increased for those attributes where the modifier was more highly rated than the header brand (i.e., "good taste", "richness", and

"luxury"; indicated by the "a" superscript in the *Slim-Fast dietfood* after *Slim-Fast cakemix* by *Godiva* column). Attribute performance levels measured for the modifier brand, *Godiva* chocolate, however, do not change from the before condition to that after exposure to *Slim-Fast cakemix* by *Godiva*. The modifier brand in the CBE does not appear to be affected by either positive or negative feedback in terms of both overall evaluation and attribute performance levels. The same pattern of results is also obtained for both header and modifier brands in terms of attribute salience (see Table 3B).

In terms of feedback from the CBE, *Godiva cakemix* by *Slim-Fast*, upon the constituent brands, Table 4A indicates that the Ss' overall reactions to the header brand, *Godiva*, remained essentially unchanged after exposure to the CBE, i.e., *Godiva chocolate* measured after the CBE exposure is not significantly different from the before measure ($\bar{x}=5.15$ versus 5.47, respectively; $p>.05$). No change is also observed for the modifier brand, *Slim-Fast. Slim-Fast dietfood*, measured both *before* and *after* exposure to the *Godiva cakemix* by *Slim-Fast* composite, remained unchanged ($\bar{x}=3.74$ versus 3.64, respectively). The absence of positive feedback from the CBE upon the header brand in this condition is again inconsistent with our expectation.

Table 4C provides interesting information pertinent to the above result. For attribute performance levels, the measures (Table 3C) related to the header brand, *Godiva chocolate*, either significantly increased or remained unchanged after exposure to the CBE (Table 4C). Generally, they increase for those attributes where the modifier is stronger than the header brand (e.g., "low calorie", "low fat", and "convenience"; indicated by the "a" superscript in the *Godiva* after *Godiva* by *Slim-Fast* column). The attribute performance levels measured for the modifier brand, *Slim-Fast dietfood*, however, do not change from the *before* (Table 3C) to the *after* condition (Table 4C). The results for attribute salience show the same pattern for both header and modifier brands (see Tables 3B and 4B). Therefore, when the modifier is *Slim-Fast* rather than *Godiva*, the header brand (i.e., *Godiva*) does not improve in S's overall reactions but does improve in attribute performance levels (and salience), while the modifier brand does not appear to be susceptible to either positive or negative feedback effects in both overall reactions and attribute salience and performance levels. The discrepancy noted above between the attribute-level improvement of and the overall reactions to the CBE appears to carry over

to the feedback effects on the header brand. Hypothesis 4 thus received mixed results.

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INSERT TABLE 4 ABOUT HERE

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In terms of the feedback effect of the CBE, *Slim-Fast cakemix by Chunky*, upon the constituent brands, Table 4A shows that S's overall reactions to both the header and the modifier brands remained essentially unchanged after exposure to the CBE (Table 4A). For example, reactions to *Slim-Fast dietfood*, measured after exposure to the CBE, is statistically indistinguishable from the before measure (Table 3A: $\bar{x}=3.32$ versus 3.74, respectively) and reactions to *Chunky chocolate bar*, measured after exposure to the CBE, is also statistically indistinguishable from the before measure ($\bar{x}=3.71$ versus 3.53, respectively). For attribute performances, Table 4C indicate that the before measures for *Slim-Fast dietfood* remain statistically indistinguishable from those after exposure to the CBE. And these measures for the modifier brand, *Chunky*, also do not change from the *before* to the *after* condition. The same results are also obtained for attribute salience (see Table 4B). Thus, the difference in attribute salience and performance level ratings (Tables 3B, 3C, 4B, and 4C) are not statistically significant. Unlike the case involving the *Godiva cakemix by Slim-Fast* CBE, this result is consistent with our expectation.

DISCUSSION

The results of the present study revealed that under conditions of high fit of the constituent brands with the extension product and high attribute level complementarity between two constituent brands, the composite brand name influenced subjects' reactions to its extension product favorably by allowing salient attributes and performance levels of the modifier brand to be assimilated into the characteristics of the header brand. Specifically, in the case of the CBE, "*Slim-Fast cakemix by Godiva*", it took the best characteristics of the two brands in forming its own concept. Consequently, subjects' reactions to the extension product of the composite brand name (*i.e.*, *Slim-Fast cakemix by Godiva*) were more favorable than their reactions to a direct extension of the header brand. In addition, it had positive feedback effects upon the header brand while having no particular effect upon the modifier brand. Compared to a direct extension, it also appeared more effective in increasing favorability of

the header brand. Since chocolate is seen as an ingredient to a chocolate cakemix and *Godiva* is associated with chocolate, the "*Slim-Fast cakemix by Godiva*" CBE is more likely to be seen by Ss as *Godiva* serving as an ingredient to the *Slim-Fast* cakemix. High effectiveness of the "*Slim-Fast cakemix by Godiva*" CBE may be explained by this so-called ingredient co-branding phenomenon. Moreover, *Godiva* as a modifier brand received little feedback from it because perhaps it is not the primary component of the product to start with.

The same was not, however, found for the CBE, "*Godiva cakemix by Slim-Fast*." Although the two brands were complementary, the CBE strategy (i.e., *Godiva cakemix by Slim-Fast*) was not more effective than a direct extension (i.e., *Godiva cakemix*). In addition, there were no apparent positive feedback effects from the CBE on the header brand (i.e., *Godiva*). This is interesting because, despite an absence of improvement in the overall evaluations of the CBE, there were upward changes in salience and performance levels for some attributes of the CBE.

Contrasts in the results from the two CBEs raise two possible issues: (1) a ceiling effect and (2) favorability of the modifier brand in the CBE. Specifically, although the modifier brand was complementary to the header brand in the CBE, "*Godiva cakemix by Slim-Fast*," such complementarity effect might not be strong enough to overcome the **ceiling** effect of the header brand (i.e., *Godiva*) which was highly favorable. This may explain the lack of greater effectiveness of the CBE over the direct extension of the header brand and the lack of the positive effect on the header brand. Alternatively, independent of the attribute level complementarity, attitudinal favorability of the modifier brand might also have influenced the subjects' evaluations of the CBE. For example, through affect transfer (Cohen and Areni 1991) consumers may form favorable (unfavorable) attitudes toward the CBE when a header is linked to a highly favorable (unfavorable) modifier brand; or the header brand may become more positive (negative) after its association with the modifier brand than before its association. Since the modifier brand, *Slim-Fast*, was only moderate in attitudes, it might not have increased the effectiveness of the CBE, "*Godiva cakemix by Slim-Fast*." Following this logic, one may also explain the greater effectiveness of the CBE, "*Slim-Fast cakemix by Godiva*" over the direct extension of the header brand, "*Slim-Fast cakemix*." Since the modifier brand (i.e., *Godiva*) was highly favorable, it might also have contributed to the effectiveness of the

CBE, "*Slim-Fast cakemix by Godiva*." Thus, the role of attribute level complementarity and high favorability of the modifier brand in determining the overall effectiveness of the CBE becomes an issue. To deal with these two issues, a second study was conducted.

STUDY 2

Two alternative explanations were offered earlier for the lack of greater effectiveness of the composite, "*Godiva cakemix by Slim-Fast*," over the direct extension of the header brand, "*Godiva cakemix*" in the Ss' attitudinal/behavioral reactions and feedback effects on the header brand: (1) ceiling effect and (2) absence of highly favorable modifier brand. Study 2 is thus designed to shed some light on these issues. Specifically, the objective of study 2 is to explore relative contributions of attribute level complementarity and attitudinal favorability of the modifier brand to the effectiveness of the CBE strategy while controlling for any potential ceiling effects by incorporating comparative evaluation measures (i.e., choice and preference). No formal hypothesis is, however, offered due to the difficulty to conceptually justify a priori the difference in their respective contributions.

In Study 1, the results revealed that the attribute complementarity of a modifier is an important factor for the effectiveness of the CBE strategy since it enables the CBE to have better attribute profile than the direct extension of its constituent brands, which may subsequently lead to more favorable reactions to the CBE. Alternatively, previous research (see Cohen and Areni 1991) also found strong effects of overall affect toward one object on the evaluation of another object when they are arranged together temporally or spatially (e.g., affect transfer), which may indicate the potential effects of attitudinal favorability of a modifier brand on the CBE. In addition, there is still another possible effect of attitudinal favorability of a modifier. It is that, being paired with the header brand, it may reduce consumers' perceived uncertainty in evaluating and purchasing a new product. For example, when a header brand is combined with a high affect modifier brand, consumer evaluation of the CBE may increase due to the reduction in uncertainty from having a favorable brand name associated with the product. If this is the case, the attitudinal favorability of a modifier brand may become an important contributor to the effectiveness of the CBE strategy.

Examining the effects of attitudinal favorability of a modifier brand on the effectiveness of the CBE, independent of the effects of the attribute level complementarity, would require a full factorial research design (i.e., different degrees of attitudinal favorableness toward header and modifier brands, and different degrees of attribute complementarity while meeting the condition of high fit). There, however, exists a conceptual problem in conducting this research design when the header brand is not favorably evaluated. Specifically, in such cases, it is not realistic to find two orthogonal conditions of attribute complementarity and attitudinal favorability. For example, suppose that "*Slimfast*" (dietfood), which was not favorably evaluated in Study 1, is a header brand and we need to find out two other brands that are orthogonal to each other in the two factors: complementarity and favorability. First, if a modifier brand is *favorably evaluated* (e.g., "*Godiva*"), it means that the brand has some strong attributes (e.g., good taste). Then, for the header brand (e.g., "*Slimfast*") not to be *complementary* with this brand, the header should also be perceived to be strong on the same attributes (good taste), otherwise the strong attributes of the modifier can compensate for the weak ones of the header. But, it is empirically difficult to identify a moderately favorable header brand and a highly favorable modifier brand while they both are similarly strong or weak in attribute characteristics.

In contrast, when the header brand is evaluated favorably, it becomes possible to identify the two orthogonal conditions. We thus came up with two conditions: in one condition both header and modifier brands are highly favorable, but not complementary to each other (i.e., "*Godiva cakemix by Haagen-Daazs*"), and in another condition the modifier is complementary to but not as favorably evaluated as the header (i.e., "*Godiva cakemix by Slimfast*"). By comparing the effectiveness of the "*Godiva cakemix by Haagen-Daazs*" CBE to that of the "*Godiva cakemix by Slim-Fast*" CBE, it may be possible to explore the relative contributions of attribute level complementarity and attitudinal favorability of the modifier brand to the overall effectiveness of the CBE.

In comparing the two CBEs, one also needs to control a ceiling effect. Specifically, a ceiling effect was suggested as a possible explanation for the lack of greater effectiveness of the CBE over the direct extension, despite the attribute-level compensation by the modifier in the CBE. This is particularly of suspect because the judgment (evaluation) task is sensitive to

the ceiling effect. In judgment or evaluation tasks, the goal is often to "categorize" objects, with no requirement to respond to objects differentially if they are largely similar (Tversky, Slovic, and Sattath 1988; Billings and Scherer 1988; Alba, Hutchinson, and Lynch 1991). In addition, the judgment task produces "holistic" and "by-alternative" evaluations without paying much attention to the intradimensional differences (Rosen and Rosenkoetter 1976). Accordingly, overall judgment or evaluation measures may not fully reflect the finer differences between the CBE and the direct extension (see Alba, Hutchinson, and Lynch 1991), especially near the anchor points of a scale where there is less room to vary as was in the "*Godiva cakemix by Slimfast*" condition. In Study 2, we thus incorporate choice and preference measures to control the ceiling effect and to reflect any finer differences between alternative branding strategies. Choices are more sensitive than judgments when overall judgments are fairly similar since choices force discrimination (Payne 1982; Costley and Brucks 1989). That is, comparative evaluations such as choice and preference involve looking for dissimilarities, those features that distinguish between alternatives (Payne 1982), which may therefore result in increased sensitivity to the differences, if any, between the CBE and the direct extension.

As a result, in study 2, the effectiveness of two different CBEs are compared under the two conditions: where (1) the modifier brand is not as favorably evaluated as the header brand but still complementary to it (i.e., "*Godiva cakemix by Slim-Fast*") and (2) both header and modifier brands are highly favorable, but not complementary to each other (i.e., "*Godiva cakemix by Haagen-Dazs*"). The two conditions vary only in the characteristics of the modifier brand while the header brand (i.e., *Godiva*) remains the same. In addition, choice and preference measures are incorporated to reduce the ceiling effect resulting from the highly favorable header brand (i.e., "*Godiva*") in both the effectiveness of the CBE and its feedback effect to the header.

METHOD

Pretest of Stimulus Material: In order to find a brand which serves as a modifier in the condition of "favorably evaluated but not complementary with the header brand," a pretest was performed. We selected the *Haagen-Dazs* (ice cream) brand based on informal interviews (N=6), since it was thought to be well-known, good fit with cakemix products, as favorably

evaluated as *Godiva*, and less able to compensate for the weaknesses of *Godiva* than was the *Slimfast* brand. These conditions were verified from a group of students ($n=27$) using the same measures as were used in the pretests of Study 1. The result revealed that Ss were familiar with the *Haagen-Dazs* brand ($x=5.60$, significantly greater than the scale mid-point, $p<.05$) and that they evaluated it as favorably as the *Godiva* brand ($x=5.34$ and 5.47 , respectively; no significant difference, $p<.05$). Ss also perceived cakemix products to be a reasonable extension for *Haagen-Dazs* ($x=5.49$, significantly greater than the mid-point, $p<.05$). Finally, the *Haagen-Dazs* brand had attribute associations that were similar to that of *Godiva* (e.g., strong on such salient attributes as good taste, richness, and luxury; i.e., mean performance ratings of these attributes were significantly greater than 4.0 at $p<.05$) and thus, attributewise, was less compensating for *Godiva*'s weaknesses (e.g., high calorie and fat) than was the *Slimfast* brand.

Subjects: 90 business students participated in the main study 2. They were randomly assigned to one of three conditions (one control group and two experimental groups). Ss in the experimental conditions received just one proposed CBE (either *Godiva cakemix by Slimfast* or *Godiva cakemix by Haagen-Dazs*) in order to preclude any confounding effect. Ss in the control group responded to *Haagen-Dazs* brand since Ss' responses to *Godiva* and *Slimfast* brands were already obtained in Study 1.

Experimental Procedure and Measurement: Ss completed questionnaires which were identical to the ones used in Study 1. Ss in the experimental conditions of Study 2 provided responses to two additional sets of measures about CBE: first, choice measures between (1) the CBE and *Duncan Hines* cakemix and (2) the CBE and *Godiva* cakemix; second, 7-point preference scales between (1) the CBE and *Duncan Hines* cakemix (1="I like the CBE less than *Duncan Hines* cakemix," 7="I like the CBE more than *Duncan Hines* cakemix") and (2) the CBE and *Godiva* cakemix (1="I like the CBE less than *Godiva* cakemix," 7="I like the CBE more than *Godiva* cakemix"), which were intended to reduce any potential ceiling effects in response and to detect any finer differences in the relative impact of the attribute complementarity and the attitudinal favorability of modifier brand. Similarly, an additional measure of choice between *Godiva* and *Hershey* was included in the measures of feedback effects on the header brand, *Godiva*.

It should be noted that *Duncan Hines* cakemix was compared with the CBEs, in

addition to *Godiva* cakemix, because *Duncan Hines* cakemix as a leading brand in the cakemix product category may offer a readily available reference point to which the CBEs are compared. *Hershey* as a leading brand in a product category of chocolates was also included for the comparison with *Godiva* in order to detect any differences in feedback effects on the header brand.

RESULT

Table 5A, 5B, 5C and 5D contrasts the mean ratings of overall reactions and the attribute salience and performance levels of the two CBEs (“*Godiva cakemix by Slimfast*” and “*Godiva cakemix by Haagen-Dazs*”), which satisfy the orthogonal condition (i.e., ‘complementary’ but not favorable’ versus ‘favorable but not complementary’). Feedback measures on the header brand, *Godiva* chocolates, are also summarized in the Table. As consistent with pretest results, no attribute-level complementarity exists between *Haagen-Dazs* and *Godiva* in the *Godiva cakemix by Haagen-Dazs* condition (see Table 5C and 5D). The results revealed that there existed no significant difference between *Godiva cakemix by Haagen-Dazs* and *Godiva cakemix by Slimfast* in terms of overall reactions ($x=5.11$ and $x=5.23$, respectively, see Table 5A). In addition, the comparison of overall reactions between the two CBEs and the direct extension of the header, *Godiva* cakemix ($x=5.11$, see Table 2A), showed no significant differences in both attribute complementarity and attitudinal favorability conditions. This indicates that in terms of overall reactions (judgment), the impact of the attribute-level complementarity of the modifier brand on the CBE is not different from that of the attitudinal favorability, and further, the relative effectiveness of the CBE strategy to the direct extension is not significant when the header brand is evaluated favorably regardless of the modifier characteristics. Interestingly, however, other measures such as choices and preferences showed significant differences between the two CBEs (see Table 5B). Specifically, when Ss were asked to choose between the CBEs and the *Duncan Hines* cakemix, 70% (23 subjects out of 33) chose the CBE in the *Godiva cakemix by Slimfast* condition, while 57% (17 out of 30) chose the CBE in the *Godiva cakemix by Haagen-Dazs* condition (significantly different at $p<.05$). In terms of preference, subjects’ preference of the *Godiva cakemix by Slimfast* to the *Duncan Hines* cakemix was greater than that of the *Godiva cakemix*

by *Haagen-Dazs* to the *Duncan Hines* cakemix ($x=5.24$ and $x=4.40$, respectively; significant at $p<.05$). In addition, when the CBEs were compared to the *Godiva* cakemix, more choices and greater preference were given to the CBE in the *Godiva cakemix by Slimfast* condition than in the *Godiva cakemix by Haagen-Dazs* condition (72% vs 55% choices, respectively; $x=5.12$ and $x=4.28$, respectively; significant at $p<.05$). In other words, the attribute-level complementarity of the modifier brand turned out to make greater contribution to the effectiveness of the CBE than the attitudinal favorability when the response modes were choices and preferences.

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INSERT TABLE 5 ABOUT HERE

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Table 5A shows that the feedback effects of the CBEs on the header brand made no significant difference between the two CBE conditions (“*Godiva cakemix by Slimfast*” and “*Godiva cakemix by Haagen-Dazs*”) in terms of overall reactions ($x=5.21$ and $x=5.08$, respectively). In addition, Table 5B shows that there existed little difference between the two conditions when Ss were asked to make a choice or express their preference between the header brand and the *Hershey* brand after their exposure to the CBEs. Interestingly, however, the three measures - attitudinal/behavioral reactions, choice, and preference - showed similar patterns, i.e., in favor of the *Godiva* chocolate after exposure to the *Godiva cakemix by Slimfast* rather than the *Godiva cakemix by Haagen-Dazs* (see table 5A and 5B). They offer at least consistent directional support for the positive role of the attribute-level complementarity in feedback effect than of the attitudinal favorability.

DISCUSSION

In Study 2, we explored the relative contributions of the two major factors for successful CBE strategies, that is, the attribute-level complementarity and the attitudinal favorability of the modifier brand, while controlling for the potential ceiling effect. The results of Study 2 indicates that the overall attitudinal/behavioral judgment measures did not fully reflect the perceived differences between the CBE and the direct extension when the header is highly favorably evaluated. This resulted in the lack of relative advantages of the CBE to the

direct extension in both conditions: “*Godiva by Slimfast*” and “*Godiva by Haagen-Dazs*.” Choice and preference measures, however, appears to be more sensitive to the differences, revealing the greater contribution of the attribute-level complementarity over the attitudinal favorability. Specifically, when the attribute level complementarity was satisfied (e.g., “*Godiva cakemix by Slimfast*”), the CBE showed a greater effectiveness over the direct extension. However, when the modifier satisfied only the attitudinal favorability (e.g., “*Godiva cakemix by Haagen-Dazs*”), the CBE showed no significant improvements over the direct extension. The comparison of the two conditions in choices and preferences clearly supports the relative importance of the attribute complementarity to the attitudinal favorability for the effectiveness of the CBE strategy. However, there was no such significant effect of the attribute-level complementarity in the feedback responses to the header brand. That is, the feedback responses were only directionally more favorable in the “*Godiva by Slimfast*” condition than in the “*Godiva by Haagen-Dazs*” condition.

In summary, there is some evidence that choices are more sensitive and more likely to reflect the perceived attribute-level differences between two brands, e.g., the “discriminating attributes” (Payne 1982), than attitudes because of its intradimensional search pattern, and thus reduce the ceiling effect that could occur with the overall evaluation measures. In the present study, the CBE has attribute-level advantages over the direct extensions when the modifier brand satisfies the attribute complementarity, which leads to the greater effectiveness of the CBE over the direct extension even when the header is very favorably evaluated. When the modifier brand does not satisfy the attribute complementarity, the CBE has no discriminating attributes and thus little advantage over the direct extension of the header brand in choice decisions. Therefore, the attribute-level complementarity between the constituent brands should be a critical consideration for the success of the CBE strategy. By combining two brands that are complementary to each other in attributes, the CBE strategy can create better attribute profiles in consumers’ minds than the direct extension of the header brand, which, consequently, can attract more consumers when they are making actual choice decisions.

GENERAL DISCUSSION

The results of Study 1 and Study 2, taken together, revealed that the attribute-level

complementarity between the two constituent brands is a critical factor for the success of the CBE strategy. By combining two brands that are complementary to each other in attributes, the CBE strategy appears to create better attribute profiles in Ss' minds than the direct extension of the header brand, which consequently can lead to preference and choice. While the positive feedback effects from the composite branding on the header brand were not clearly manifested, its positive effects on the extension product were strong. These results certainly offer promising implications on the composite brand extension as a branding strategy. They may also have similar implications for line extension strategy (e.g., *Eggo waffle by Special K*) and other possible forms of alliance such as co-packaging (package bundling) or co-advertising (two brands are interwoven in a single message theme). While we have sought to make a contribution by demonstrating empirical support for hypotheses derived in part from concept combination theory, we have, however, investigated a limited set of brands and a single product category. Although these were carefully selected, they remain but one set. Further research would, thus, be desirable to more adequately examine the generalizability of the results reported here, as well as their ability to extend the underlying theory. In addition, the results of both Studies 1 and 2 offer several additional interesting possibilities for future research.

First, one of managerially important results is the finding of neutral effects from the CBE upon the original modifier brand. While the header brand enjoyed the benefits of the association with the modifier brand, the latter was not affected by its association with the former in the CBE strategy. Since the effectiveness of a CBE strategy would vary, depending upon which brand serves as a header or a modifier, the order of the brands on the package or in advertising should be clearly presented to and understood by consumers. The benefits the header brand enjoy from its association with the modifier brand also affects the issue of compensation to the modifier brand by the header. When the two brands are trademarks of the same firm, compensation is less an issue; however, when two different firms are involved, it becomes an important one. While the specific ways by which the amount of compensation is determined may vary, the results of the present study suggest that compensation for the modifier brand may depend not only upon any contribution to revenue generation by the composite brand but also upon its contribution to improving the image of the header brand

through positive feedback effects. However, it should be noted that while the results of the present study showed no negative feedback effects of the CBE upon the original modifier brand, they may not hold when the header brand is highly unfavorable. Moreover, the present study did not address any long-term effects of the header-modifier brand association (i.e., repeated exposure) upon the original modifier brand. Additional research seems necessary to investigate what limits exist, if any, to the results found in the present study.

Second, while the results of Study 2 supported the critical importance of attribute-level complementarity for the success of the CBE, its role in other forms of CBEs needs to be further examined. Specifically, in the present research complementarity was defined in terms of whether or not attributes of the constituent brands have compensating relationships. The stimuli used in the present research, thus, fits more with the so-called ingredient co-branding, as noted earlier. However, complementarity may also occur with respect to an overall image (e.g., *Jaguar sedan by Toyota*) or usage situations (*Little Caesar's breakfast pizza by Eggo*). Whether or not consumers process these types of composite branding in the same way as they do with the composite branding with attribute-level complementarity is an interesting issue future research needs to address.

Third, research is needed to assess the importance of the fit between the constituent brands and the extension product. While the present study established a relatively high degree of such fit, it is not clear how subjects would react to the CBE when fit is not high. As pointed out earlier, to the extent that the fit between the two is low, the transfer from the constituent brands to the CBE should be limited (Aaker and Keller 1990; Park, Milberg, and Lawson 1991). It is, however, also plausible that subjects use their own idiosyncratic "theories" (Murphy and Medin 1985) in making sense of the stimuli. Since the name of the CBE, in general, looks novel and interesting, it may draw subjects' attention, motivating them to rely upon internal knowledge in interpreting the meaning of the CBE. This may make the issue of fit less critical in the context of the CBE than in a direct brand extension context (where previous research has already emphasized the importance of fit between the parent brand and its extension product). Fit with the extension product may be even less critical for the modifier brand, since the CBE seems primarily associated with the header.

Fourth, while the results of Study 2 showed less contribution by the attitudinal

favorability of the modifier brand to the effectiveness of the CBE than by the attribute-level complementarity, they do not necessarily mean the absence of contribution by the attitudinal favorability of the modifier brand to the effectiveness of the CBE in an absolute sense when both header and modifier brands are highly favorable but not complementary to each other. Actually, there was a directional, but not significant, support for the effectiveness of the *Godiva by Haagen-Dazs* over the direct extension, *Godiva cakemix*, in terms of choice and preference (see Table 5D). The fact that there was no substantial contribution by *Haagen Dazs* to the *Godiva cakemix by Haagen Dazs* CBE may not necessarily mean that the same would occur when the header brand is only moderate in attitudes. Attitudinal favorability may still have some positive effects on the effectiveness of the CBE when the header is only neutral in attitudes. In order to precisely identify the effect of attitudinal favorability of the modifier brand on the CBE, the future research may have to employ a full factorial design in which different levels of attitudinal favorability and attribute-level complementarity are experimentally manipulated rather than simply measured because of the difficulty to identify real world examples for each of the multiple experimental treatment conditions.

Fifth and finally, our study dealt only with customer reactions to the CBE, not the evaluations that occur when those expectations are confronted by the reality of actual product experience. In that sense our results are suggestive of what may be desirable for the producer to try to achieve, not what may be feasible for it to accomplish via actual product performance (Ratneshwar, Shocker, and Srivastava 1994). However, since not all attributes important to the consumer may be readily observed or experienced (Darby and Karni 1974; Nelson 1970), it is possible in certain instances for the CBE strategy to be superior. In such cases favorable beliefs about such attributes may be formed and persist based upon brand name alone. For example, examining branding strategy in the context of *search* and *experience* goods (Nelson 1970) and *credence* goods (Darby and Karni 1974) may afford useful conditions for studying the contingency effects of a CBE strategy. Research could investigate whether the strategy may be more effective for experience/credence goods than for search goods.

FOOTNOTES

- ¹ While Hampton (1987) used the term, "necessity", the present study relies on the term, "salience". It is assumed that an attribute that serves as a necessary characteristic for a concept is also salient for the concept.
- ² In order to avoid redundancy, the term, cakemix, is used hereafter to refer to the chocolate cakemix.
- ³ In the composite concept of pet fish, the warm-blooded characteristic of a pet becomes impossible for a cold-blooded fish. However, average taste for *Slim-Fast* diet food and good taste for *Godiva* chocolates are not logically impossible for the CBE, *Slim-Fast cakemix* by *Godiva*. The taste of the CBE can, of course, be different from the taste of either constituent brand.
- ⁴ Based upon informal interviews and expert judgements, we obtained a list of eight attributes relevant to the three product classes (dietfood, chocolate candy, and cakemix): good taste, richness, low calorie, low fat, good value, attractive package, convenience, and luxury. In order to support selection of these attributes, a group of student Ss ($n=18$) were asked to rate the perceived relevance of these attributes with each product class on two 7-point scales (i.e., *ability to judge the product based upon this attribute* and *relevance to the product*). Results showed that all the attributes were relevant, and not impossible, for the three products.
- ⁵ In order to ensure that all of the salient attributes of the *Chunky* brand are included in the pretest, a group of Ss ($n=20$) were asked to list the attributes which came to mind when the name *Chunky* chocolates was mentioned, and to indicate the importance of those attributes on the same seven-point scale as was used in the earlier pretest. The only attribute that most subjects ($n=12$) listed, but was not one of the eight attributes used in the present study, was "size". Moreover, they did not judge it to be highly salient to them ($\bar{x}=4.56$). Not including this particular attribute in the present study may, however, be construed as a limitation.
- ⁶ It should be noted that terms like importance and salience have been used differently by different researchers. Murphy (1988), however, used the term attribute salience to refer to not only attributes but also their levels (e.g., **red color**). In the present study we adopted Murphy's use of the term attribute salience because the present study focuses on brands and brands are typically described with attributes and their levels together (e.g., low calorie attribute for "*Slim-Fast*").
- ⁷ Since the results obtained from the main study on brand familiarity and attitudes of constituent brands were consistent with those obtained from the pretests, they are not reported in the results section.
- ⁸ The results remain the same for all hypotheses, including Hypothesis 1, when the original constituent brands, *Slim-Fast dietfood* and *Godiva chocolates*, were compared to the CBE, instead of *Slim-Fast cakemix* and *Godiva cakemix*. This is likely a consequence of high similarity in attribute information between the original brands and their extensions.
- ⁹ Two coders independently classified the thought statements into the three broad categories

(allowing multiple statements per subject). Whenever the two coders disagreed in the classification of a thought statement, it was excluded from the analyses. The total number of such statements with disagreement was eight for the "*Slim-Fast cakemix by Godiva*" group, and six for the "*Godiva cakemix by Slim-Fast*" group. The coding decision for Category 2 was based strictly upon the sequence and structure of words contained in the thought statements. Specifically, whenever the extension product was described with the *Slim-Fast* characteristics, followed by the *Godiva* characteristics, it was operationalized as belonging to the "*Slim-Fast cakemix by Godiva*" description, and *vice versa*.

¹⁰. The thought statements that belong to the "other" category include (1) general statements about the complementarity of *Slim-Fast* and *Godiva* (e.g., "they are complementary to each other," "best of both worlds," "they do not go together.") and (2) general comments such as curiosity-related or buying intention-related statements ("are they available?" "I'll try it.") The frequencies of thought statements for these two subcategories in the "*Slim-Fast cakemix by Godiva*" and "*Godiva cakemix by Slim-Fast*" groups are ten and twelve, respectively, for the subcategory of general complementarity-related statement, and twelve and eighteen, respectively, for the subcategory of general comments.

¹¹. A question may be raised about the generalizability of the header and modifier positions in other forms of the composite brand extension such as "*Godiva's Slim-Fast cakemix*" instead of "*Slim-Fast cakemix by Godiva*." We examined this issue by comparing Ss' reactions to the "*Slim-Fast cakemix by Godiva*" CBE with those to the "*Godiva's Slim-Fast cakemix*" CBE, using two groups of Ss (N=29 and 30, respectively). The results, while not being reported due to the space limitations, reveal highly similar patterns in terms of attribute salience and attribute performance levels between "*Godiva's Slim-Fast cakemix*" and "*Slim-Fast cakemix by Godiva*," while showing greater effectiveness for the latter than for the former in the attitudinal/behavioral reactions. Ss also indicated that the former was not as realistic and believable (\bar{x} =4.17 and \bar{x} =4.21, respectively) as the latter (\bar{x} =5.52 and \bar{x} =5.19, respectively; both $p < .05$) as a brand name. Thus, while the generalizability of the header and modifier positions holds well in an alternative branding form, the relative effectiveness of the composite brand extension also seems to differ, depending on the specific form of composite branding.

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TABLE1 : STUDY DESIGN

BETWEEN GROUPS	CELL SIZE
A. Control Groups	
1. Slimfast dietfood	24
2. Godiva chocolates	24
3. Chunky chocolates	25
B. Experimental Groups	
4. Slimfast cakemix with its feedback effect on Slimfast dietfood	31
5. Godiva cakemix with its feedback effect on Godiva chocolates	31
6. Chunky cakemix with its feedback effect on Chunky chocolates	27
<u>Slimfast cakemix by Godiva</u>	57
7. with its feedback effect on Slimfast dietfood	24
8. with its feedback effect on Godiva chocolates	29
<u>Godiva cakemix by Slimfast</u>	54
9. with its feedback effect on Slimfast dietfood	29
10. with its feedback effect on Godiva chocolates	25
<u>Slimfast cakemix by Chunky</u>	55
11. with its feedback effect on Slimfast dietfood	27
12. with its feedback effect on Chunky chocolates	28
TOTAL	342

TABLE 2: DIRECT AND COMPOSITE BRAND EXTENSIONS**A. Evaluation**

Evaluations	Slimfast cakemix	Godiva cakemix	Slimfast cakemix by Godiva	Godiva cakemix by Slimfast	Chunky cakemix	Slimfast cakemix by Chunky
average	4.08	5.11*b	5.32*a	5.13*	3.74	3.68

B. Attribute Salience

Attribute Saliences	Slimfast cakemix	Godiva cakemix	Slimfast cakemix by Godiva	Godiva cakemix by Slimfast	Chunky cakemix	Slimfast cakemix by Chunky
low calorie	5.97*b	2.90	6.24*c	5.34*a	2.44	6.05*
low fat	6.00*b	3.00	6.19*c	5.49*a	3.00	6.04*
good value	5.16*b	4.48*	5.30*c	4.69*	5.00*	5.13*
convenience	5.45*	5.55*	5.40*	5.03*	5.11*	5.56*
good taste	6.42*	6.58*	6.13*	6.46*	6.22*	6.25*
package	3.45	5.03*b	4.73*a	5.08*	3.89	3.82
richness	4.90*	6.03*b	5.51*a	6.33*c	5.33*	5.24*
luxury	3.10	5.29*b	4.90*a	5.64*c	3.22	3.29

C. Attribute Performance

Attribute Values	Slimfast cakemix	Godiva cakemix	Slimfast cakemix by Godiva	Godiva cakemix by Slimfast	Chunky cakemix	Slimfast cakemix by Chunky
low calorie	6.23*b	2.00	6.14*c	4.92*a	1.89	5.87*
low fat	5.81*b	2.52	6.14*c	4.85*a	2.11	5.73*
good value	3.55	3.80	3.68	3.41	4.11	3.73
convenience	5.23*	4.94*	5.02*	4.85*	4.56*	5.00*
good taste	4.58*	6.39*b	5.76*a	6.39*c	5.00*	4.82*
package	4.48*	6.00*b	5.11*a	5.77*c	4.22	4.31
richness	3.77	6.32*b	5.35*a	6.33*c	4.33	4.24
luxury	4.29	5.39*b	4.97*a	5.87*c	3.56	3.80

Note:

Standard deviations information is suppressed to enhance readability of the Table. The typical standard deviation for the data is approximately 0.24.

* indicates that the rating is significantly greater than the mid-point (=4.0) at $p < .05$ using one-tailed test.

a indicates a significant difference in mean attribute rating between a composite brand (Slimfast cakemix by Godiva, Godiva cakemix by Slimfast, and Slimfast cakemix by Chunky) and the header brand (Slimfast cakemix and Godiva cakemix) on that attribute ($p < .05$, one-tailed test).

b indicates a significant difference in mean rating between Slimfast cakemix and Godiva cakemix ($p < .05$, one-tailed test).

c indicates a significant difference in mean rating between Slimfast cakemix by Godiva and Godiva cakemix by Slimfast ($p < .05$, one-tailed test).

TABLE 3 : CONSTITUENT BRANDS AND FEEDBACK EFFECTS

A. Evaluation

Evaluations	Slimfast dietfood	Slimfast dietfood after Slimfast by Godiva	Godiva chocolate	Godiva chocolate after Slimfast by Godiva	Slimfast dietfood after Slimfast cakemix
average score	3.74	4.92*ab	5.47*	5.37*	3.66

B. Attribute Salience

Attributes	Slimfast dietfood	Slimfast dietfood after Slimfast by Godiva	Godiva chocolate	Godiva chocolate after Slimfast by Godiva	Slimfast dietfood after Slimfast cakemix
low calorie	6.38*	6.47*	2.28	2.03	6.19*
low fat	6.46*	6.00*	2.92	2.79	6.13*
good value	5.42*	5.15*	4.12	4.24	5.10*
convenience	5.58*	5.35*	4.68*	4.31	5.26*
good taste	6.04*	6.15*	6.76*	6.62*	6.13*
package	3.54	4.03 a	5.28*	5.03*	3.68
richness	4.08	5.50*ab	6.44*	6.38*	4.52*
luxury	2.17	3.68 ab	5.60*	5.72*	2.52

C. Attribute Performance

Attributes	Slimfast dietfood	Slimfast dietfood after Slimfast by Godiva	Godiva chocolate	Godiva chocolate after Slimfast by Godiva	Slimfast dietfood after Slimfast cakemix
low calorie	6.08*	6.47*	1.48	2.00	6.19*
low fat	6.25*	6.00*	1.52	2.00	6.13*
good value	4.33	4.38	3.24	3.24	4.00
convenience	5.08*	5.18*	4.56*	5.07*	5.23*
good taste	4.42	5.47*ab	6.44*	6.31*	4.58*
package	4.21	4.62*	5.36*	5.48*	4.29
richness	4.17	5.00*ab	6.28*	6.52*	4.00
luxury	3.29	4.18 ab	5.72*	5.86*	3.23

Note:

Standard deviations information is suppressed to enhance readability of the Table. The typical standard deviation of the mean is approximately 0.24.

* indicates that the rating is significantly greater than the mid-point (= 4.0) at $p < 0.5$ using one-tailed test.

a indicates a significant difference in mean rating between a header brand measured after exposure to a composite brand (Slimfast dietfood after Slimfast by Godiva) versus measurement before the exposure (Slimfast dietfood) ($p < 0.5$ one-tailed test).

b indicates a significant difference in mean rating between Slimfast dietfood after Slimfast by Godiva and Slimfast dietfood after Slimfast cakemix ($p < 0.5$ one-tailed test).

TABLE 4 : FEEDBACK EFFECTS IN OTHER CONDITIONS

A. Evaluation

Evaluations	Slimfast dietfood after Godiva by Slimfast	Godiva chocolate after Godiva by Slimfast	Chunky chocolate	Slimfast dietfood after Slimfast by Chunky	Chunky chocolate after Slimfast by Chunky
average score	3.64	5.15*	3.53	3.32	3.71

B. Attribute Salience

Attributes	Slimfast dietfood after Godiva by Slimfast	Godiva chocolate after Godiva by Slimfast	Chunky chocolate	Slimfast dietfood after Slimfast by Chunky	Chunky chocolate after Slimfast by Chunky
low calorie	6.55*	4.06a	2.40	6.22*	2.43
low fat	6.20*	3.91a	2.96	6.37*	2.61
good value	5.10*	4.34	5.00*	5.04*	4.86*
convenience	5.48*	5.09*	5.24*	5.37*	4.93*
good taste	5.83*	6.56*	6.04*	6.41*	6.29*
package	3.34	5.06*	4.00	3.74	4.21
richness	4.24	6.03*	5.64*	4.85*a	6.04*
luxury	2.48	5.53*	3.08	2.63	3.11

C. Attribute Performance

Attributes	Slimfast dietfood after Godiva by Slimfast	Godiva chocolate after Godiva by Slimfast	Chunky chocolate	Slimfast dietfood after Slimfast by Chunky	Chunky chocolate after Slimfast by Chunky
low calorie	6.17*	3.47a	2.12	6.37*	2.07
low fat	6.00*	3.47a	2.12	6.04*	2.07
good value	3.93	3.44	4.40	3.96	4.29
convenience	5.45*	5.38*a	4.36	5.22*	4.68*
good taste	4.07	6.56*	4.60*	4.70*	4.75*
package	3.97	5.38*	3.80	4.37	4.07
richness	4.07	6.44*	4.24	4.41*	4.43*
luxury	3.21	5.81*	3.08	3.07	3.57

Note:

Standard deviations information is suppressed to enhance readability of the Table. The typical standard deviation of mean rating is approximately 0.24.

* indicates that the rating is significantly greater than the mid-point (= 4.0) at $p < .05$ using one-tailed test

a indicates a significant difference in mean rating between a constituent brand measured after exposure to a competitor brand (Godiva by Slimfast or Slimfast by Chunky) versus measurement before the exposure ($p < .05$, one-tailed test)

b indicates a significant difference in mean rating between Slimfast dietfood after Slimfast by Chunky and Slimfast dietfood after Slimfast cakemix ($p < .05$, one-tailed test)

TABLE 5. GODIVA CAKEMIX BY HAAGEN-DAZS VS GODIVA CAKEMIX BY SLIMFAST**A. Overall Evaluations**

Evaluation	Haagen-Dazs ice cream (n=27)	Godiva chocolate (n=25)	Godiva cakemix by Haagen-Dazs (n=30)	Godiva cakemix by Slimfast (n=33)	Godiva chocolate after G-by-H (n=30)	Godiva chocolate after G-by-S (n=33)
Average	5.35	5.47	5.11	5.23	5.08	5.21

B. Choice and Preference Measures

Choices and Preferences	Godiva cakemix by Haagen-Dazs (n=30)	Godiva cakemix by Slimfast (n=33)	Godiva chocolate after G-by-H (n=30)	Godiva chocolate after G-by-S (n=33)
Choices:				
1. CBE vs Duncan Hines cakemix	17-13 (57%)	23-10 (70%)		
2. CBE vs Godiva cakemix	16-13 (55%)	21-8 (72%)		
3. Godiva vs Hershey chocolates			17-12 (59%)	19-14 (60%)
Preferences:				
1. CBE (7) vs Duncan Hines cakemix	4.40	5.24		
2. CBE (7) vs Godiva cakemix	4.28	5.12		
3. Godiva (7) vs Hershey chocolates			4.76	4.94

C. Means of Attribute Importance

Attribute Importance	Haagen-Dazs ice cream (n=27)	Godiva chocolate (n=25)	Godiva cakemix by Haagen-Dazs (n=30)	Godiva cakemix by Slimfast (n=33)	Godiva chocolate after G-by-H (n=30)	Godiva chocolate after G-by-S (n=33)
low calorie	3.21	2.28	2.77	5.61	2.20	3.73
low fat	3.08	2.92	2.93	5.73	2.33	3.85
good value	5.52	4.12	4.67	4.61	3.87	3.79
convenience	4.15	4.68	4.87	5.09	4.33	4.39
good taste	6.59	6.76	6.57	6.39	6.60	6.36
package	3.63	5.28	5.17	4.76	5.13	5.27
richness	5.33	6.44	6.03	5.91	6.57	5.97
luxury	4.51	5.60	5.20	5.06	5.43	5.27

D. Means of Attribute Performance

Attribute performance	Haagen-Dazs ice cream (n=27)	Godiva chocolate (n=25)	Godiva cakemix by Haagen-Dazs (n=30)	Godiva cakemix by Slimfast (n=33)	Godiva chocolate after G-by-H (n=30)	Godiva chocolate after G-by-S (n=33)
low calorie	2.11	1.48	1.83	4.88	1.77	2.91
low fat	2.17	1.52	1.67	4.76	1.80	3.24
good value	4.30	3.24	3.57	3.70	3.23	3.55
convenience	4.78	4.56	4.50	5.06	4.80	5.12
good taste	6.19	6.44	6.33	5.97	6.60	6.45
package	4.26	5.36	5.87	5.76	5.91	5.76
richness	5.74	6.28	6.37	5.93	6.43	6.09
luxury	4.98	5.72	5.93	5.50	6.03	5.85

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