Recent research has identified two factors that influence consumer perceptions of a brand extension: brand affect and the similarity between the original and extension product categories. However, surprisingly little attention has been paid to other associations specific to the brand itself. The authors perform three experiments to explore the relative importance of these associations. The experiments reveal that brand-specific associations may dominate the effects of brand affect and category similarity, particularly when consumer knowledge of the brands is high. The authors conclude by discussing the implications of these findings for managerial decision making and the process by which consumers evaluate brand extensions.

The Importance of the Brand in Brand Extension

Brand equity is an elusive concept but has been described most frequently as the value a brand name adds to a product (e.g., Farquhar 1989). Srivastava and Shocker (1991) aptly note that the value of a brand name can be measured in terms of not only the advantages it provides in its present competitive arena but also the potential advantages it offers in untapped markets.

This same insight on the part of managers has prompted increased use of brand extension as a vehicle for growth (Springen and Miller 1990), which in turn has sparked empirical research on the way consumers evaluate extended brands. Initial research was exploratory and attempted to identify at a general level the variables that influence perceptions of an extension (Aaker and Keller 1990; MacInnis and Nakamoto 1990). Subsequent research has attempted to isolate the processes that underlie the evaluation of an extended brand (Boush and Loken 1991; Bridges 1992). An assumption common to virtually all research, however, is that brand affect and product category similarity play important roles (cf. Boush et al. 1987). That is, evaluation of an extension is a joint function of how much the brand is liked in its original category and the similarity between the original and extension categories.

Ironically, a second commonality of most research on brand extension is the inability to address brand effects. Exploratory studies provide cues for future research but either extend only one brand from each category so that brand and category effects cannot be disentangled (e.g., Aaker and Keller 1990) or select extension categories with little consideration for brand effects (e.g., MacInnis and Nakamoto 1990). Studies that look more narrowly have attempted to heighten experimental control by utilizing fictitious brand names, but in so doing investigate category- rather than brand-level effects (e.g., Boush et al. 1987; Boush and Loken 1991; Bridges 1992; Keller and Aaker 1992).

Assuming that there exist multiple determinants of brand extension evaluation, a reasonable goal is to determine the relative influence of each determinant. From a consumer perspective, the problem can be cast in terms of the perceived diagnosticity of each determinant (Feldman and Lynch 1988). That is, the task for the consumer is to evaluate the attractiveness of an extended brand on the basis of the available cues. A cue, such as brand affect or category similarity, should be utilized to the extent that it is perceived to be a good predictor of the attractiveness of the extension. As in other judgment and decision contexts, however, the relative diagnosticities of competing cues are difficult to specify a priori, particularly because diagnosticity is subjectively determined and can vary across situations (Lynch, Marmorstein, and Weigold 1988). The purpose of our experiments is to explore the relative diagnosticities of cues that can be used by consumers to predict the attractiveness of a brand extension. We pay particular attention to the influence of brand-specific associations. In Experiment 1, we compare the relative diagnosticities of brand-specific associations and brand affect. In Experiment 2, these associations are compared with category similarity. In Experiment 3, we examine how these relative diagnosticities vary as a function of consumer expertise.

Susan M. Broniarczyk is an Assistant Professor of Marketing, University of Texas, Austin. Joseph W. Alba is the JC Penney Professor of Marketing, University of Florida. They are grateful to Mark Alpert, Wes Hutchinson, Bart Weitz, and especially John Lynch for their helpful comments.
BRAND-SPECIFIC ASSOCIATIONS

A brand-specific association is defined simply as an attribute or benefit that differentiates a brand from competing brands (MacInnis and Nakamoto 1990). For example, Apple computer is associated with user friendliness, but this association is not strongly associated with other computer brands or with the product class as a whole. To the extent that these associations are linked to important benefits customers seek through purchase, they can influence marketing success (Myers and Alpert 1968). It is common marketing practice to invest heavily to establish and reinforce these associations—a practice that has an added payoff if the association can be used as a platform for successful entry into another product class.

As indicated, most previous research does not address these brand-specific effects. A notable exception is a recent study by Park, Milberg, and Lawson (1991; cf. Bridges 1992), which examines the broad distinction between functional and prestigious brand associations. They find that evaluation of an extension is enhanced when the brand and the extension category share the same association. We concur with Park, Milberg, and Lawson (1991) regarding the importance of brand effects, and we use their finding as a starting point. However, we emphasize associations that are narrower than the functional/prestigious distinction, and we adopt the extreme view that brand-specific associations can render the effects of affect and category similarity uninformative or misleading.

The Relative Influence of Brand-Specific Associations

An affect-transfer process frequently is invoked to describe how consumers evaluate brand extensions. The assumption is that affect associated with the original brand is transferred to the extension and this transfer occurs most directly when similarity between the two products is high (cf. Boush and Loken 1991). We agree that, all things being equal, the best scenario for success involves extension of a highly regarded brand to a very similar product class. However, we argue that the managerially relevant question involves the extent to which brand extension is limited by deficits in affect or similarity. Our research concerns the extent to which brand-specific associations override these constraints.

Brand affect. The use of fictitious brands and the failure to disentangle brand from category effects render most research mute on the relative importance of brand affect versus other brand-specific associations. Park, Milberg, and Lawson (1991), who examine real brands and unconfounded brand and category effects, also controlled for brand affect. In Experiment 1, we vary brand affect and brand-specific associations while holding category similarity constant. We argue that evaluation of a brand extension is not a simple matter of similarity-mediated affect transfer but that consumers assess the ability of the extension to satisfy their needs and such assessments are driven primarily by the specific associations of the brand. Because the value of a brand association differs depending on the benefits sought within a particular product category, evaluation of a brand extension need not correspond to evaluation of that brand in its original category. Thus, we predict that brand-specific associations will moderate the influence of brand affect in extension evaluation.

Moreover, we predict that brand-specific associations will dominate brand affect if the brand-specific association is relevant in the extension category. That is, the preference ordering for brands in the original category should reverse in an extended category when the brand-specific association of a less preferred brand is relevant in the extension category. This prediction is supported by research in social cognition, which shows that semantic consistency dominates evaluative consistency during the formation of trait inferences (e.g., Peabody 1967). For example, a person who is described as thrifty (a desirable trait) is more likely to be judged as stingy (an undesirable but conceptually consistent trait) than generous (a desirable but conceptually inconsistent trait).

Product category similarity. These predictions do not imply that category similarity is irrelevant to brand extension. Similarity can mediate affect transfer when brand-specific associations are held constant and may provide the most valid basis for evaluating an extension when both affect and brand-specific associations are held constant. Indeed, substantial evidence implicates category similarity in brand extension evaluation (Aaker and Keller 1990; Boush and Loken 1991; Keller and Aaker 1992). However, there is a definitional problem that accompanies the similarity construct. Classic definitions of similarity as total feature overlap have been found inadequate because they ignore the relevance of theories and knowledge that can tie seemingly disparate objects together (Murphy and Medin 1985). In some instances, different objects can be classified as members of the same category on the basis of a single relational match. For example, milk, spinach, and sardines are united by their high calcium content. In some instances, therefore, assessing the correspondence among products may be less a process of feature mapping and more of inferring context-specific connections between otherwise dissimilar objects. We argue that there is no necessary reason to expect consumers to make judgments of overall similarity between a brand’s original category and an extension category or that, if such judgments are made, similarity will be based on total feature overlap or occur at the product class level. Instead, a single brand association may provide a persuasive connection between the brand and an otherwise dissimilar extension category.

This psychological view of similarity is consistent with a popular definition of market structure, which argues that consumers seek benefits rather than products and may not restrict their purchases to any single category when pursuing those benefits (Day, Shocker, and Srivastava 1979; see also Barsalou 1983). According to this definition, the core meaning of a product is determined by the benefits it provides (Ratneshwar and Shocker 1991). Insofar as it provides benefits desired by consumers in a given situation, a product can compete against otherwise dissimilar products. By analogy, we argue that a brand may be defined in terms of benefits, and its appropriateness need not be restricted to a particular product class. That is, a brand may “fit” into another category, regardless of its category of origin, if it is perceived to offer the benefits sought in the extended category.
We suggest that initial benefit perceptions are determined in large part by the brand itself via its specific associations.

A theory-based view of similarity has implications for the viability of a brand extension for two reasons. At a minimum, an extended brand that promises a desired benefit in an extension category by virtue of its specific associations may enter a consumer's consideration set. Moreover, depending on the strength and credibility of the promise, the extended brand may compete effectively against existing brands. When disparate items are categorized together based solely on their relevance to the achievement of a goal ("goal-derived categories"), the perceived typicality of an item is determined in part by its efficacy in attaining the goal (Barsalou 1985). Thus, an extended brand may compensate for its lack of category similarity and history in the new category through its benefit-related associations.

Empirically, Park, Milberg, and Lawson (1991) report that product category similarity interacts with brand characteristics. In their study, the effect of similarity was pervasive, but was stronger for functional brands than prestige brands. However, Park, Milberg, and Lawson did not directly assess the relative importance of category similarity and brand effects. In Experiment 2, we compare the effects of brand-specific associations and product category similarity while controlling for brand affect. Consistent with Park, Milberg, and Lawson, we predict an interaction between brand-specific associations and the similarity of the extension category. However, we further suggest that brand-specific associations can override the effects of product class similarity. To provide a strong test of the hypotheses; we restrict our focus to functional brands.

**Effects of Brand Knowledge**

An emphasis on brand-specific effects elevates the role of brand knowledge as a moderating variable. Knowledge of the brand-specific association is required for consumers to appreciate the appropriateness of the brand in the extension category. Thus, at a general level, brand-specific associations should moderate the influence of brand affect and category similarity on brand experts but not brand novices (cf. Alba and Hutchinson 1987; Murphy and Medin 1985; Muthukrishnan and Weitz 1991). Moreover, consistent with our assumptions that consumers are influenced by the perceived diagnosticity of cues and brand-specific associations are perceived to be more diagnostic than other cues, we hypothesize that brand-specific associations will determine the evaluations made by experts, but brand affect or category similarity will determine the evaluations made by novices. The potential moderating effect of brand knowledge is investigated in Experiment 3.

**PRETESTS**

Research of this type requires extensive pretesting to identify real brands that conform to the experimental manipulations but also control for extraneous variables. Pretests were conducted to identify product categories that contained at least two nonprestige brands that differed in consumer preference but for which the less preferred brand possessed a unique association. Additional pretests identified extension categories in which these brand associations were valued.

The starting point was a set of 119 product categories and their corresponding brands taken from a national marketing research service, supermarket inventory list, and several consumer catalogs. It included a broad sampling of durable goods, food products, health care products, and services. Four separate pretests sequentially narrowed these categories and brands to a set appropriate for hypothesis testing.

**Pretest 1 and 2**

The first two pretests were designed to identify a comprehensive set of brands that (1) would be familiar to all subjects, (2) had specific associations that were highly salient but not based on prestige, (3) had associations that differentiated them from their product categories and the other brands in those categories, and (4) had not been extended previously.

In the initial pretest, three business school graduate students served as judges and were asked to examine the entire list of product categories and identify all brands that would meet these requirements. Specifically, they were instructed to identify product categories containing at least two familiar brand names with specific, nonoverlapping associations that had not been multiply extended.

The judges were in complete agreement on 76% of the categories. Categories were retained for further pretesting if at least two judges agreed that all criteria had been met. Of the original 119 categories, 31 were retained.

The second pretest used a considerably larger sample of undergraduate respondents to identify precisely the associations of the retained categories and brands. A free association task was used wherein subjects were given 30 seconds to provide associations that came to mind upon presentation of a particular brand name or category. Of the 102 subjects who participated, 72 provided associations to one brand from each of several categories. The remaining subjects provided associations to category names. These latter associations were collected to ensure that the critical brands possessed associations that were unique not only with respect to other individual brands in the category but also to the category as a whole.

Afterward, associations to a given brand were compared with associations to other brands in the category and to the category as a whole. A brand was considered to have a specific association if its association was (1) unique with respect to other brands in the category and the category itself or (2) twice as salient relative to other brands or the category, as measured by frequency of mention. Only 22 categories were identified as containing at least one brand with an association that met these criteria.

**Pretest 3**

To test the hypothesis that brand-specific effects can produce a change in brand preference from the original to the extended category, it was necessary to vary brand affect. Also, because we wished to restrict the research to nonprestige brands, brands that conveyed a prestige image needed to be eliminated.
The Importance of the Brand

In the third pretest, 60 undergraduate subjects rated brands in the remaining 22 product categories in terms of affect and prestige. The 9-point affect scale was anchored by "dislike" and "like." The prestige scale produced ratings of the extent to which the brands had an image relating to prestige or high status; it ranged from "not at all" to "very much" (cf. MacInnis and Nakamoto 1990).

On the basis of a repeated measures ANOVA, nine product categories were eliminated because significant preference differences did not arise among brands possessing specific associations. For the remaining categories, it was not possible to eliminate completely the effects of prestige; thus, we decided to eliminate five product categories that contained brands with decidedly high prestige traits and covary out the remaining effects of prestige in the experiment. Each of the remaining eight categories included a brand (hereafter referred to as the focal brand) that possessed a specific, nonprestige association and was significantly less preferred than another brand (hereafter referred to as the comparison brand) in the same category. The more preferred comparison brand served as a control and possessed a strong association that differed from that of the focal brand.¹

Pretest 4

The final pretest was designed to generate potential extensions of the brands so that hypothesis testing would be based on a set of brand extensions deemed plausible by subjects. For each of the remaining eight categories, 33 undergraduate subjects were provided with either the focal brand, the comparison brand, or the category itself and were asked to identify possible areas of expansion. The results led to the elimination of three additional categories because subjects had difficulty generating extensions for brands in these categories or the same extensions were generated to different categories.

From the pool of responses to the five remaining categories, extension categories were selected such that the desired manipulations were achieved. Four extension categories were selected for each of the five original categories, two for which the focal brand's attribute was relevant and two for which the comparison brand's attribute was relevant. To corroborate selection of extensions, 14 subjects rated the relevance of the brand associations in each of the potential extension categories on a 9-point scale ranging from "not at all relevant" to "very relevant." The results were analyzed using within-subject ANOVA contrasts. They revealed in all cases that the focal brand association was more relevant in the extension categories chosen to match the focal brand (focal extension categories) than in extension categories chosen to match the comparison brand (comparison extension categories) (ps < .05). Likewise, the comparison brand association was always more relevant in the extension categories chosen to match the comparison brand than in those chosen to match the focal brand (ps < .05).

To summarize, five originating categories met the criteria for hypothesis testing in Experiment 1. Each category contained two familiar brands, one of which had a unique association but was less preferred than the other brand. Neither of these brands were perceived by subjects to have been extended previously. In addition, extension categories were identified that matched the associations of these brands. The complete set of stimuli are presented in Table 1.

EXPERIMENT 1

To recapitulate, this experiment examines the relative influence of brand-specific associations and brand affect in the evaluation of brand extensions. We predict that brand-specific associations will moderate the influence of brand affect on extension judgments. We further propose that if a brand's specific associations are highly relevant in the extension category, the brand will be evaluated more favorably than extensions of its original competitors, even if those competitors are more favorably evaluated in the original product class.

For example, Close-Up is evaluated less favorably than Crest in the toothpaste category. However, Close-Up has a breath-freshening association whereas Crest has a dental protection association. The breath-freshening association of Close-Up is relevant in the mouthwash category, and thus we predict that a Close-Up extension will be evaluated more favorably than a Crest extension in the mouthwash category. Conversely, Crest should be evaluated more favorably than Close-Up in the dental floss category in which dental protection is relevant.

Method

Experimental design. A 2 (brand affect) X 2 (relevance of the brand-specific association in the extension category) X 5 (product category) X 2 (set) mixed design was used. Brand affect was a between-subjects factor that contrasted the less preferred, focal brand to the more preferred, comparison brand (e.g., Close-Up versus Crest). Extension relevance was a within-subject manipulation of the correspondence between the brand-specific association and the relevance of that association in the extension category. For example, Close-Up's breath-freshening association is relevant in the mouthwash category but not in the dental floss category.

The last two factors were replication factors. Product category was a within-subject replication factor consisting of the five product categories that survived all pretests. Set was a replication factor that varied between subjects the categories into which the brands could extend. For example, Close-Up and Crest were compared not only in the mouthwash and dental floss categories, but also in the corresponding categories of breath mint and toothbrush. These replication factors were included to demonstrate that the predicted preference reversals are generalizable and that the effect is due to the influence of brand associations rather than to some other aspect of the extension category.

¹These brand associations were assessed further via a rating scale measure administered to 24 additional subjects. Each association was rated in terms of how strongly it was associated with four brands in each category, including the focal and comparison brands. A 9-point scale was used, anchored by "not at all" and "very strongly." The results strongly converged with the results of the free association task. Tests for the difference in association strength between the focal and comparison brands found that all 16 differences were directionally correct, 14 of which attained statistical significance (ps > .05)
To summarize at the individual level, each subject evaluated one brand from each of the five original categories in either of two sets of extension categories. One extension category in each set was consistent with the focal brand’s association and the other was consistent with the comparison brand’s association. The order in which the five original brands were evaluated was determined by a Latin square design. The order of extension relevance and the assignment of extension set were counterbalanced. To discourage subjects from inferring the hypothesis, a sixth original category, in which both extensions were appropriate, was included. Thus, subjects evaluated a total of 12 extensions.

Procedure. Subjects were 76 undergraduates (39 males and 37 females) who received extra credit in an introductory marketing class for their participation. The experimental materials were contained in booklets, which allowed the various design factors to be counterbalanced within experimental session. Subjects were run in groups of 10 to 12 and were told that the experimenter was interested in reactions to some potential brand extensions. The first page of the booklet defined brand extensions and provided examples. The second page contained a practice stimulus.

Subjects were allotted one minute to answer three items for each extension (cf. Maclnnis and Nakamoto 1990): The first was a 9-point scale that assessed overall evaluation of the potential extension relative to existing brands in the extension category ranging from “one of the worst” to “one of the best”; the second also was a 9-point scale that assessed attitude for the potential extension, anchored by “dislike” and “like”; and the third solicited open-ended reactions to the potential extensions. Afterwards, brand preference in the original category was measured as a check of the affect manipulation. Measures of brand familiarity and brand prestige also were taken on 9-point scales for use as covariates in the analyses. The familiarity scale assessed subjects’ awareness of the brand name and ranged from “never heard of” to “very aware of.” Brand prestige assessed the degree to which the brand conveyed an image of prestige and ranged from “not at all” to “very much.”

A final task then was administered in which subjects provided their ranked preference for the focal and comparison brands in potential extension categories. However, these rankings were performed on the complementary extension set rather than the set they had just rated.

Results

The results of the manipulation check were consistent with those of the pretest. On the 9-point scale, focal brands (6.16) were less preferred than comparison brands (6.86) across the five original categories ($F_{1,375} = 7.42, p < .001$). The two evaluative scale ratings were highly correlated across all conditions ($Pearson r = .84$) and were averaged to form a single dependent measure. For purposes of analysis, the design was treated as a hierarchical nested design. The brand affect factor is nested in product category because each set of focal and comparison brands is specific to its original product category (Keppel 1982). Likewise, extension relevance and set are nested in product category. The data were analyzed using a mixed ANOVA, with brand affect and set as between-subjects factors, extension rele-
Table 2
LEAST-SQUARES EVALUATION MEANS (STANDARD DEVIATIONS) FOR EXPERIMENT 1

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>FOCAL BRAND</th>
<th></th>
<th>COMPARISON BRAND</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Close-Up</td>
<td></td>
<td>Crest</td>
<td></td>
</tr>
<tr>
<td>SET 1 FOCAL EXT</td>
<td>Mouthwash</td>
<td>6.80 (.42)</td>
<td></td>
<td>7.36 (.41)</td>
<td></td>
</tr>
<tr>
<td>SET 1 COMPARISON EXT</td>
<td>Dental Floss</td>
<td>6.20 (.40)</td>
<td></td>
<td>6.69 (.39)</td>
<td></td>
</tr>
<tr>
<td>SET 2 FOCAL EXT</td>
<td>Breath Mint&lt;sup&gt;a&lt;/sup&gt;</td>
<td>7.58 (.39)</td>
<td></td>
<td>6.17 (.40)</td>
<td></td>
</tr>
<tr>
<td>SET 2 COMPARISON EXT</td>
<td>Toothbrush&lt;sup&gt;b&lt;/sup&gt;</td>
<td>5.95 (.37)</td>
<td></td>
<td>6.81 (.38)</td>
<td></td>
</tr>
</tbody>
</table>

CEREAL<sup>a</sup>

|                  |                  | Cheerios     |            | Froot Loops     |            |
| SET 1 FOCAL EXT  | Oatmeal<sup>b</sup> | 6.08 (.47)   |            | 3.26 (.49)      |            |
| SET 1 COMPARISON EXT | Toasted Pastry<sup>b</sup> | 5.25 (.48)   |            | 4.77 (.51)      |            |
| SET 2 FOCAL EXT  | Waffles<sup>b</sup> | 5.20 (.49)   |            | 3.88 (.49)      |            |
| SET 2 COMPARISON EXT | Lollipops<sup>b</sup> | 3.84 (.50)   |            | 6.52 (.50)      |            |

SOAP<sup>a</sup>

|                  |                  | Camay        |            | Irish Spring    |            |
| SET 1 FOCAL EXT  | Moisturizer<sup>b</sup> | 6.35 (.44)   |            | 4.13 (.44)      |            |
| SET 1 COMPARISON EXT | Deodorant<sup>b</sup> | 4.53 (.47)   |            | 5.19 (.46)      |            |
| SET 2 FOCAL EXT  | Cleansing Cream<sup>b</sup> | 5.97 (.45)   |            | 4.86 (.42)      |            |
| SET 2 COMPARISON EXT | Cologne        | 3.40 (.48)   |            | 3.33 (.44)      |            |

COMPUTER

|                  |                  | Apple        |            | IBM             |            |
| SET 1 FOCAL EXT  | Video Games      | 6.45 (.43)   |            | 6.08 (.42)      |            |
| SET 1 COMPARISON EXT | Stereo          | 4.82 (.45)   |            | 4.66 (.44)      |            |
| SET 2 FOCAL EXT  | Instructional Tape | 6.85 (.41)   |            | 7.34 (.46)      |            |
| SET 2 COMPARISON EXT | Cellular Phone<sup>b</sup> | 6.21 (.42)   |            | 7.22 (.47)      |            |

BEER<sup>a</sup>

|                  |                  | Coors        |            | Budweiser       |            |
| SET 1 FOCAL EXT  | Wine Coolers<sup>b</sup> | 5.67 (.44)   |            | 3.29 (.41)      |            |
| SET 1 COMPARISON EXT | Beer Mug         | 6.83 (.49)   |            | 6.43 (.47)      |            |
| SET 2 FOCAL EXT  | Bottled Water<sup>b</sup> | 5.91 (.44)   |            | 3.03 (.42)      |            |
| SET 2 COMPARISON EXT | Scotch<sup>b</sup> | 3.68 (.50)   |            | 4.71 (.47)      |            |

<sup>a</sup>Focal extension is an extension for which the focal brand's specific association is relevant. Comparison extension is an extension for which the comparison brand's specific association is relevant. Within each parent product category, set is a replicate of the match of brand associations to extension categories.

<sup>b</sup>Brand Affect X Extension Relevance interaction significant for category (p < .05)

<sup>2</sup>In this and subsequent experiments, effects not involved in hypothesis testing are only reported if significant (p < .05).
The extended category, the brand would have an advantage when extending to that new category, even if the competitors have higher brand affect. The test of the preference ordering of brands in the focal extension category supports this prediction. In the extension categories in which the focal brand-specific association was relevant, the focal brand was more preferred as an extension (6.15) than was the comparison brand (5.04). However, as expected, in extension product categories in which the focal brand association was not relevant, the comparison brand (5.73) retained its advantage over the focal brand (4.94). Thus, not only was brand preference moderated by the relevance of the associations, but reversals of preference were obtained.

The nested design precluded examination of simple effects at the aggregate level. Thus, analyses were performed separately for each focal extension category. Results showed that eight of the ten focal extension categories exhibited preference reversals, seven of which were statistically significant (see Table 2). For example, in the toothpaste category, the focal brand (Close-Up) was more preferred as a brand extension than the comparison brand (Crest) in the category of breath mints in which its brand-specific association of breath-freshening was relevant (7.58 versus 6.17, respectively; F1.38 = 4.63, p < .04). Similarly, in the soap product category, the focal brand (Camay) was more preferred as an extension than the comparison brand (Irish Spring) in the focal extension category of moisturizer, in which Camay’s brand-specific association of skin-softening was relevant (6.35 versus 4.13, respectively; F1.37 = 8.65, p < .01).

The two failures to obtain preference reversals occurred in the mouthwash and instructional tape extension categories, in which the comparison and focal brands were equally preferred. These results were unexpected but are explainable post hoc. Open-ended responses revealed that subjects interpreted the mouthwash category differently than we expected. In particular, Crest mouthwash was interpreted by subjects as an anti-plaque dental rinse, which is highly consistent with the Crest toothpaste association. Responses to the instructional tape, which we predicted would be more appropriate for Apple than for IBM, revealed that an IBM instructional tape was highly rated precisely because IBM is perceived as difficult to use. Apparently, subjects interpreted the instructional tape as a device to facilitate the use of the computer rather than as an independent educational product that corresponded to Apple’s association. Thus, in every instance in which subjects did not misinterpret the stimuli, preference reversals were obtained.

The soap product category provides further insights into the relative diagnosticities of brand-specific associations and brand affect. Although Irish Spring was preferred to Camay in its original category at the aggregate level, this preference was found only with males; females were ambivalent. If the extension evaluations had been influenced by brand affect, gender differences should have arisen. However, males and females reacted identically. The brand affect X extension relevance X gender interaction did not approach significance (F < 1). For both groups, the brand affect X extension relevance interaction was significant and exhibited the same crossover pattern (males: F1.27 = 12.24, p < .01; females: F1.27 = 5.32, p < .03).

This result is meaningful for three reasons. First, it shows that no bias was present in the selection of brands and extensions. Within a category that had different preference segments, identical extension reactions were found. The second reason is that knowledge of the brand association may be more critical than brand usage in determining extension reactions. Although males used Camay soap infrequently, they recognized the relevance of its skin softening association in the moisturizer and cleansing cream extension categories. Finally, even though Camay soap was the least liked brand in the experiment, males (who rated it 3.47 on the 9-point preference scale in pretesting) preferred it over Irish Spring and gave it high ratings in extension categories that matched its association (moisturizer rating: 6.91; cleansing cream rating: 6.59).

The preference ranking task, which treated brand affect as a within-subject factor, produced an identical pattern of results; therefore, we do not discuss these results. Taken as a whole, the results illustrate the relative influence of brand-specific associations and brand affect on the evaluation of brand extensions. Within the ranges investigated, brand associations appear to dominate brand attitude.3 In the next experiment we compare the influence of brand associations with that of product category similarity.

**EXPERIMENT 2**

Prior research has supported the commonsense notion that product category similarity plays a role in brand extension. That is, a brand extends more easily when the new category is similar to the original category than when it is dissimilar (Aaker and Keller 1990; Boush and Loken 1991; Boush et al. 1987). As noted, however, Park, Milberg, and Lawson (1991; also Bridges 1992) have argued that this relationship may be moderated by the extent to which a brand is perceived to be prestigious versus functional.

The Park, Milberg, and Lawson (1991) study represents an important step because it recognizes the influence of the brand in brand extension. Unlike other research, it employs real brands with unique identities and does not confound brand identity with product class. However, it may be limited in its ability to capture the unique value of a brand name for two reasons. First, the distinction between functionality and prestige is rather broad, inasmuch as each concept can refer to a diverse set of meanings. For example, among automobiles, functionality can be reflected in reliability (e.g., Honda), energy efficiency (e.g., Geo), safety (e.g., Chrysler), or durability (e.g., Ford). Similarly, a brand can be prestigious for a variety of reasons, including its expenditure.

3 The ranges were realistic and uncontrived, and our sampling of real-world brands was rather exhaustive. Nonetheless, one might argue that our results would have been less dramatic had the preference differences between the focal and comparison brands been even larger in the original categories. We return to this issue in the “Final Discussion” section but respond here by noting that larger differences are difficult to obtain. Whereas it is easy to identify brands that are esteemed, brands that are disliked have little long-term viability and are therefore scarce. In addition, we found the same pattern of results across stimuli, even among focal brands that did receive relatively low affective reactions in their original categories (e.g., Camay). Finally, the influence of brand affect was not merely tempered by brand associations. The preference reversal phenomenon was quite robust.
The importance of the brand

easive price, superior product quality, or exclusivity of consumers (Park, Jaworski, and MacInnis 1986). Indeed, it could be argued that prestige and function orientations are subcategories within a product class—more specific than the category but less specific than individual brand attributes. For example, Experiment 1 shows that consumers reacted very differently to extensions from two functional brands of cereal, such as Froot Loops and Cheerios. This problem is exacerbated in the Park, Milberg, and Lawson (1991) study by the use of only a single prestige brand (Rolex) and a single functional brand (Timex), resulting in a confound of sorts between brand and subcategory.

A second limitation of the study involves its focus and the consequent managerial implications of its results. Park, Milberg, and Lawson (1991) were interested primarily in examining the joint effects of product class similarity and brand concept consistency on extendibility. Their results indicate that the best scenario for successful extension involves extending a brand into a similar and consistent category (e.g., functional brand into a similar functional category). Most managers likely would concur with this finding. Functional brands may lack the glamour needed to succeed in prestige product classes and, all else being equal, similar extensions should produce better results than dissimilar extensions. Once the incongruity between prestige and functionality is recognized, however, a critical question for managers is the extent to which their opportunities are limited by category similarity. The central theme of our research is that associations specific to the brand are a primary determinant of extendibility.

In the present context, this suggests that an appropriate brand-specific association can compensate for lack of product class similarity and extensions that are not consistent with the brand’s specific identity may be ill-conceived, regardless of category similarity. In Experiment 2 we directly examine the differential leverage provided by product category similarity and brand-specific associations when extending to a new product category. Following the logic of Experiment 1, we predict a brand-specific association $\times$ product category similarity interaction. Moreover, we hypothesize that an extended brand will be more favorably evaluated in a dissimilar category in which its association is relevant than in a similar category in which its specific association is not relevant. That is, brand effects are predicted to dominate the effects of category similarity when the brand association is relevant in the extension category.

We focus on functional brands because the findings of Park, Milberg, and Lawson (1991) imply that brand effects and extension opportunities may be limited for functional brands. In addition, in Experiment 2, we attempt to extend previous research by showing that brand associations are not limited to the generic prestigious or functional categories but can include any association that is linked strongly to the brand.

Method

Stimulus materials. The criteria for stimulus selection overlapped with those of Experiment 1. However, an additional criterion was important in the present experiment, inasmuch as there was a need to vary the similarity of the potential extension categories and the relevance of the brand associations in those categories. Through additional pretesting, four product categories were identified that satisfied the entire set of criteria: cereal, soap, gym shoes, and watches. The fact that the last category met the selection criteria is fortunate because it allows comparison with the results of Park, Milberg, and Lawson, who use watches as their sole originating category.

All four categories generally satisfied three essential criteria for hypothesis testing. First, pretests showed that each category contained individual brands that possessed different primary associations. Second, a separate pretest showed that 34 different subjects could generate credible extensions that varied widely in terms of their similarity to the original category. In fact, three levels of similarity were identified. Operationally, these levels mapped onto the 9-point scale used in the pretest that ranged from “not similar” (1) to “very similar” (9). Potential extensions with ratings between 7 and 9 were deemed very similar and, in fact, correspond to line extensions. That is, they represent extensions that are members of the same product category as the original. Extensions with ratings from 4 to 6 were defined as similar brand extensions, and those that ranged from 1 to 3 were considered dissimilar extensions. Table 3 describes the four original categories, individual brands in each category, three extension categories, and similarity ratings. Results of the similarity pretest showed that the two dissimilar extension categories did not differ from one another, but that the line extensions, similar extensions, and dissimilar extensions differed from one another significantly (all $p < .05$).

Note that two different dissimilar extensions were generated; the reason for this pertains to the final criterion for stimulus selection. Because the experiment was designed to pit category similarity against brand-specific effects, the extension categories were chosen not only on the basis of similarity to the original product category but also according to the relevance of the focal brand’s association in those categories. Thus, an attempt was made to pick extension categories in which the association of the focal brand was not relevant in the line extension or similar extension but was relevant in the dissimilar extension category. To this end, the same 34 subjects who generated extension categories also rated the relevance of the brand-specific associations in these extension categories on a 9-point scale that ranged from “not at all important” (1) to “very important” (9). Results showed that our criteria for choosing extension categories were partially met. Although the associations were always more relevant in the dissimilar than the similar extension categories ($ps < .05$), the relevance comparison between dissimilar extensions and line extensions was significant only for cereals and soaps. Thus, subsequent hypothesis testing will focus on similar versus dissimilar extensions and use the line extension versus dissimilar extension as a strong test of the similarity effect. Furthermore, because similarity and extension relevance ratings are on different scales, it is not possible to equate their manipulation strength. Thus, only highly dissimilar extension categories were chosen and more than one dissimilar extension was tested from each product category. In Table 4, we describe
Table 3
MEAN SIMILARITY RATINGS AS A FUNCTION OF EXTENSION CATEGORY TYPE (EXPERIMENT 2)

<table>
<thead>
<tr>
<th>ORIGINAL CATEGORY</th>
<th>LINE EXTEN.</th>
<th>SIMILAR</th>
<th>DISSIMILAR 1</th>
<th>DISSIMILAR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEREAL</td>
<td>Hot Cereal</td>
<td>Waffles</td>
<td>Lollipop</td>
<td>Popsicle</td>
</tr>
<tr>
<td></td>
<td>7.97</td>
<td>4.59</td>
<td>1.44</td>
<td>1.59</td>
</tr>
<tr>
<td>Focal Brand: Froot Loops (sweet, flavors, kids)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Brand: Cheerios</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOAP</td>
<td>Liquid Hand Soap</td>
<td>Bubble Bath</td>
<td>Shoe Deodorizer</td>
<td>Room Freshener</td>
</tr>
<tr>
<td></td>
<td>8.21</td>
<td>5.65</td>
<td>1.45</td>
<td>2.15</td>
</tr>
<tr>
<td>Focal Brand: Irish Spring (scent)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Brand: Camay</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GYM SHOE</td>
<td>Ladies’ Canvas Gym Shoes</td>
<td>Wingtips</td>
<td>Pain Rub</td>
<td>Thirst Quencher</td>
</tr>
<tr>
<td></td>
<td>7.97</td>
<td>3.64</td>
<td>1.82</td>
<td>2.68</td>
</tr>
<tr>
<td>Focal Brand: Nike (athletic)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Brand: L.A. Gear</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WATCH</td>
<td>Pocket Watch</td>
<td>Bracelet</td>
<td>Alarm System</td>
<td>Outdoor Thermostat</td>
</tr>
<tr>
<td></td>
<td>7.29</td>
<td>4.62</td>
<td>2.21</td>
<td>1.88</td>
</tr>
<tr>
<td>Focal Brand: Timex (durability, reliability)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Brand: Seiko</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Numbers represent mean similarity ratings between the extension categories and the original category. In all cases, the line extension means and similar extension means differed significantly from each other and from the two dissimilar extensions means ($p < .05$). The two dissimilar extension means did not differ from each other. Beneath the means are the brands that served as the focal and comparison brands. The brand-specific associations of the focal brands are noted in parentheses.

To summarize, four originating categories met the criteria for hypothesis testing in Experiment 2. Each category contained two familiar brands that had different primary associations. The focal brand had a specific association that was relevant in the dissimilar but not the similar extension categories. The comparison brand served as a control for product category effects. Thus, for Experiment 2, use of the terms of focal and comparison brands refers to relevance of brand associations in dissimilar categories. For example, the focal brand of Froot Loops had a flavor association that was relevant in the dissimilar categories of lollipops and popsicles, but not in the similar extension category of waffles or the line extension of hot cereal. The comparison cereal brand of Cheerios had a healthy grain association that was not relevant in the dissimilar extension categories. We predict that Froot Loops will be evaluated more favorably in the dissimilar extension categories of lollipops and popsicles, in which its specific association is relevant, than in the similar categories of waffles and hot cereal, in which its specific association is not relevant. Conversely, we expect Cheerios’ extensions to be more favorably evaluated in similar than dissimilar categories given that its association was not relevant in the dissimilar extension categories.

Experimental design and procedure. The experiment conformed to a 2 (brand-specific association) X 4 (extension category similarity) X 4 (product category) design. Brand-

Table 4
MEAN RATINGS OF FOCAL BRAND ASSOCIATION RELEVANCE AS A FUNCTION OF EXTENSION CATEGORY TYPE (EXPERIMENT 2)

<table>
<thead>
<tr>
<th>FOCAL BRAND ASSOCIATION</th>
<th>LINE EXTEN.</th>
<th>SIMILAR</th>
<th>DISSIMILAR 1</th>
<th>DISSIMILAR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEREAL</td>
<td>Hot Cereal</td>
<td>Waffles</td>
<td>Lollipop</td>
<td>Popsicle</td>
</tr>
<tr>
<td>Flavor, Sweet</td>
<td>5.45</td>
<td>5.25</td>
<td>8.56</td>
<td>8.44</td>
</tr>
<tr>
<td>SOAP</td>
<td>Liquid Hand Soap</td>
<td>Bubble Bath</td>
<td>Shoe Deodorizer</td>
<td>Room Freshener</td>
</tr>
<tr>
<td>Scent</td>
<td>6.72</td>
<td>7.10</td>
<td>8.24</td>
<td>8.96</td>
</tr>
<tr>
<td>GYM SHOE</td>
<td>Ladies’ Canvas Gym Shoes</td>
<td>Wingtips</td>
<td>Pain Rub</td>
<td>Thirst Quencher</td>
</tr>
<tr>
<td>Athlete, Sports</td>
<td>6.99</td>
<td>2.07</td>
<td>6.98</td>
<td>7.59</td>
</tr>
<tr>
<td>WATCH</td>
<td>Pocket Watch</td>
<td>Bracelet</td>
<td>Alarm System</td>
<td>Outdoor Thermostat</td>
</tr>
<tr>
<td>Durability, Reliability</td>
<td>7.69</td>
<td>5.86</td>
<td>8.36</td>
<td>6.89</td>
</tr>
</tbody>
</table>

Numbers represent mean association relevance ratings. In all cases, the dissimilar extension means and similar extension means differed significantly from each other ($p < .05$). The dissimilar extension means differed from the line extensions means only for the categories of cereal and soap ($p < .05$).
specific association (BSA) was a between-subjects factor that compared two different brands, the focal and comparison brands, that possessed different associations. The similarity factor consisted of four levels: line extension, similar extension, and two dissimilar extensions. The relevance of the BSA in the extension category was embedded within the similarity manipulation such that the focal brand association was relevant in the dissimilar categories but not in the similar categories. As in Experiment 1, product category was a replicate involving the four original product categories.

The similarity and product category factors were crossed to form a 4 × 4 Latin square design such that subjects saw each similarity level and product category once. Each subject evaluated four brand extensions, one for each of the four original product categories. Furthermore, one extension was a line extension, one was a similar extension, and two were dissimilar extensions. The selection of extensions and the order in which subjects evaluated them was counterbalanced for each sequence.

A total of 159 different subjects from the same pool used in the previous experiment were run in groups of 10 to 12. Subjects completed the same introductory procedure used in Experiment 1. For each extension, subjects were allotted one minute to answer three items. The first two items were 9-point rating scales that measured each subject’s assessment of the extension. The third item was an open-ended measure of subjects’ reactions to the extension. After all extensions had been evaluated, the following covariates were measured: preference for the original brand, familiarity with the original brand, prestige image of the brand, prototypicality of the brand in its original category, and usage of the extension product category. The entire procedure took approximately 35 minutes.

Results

The experiment was treated as a hierarchical nested design. BSA is nested in product category because each set of focal and comparison brands is specific to its original product category. Similarity also was treated as nested in product category because the degree of extension category similarity is relative to each original product category. Statistical tests were performed using an ANOVA that included the between-subjects factor of BSA, the within-subject factors of similarity and product category, and the five covariates. Because the two dissimilar extensions from each original product category showed no differential effects of similarity or a similarity × BSA interaction (ps > .20), they were collapsed to form the dissimilar extension condition.

The only significant covariate was brand effect (F1,308 = 28.48, p < .001). With one exception, the five covariates did not interact with any of the treatments or the treatment interactions (ps > .15). As in Experiment 1, there was a main effect of product category (F3,422 = 10.61, p < .01). Consistent with prior research, there was a main effect of similarity (F4,422 = 14.00, p < .01), indicating that extensions were more preferred to similar than dissimilar categories. However, this effect of similarity is qualified by its significant interaction with BSA. Least-squares evaluation means are reported in Table 5.

Preliminary support for our hypothesis is provided by a significant BSA × similarity interaction (F4,360 = 3.74, p < .001). However, as noted previously, the critical test involves the similar versus dissimilar comparison, with the line versus dissimilar comparison serving as a very strong test of our hypotheses.

Similar versus dissimilar extensions. The BSA × similarity interaction tests whether brand-specific associations moderate the effect of category similarity on brand extension evaluations. Interaction comparisons support this hypothesis, as the BSA × similarity interaction between similar and dissimilar extensions was significant (F4,426 = 3.62, p < .008).

Our hypothesis regarding the dominance of brand-specific associations over product category similarity also was supported. Simple effects tests were performed to determine if the focal brand was more preferred in a dissimilar extension in which its specific association was relevant than in a similar extension in which its specific association was not relevant. The results show that the focal brand was more preferred in the dissimilar than the similar condition (F4,426 = 5.10, p < .004), whereas the comparison brand was less preferred in the dissimilar condition (F4,426 = 3.94, p < .008). Thus, subjects were influenced sufficiently by the brand-specific associations that their extension ratings were inversely related to similarity for the focal brand.

Given the nested design, it was not possible to examine the similarity (similar versus dissimilar) × BSA × product category interaction. Therefore, separate analyses were performed to test the hypotheses for each category replicate. First, the categories were examined to see whether brand-specific associations moderated category similarity. Significant similarity × BSA interaction contrasts were obtained in the product categories of cereal (F4,426 = 9.26, p < .004) and soap (F4,426 = 8.51, p < .005). No similarity × BSA interaction contrast was obtained in the product categories of gym shoe and watch (ps > .13). Surprisingly, however, the failure of an interaction to emerge in these cases was not due to a dominance of similarity but rather because both the focal and comparison brands were more preferred in the dissimilar than similar extension.

---

4For half of the subjects, the two rating scales were affective in nature, anchored by “dislike” and “like” on one scale and “undesirable” and “desirable” on the other. For the remaining subjects, the two scales measured the fit of the brand in the new category and were anchored by “not at all” and “very much” on one scale and “not appropriate” and “appropriate” on the other. Within each set of scales, responses were correlated reasonably well (afffective: r = .84; fit: r = .60). Thus, for each subject the average of the two rating scales served as the dependent measure in the analyses. The different sets of scales were used between subjects because the appropriateness of evaluation versus fit has been an issue in brand extension research (Park, Lawson, and Milberg 1989). However, in the present research, the results were not affected by the type of measure and, therefore, this factor will not be discussed in detail. All reported analyses are collapsed across measures.

5The prestige covariate interacted with the similarity treatment (F4,426 = 2.52, p < .05). Simple effects analyses revealed that the prestige × similarity interaction was ordinal, and therefore one can interpret the ANCOVA results meaningfully (Jaccard, Wan, and Turrisi 1990). Furthermore, all reported results remained unchanged when prestige was dropped from the analyses. To maintain consistency with the other experiments, the least-squares means include the prestige covariate.
Further analysis shows that the higher ratings given to the dissimilar extensions in the gym shoe and watch replicates were not due to simple consumer preference for the products in the dissimilar categories. When the data are analyzed separately for those subjects who rated their line extension preferences, the results do not change substantially and in fact exhibit an even stronger correspondence to our hypotheses. The open-ended responses provide further insights. In the gym shoe category, the similar extension (L.A. Gear) was disliked in both the focal and comparison conditions, but for different reasons. Nike wingtips were received poorly because the "sporty" image of Nike does not match the "dressy" wingtips image. L.A. Gear wingtips received low ratings because such a product sounded "cheap" to subjects. In the case of watches, the associations of Timex and Seiko were more similar than were suggested by the pretests. Subjects believed both brands to be reliable and durable and therefore found their dissimilar extensions to be equally attractive.

Second, the categories were analyzed separately to examine the hypothesis regarding the dominance of brand-specific associations over category similarity. Analysis of simple effects shows that the dissimilar extension was directionally preferred to the similar extension in three of the four focal extension categories. Specifically, the focal brands were more preferred in the dissimilar than similar extension category in the case of gym shoes (5.26 versus 2.94, respectively; $F_{1,49} = 10.87, p < .002$) and watches (5.68 versus 3.73, respectively; $F_{1,48} = 7.59, p < .01$). In the case of cereals, the focal brand (Froot Loops) was more preferred in the dissimilar than similar extension categories, though this difference was not significant (5.63 versus 3.40, respectively; $F_{1,49} = 1.52, p > .22$). The lone exception to this pattern was the soap product category, in which the focal brand (Irish Spring) was preferred equally in the dissimilar and similar extensions (5.76 versus 5.96, respectively; $F < 1$). Overall, the category replicates show the focal brand being more preferred in a dissimilar extension category in which its association was relevant than a similar extension category in which its association was not relevant. In no instance did similarity dominate.

**Line versus dissimilar extensions.** The BSA X similarity interaction between line and dissimilar extensions was marginally significant ($F_{1,127} = 2.11, p < .09$) and appeared to be driven by two of the four categories. Recall that it was difficult to select line extensions that were low on extension relevance for the focal brand. We attained our goal only in the cereal and soap product categories, but even in these instances, the focal brands' associations were rated above the mean for extension relevance. However, because line extensions represent a powerful manipulation of similarity when contrasted to dissimilar extensions, the cereal and soap replicates provide a very conservative test of our hypothesis.

When only the cereal and soap categories are included in the analysis, the BSA X similarity interaction contrast between line and dissimilar extensions becomes significant ($F_{2,209} = 12.26, p < .001$). The nature of the interaction differed from the similar versus dissimilar comparison. Here, line extensions are preferred to dissimilar extensions; however, this difference is significant for comparison brands ($F_{2,209} = 3.48, p < .05$) but not for focal brands ($F < 1$). Therefore, even with a conservative test, the focal brand is not more preferred as a line extension than a dissimilar extension.

At the category level, significant similarity (line versus dissimilar) X BSA interactions were obtained in both the cereal ($F_{1,103} = 14.31, p < .001$) and soap categories ($F_{1,99} = 7.95, p < .006$). In the cereal product category, the focal
brand (Froot Loops) was marginally more preferred in the dissimilar categories than as a line extension (5.63 versus 4.46, respectively; $F_{1,45} = 3.75$, $p < .06$). However, in the soap product category, both brands were more preferred as a line extension, though this difference was smaller for the focal brand (Irish Spring: 5.76 versus 7.10, respectively; $F_{1,46} = 5.09$, $p < .03$) than for the comparison brand (Camay: 4.28 versus 7.00, respectively; $F_{1,45} = 46.07$, $p < .001$). Thus, in the comparison between line and dissimilar extensions, brand-specific associations still dominated for the cereal category and significantly reduced similarity’s influence in the soap category.

In summary, this experiment found a brand-specific association X product category similarity interaction for functional products. In addition, brand extensions to dissimilar product categories largely were judged more favorably than extensions to similar product categories when the brands’ specific associations were relevant in the dissimilar categories. Even when the comparison pitted dissimilar extensions against line extensions, it was shown that brand-specific associations may dominate or offset product category similarity.

These results, particularly those from the watch category replicate, provide an interesting contrast to the findings of Park, Milberg, and Lawson (1991). They found that the functional Timex brand extends more easily into similar than dissimilar functional categories. Going a step further, they appear to find that a Timex extension into a dissimilar functional category receives the same low ratings as a Timex extension into a similar but prestigious category. Direct comparisons between their results and ours are not possible because we examine different associations and extension categories. Nonetheless, we find that when the associations of watch brands are pitted against similarity, the associations dominate. We find it very plausible that similarity should have a large effect on extendibility when brand effects are held constant. However, our results suggest that a focus on similarity may divert attention from other opportunities made possible by brand-specific associations. Moreover, insofar as the associations are unique, they provide leverage into new categories that is less easily duplicated than leverage arising from category similarity alone.

**EXPERIMENT 3**

The results of Experiments 1 and 2 do not suggest that affect and similarity are unimportant; rather, they point to the influence of brand-specific associations, which heretofore have received surprisingly little attention. Nonetheless, the effects of brand-specific associations are not expected to be uniform across consumer segments. These associations represent an aspect of brand knowledge and therefore should exert their greatest influence among consumers who are most knowledgeable. When such knowledge is lacking, affect and similarity effects should be more prominent.

To test this reasoning, we examine the relative effects of affect and brand-specific associations as a function of expertise. In Experiment 1 we find that not only did brand-specific associations moderate brand affect, they also dominated affect in virtually every instance investigated. However, the brands tested in that experiment were chosen explicitly on the basis of their high familiarity and well-known associations. In this experiment we examine brands for which consumer knowledge is likely to be more heterogeneous.

Specifically, we predict that brand-specific associations will moderate the effect of brand affect in extension evaluations for brand experts, but not for brand novices. Moreover, on the basis of the preceding results, we expect that brand-specific associations will dominate brand affect only for consumers high in brand knowledge. Conversely, we predict that brand affect will dominate brand-specific associations for consumers low in brand knowledge.

**Method**

**Stimulus materials.** A product category was needed in which experts and novices had the same brand preferences. In addition, both experts and novices needed to be familiar with the product category. The category of personal computers was selected because it is a well-known category, but one in which technical knowledge varies widely.

Using market share as a surrogate for brand preference, Apple was selected as the more preferred personal computer brand, and Compaq as the less preferred brand (Standard & Poor’s Industry Surveys 1990). Discussions with computer industry personnel revealed that Apple was associated with good software features such as graphics and sound, but poor hardware attributes. On the other hand, Compaq was associated with good hardware, but had no software associations.

Extension categories in which these brand associations were relevant also were generated from discussions with computer industry personnel. A machine reader was selected as an appropriate extension for Apple because its associations of graphics and sound were relevant. A machine reader is a hand-held device that scans written pages and then speaks the text aloud. A mainframe computer was selected as an appropriate extension for Compaq because its hardware design is several steps more advanced than a personal computer.

**Experimental design.** A $2 \times 2$ (brand affect $\times$ relevance of the brand specific association in the extension category) $\times 2$ (brand knowledge) mixed design was used. Brand affect was a between-subjects factor that pitted the more preferred Apple brand against the less preferred Compaq brand. Extension relevance was a within-subject factor involving whether the associations of Apple or Compaq were relevant in the extension category. Brand knowledge was a between-subjects factor involving whether subjects had high or low knowledge of the brands. Computer engineers with either masters' or doctoral degrees served as brand experts. They were employed at a specialized computer firm that did not compete in the personal computer market. Undergraduate business students served as novices. Informal pretesting revealed that novices used computers but had difficulty generating brand-specific associations. However, to the extent that knowledge may be heterogeneous among novices, the manipulation of brand knowledge may be considered weak. Hence, this experiment represents a conservative test of the moderating effect of knowledge.
Subjects evaluated two extensions for the same brand—one relevant to the brand association and the other not. The order in which subjects evaluated the extensions was counterbalanced. Subjects were assigned randomly to the brand conditions.

Procedure. A total of 45 subjects participated in this experiment, 15 of whom were experts. Subjects received an introductory page that explained brand extensions. For each extension category, the product was defined at the top of the page to ensure that novices understood it. Subjects then responded to the same two evaluative items used in Experiment 1 and gave their open-ended responses. They then provided ratings of their preference for the computer brands, which served as a manipulation check. They also rated their perceptions of brand prestige and usage of personal computer brands, which served as covariates in the analysis.

Results

During stimulus selection, market share served as a surrogate for brand preference, with Apple being preferred over Compaq. The results of subjects’ brand preferences confirmed this manipulation. On a 9-point scale, Apple was preferred over Compaq as a personal computer by both experts (7.07 versus 4.80, respectively, $F_{1,14} = 15.21, p < .01$) and novices (7.42 versus 5.90, respectively; $F_{1,29} = 12.51, p < .01$).

The data were analyzed using a mixed ANOVA containing brand affect and brand knowledge as between-subjects factors, extension relevance as a within-subject factor, and the covariates. The two measures of extension evaluation were highly correlated for each extension (mainframe: $r = .72$; machine reader: $r = .76$) and were averaged to produce a single dependent measure in the analyses.

The covariates did not interact with the treatments or treatment interactions ($ps > .15$). Only the prestige image covariate was significant ($F_{1,35} = 10.50, p < .003$). As expected, there was a main effect of brand knowledge ($F_{1,35} = 20.39, p < .01$), indicating that experts and novices differed in their extension evaluations. Consistent with Experiment 1, there was a main effect of extension relevance ($F_{1,35} = 5.56, p < .03$) and a brand affect X extension relevance interaction ($F_{1,35} = 11.92, p < .01$), indicating that extension evaluations were influenced by the relevance of the brand-specific association in the extension category. The extension relevance X brand knowledge interaction ($F_{1,35} = 10.71, p < .01$) indicates experts were more sensitive to the relevance of brand-specific associations than novices. The least-squares evaluation means are presented in Table 6.

We hypothesized that only the experts’ judgments would be moderated by the relevance of the brand-specific associations in the extension categories. Such an outcome would result in a brand affect X extension relevance X brand knowledge interaction. This critical interaction was significant ($F_{1,35} = 11.96, p < .002$). As predicted, simple effect tests revealed that the brand affect X extension relevance interaction was significant for experts ($F_{1,9} = 18.45, p < .01$), but not for novices ($F < 1$). Thus, for consumers high in brand knowledge, their extension evaluations were moderated by the relevance of the brand associations in the extension categories, whereas novices were not influenced by brand-specific associations.

Furthermore, we predicted that the experts’ judgments would be dominated by the relevance of the brand-specific associations in the extension categories and that novices’ extension judgments would be dominated by brand affect. That is, preference reversals from the original to the focal extension category were expected for experts but not for novices. The hypothesis involving preference reversals among experts but not novices is tested by the brand affect X brand knowledge interaction for the extension category in which the less preferred brand’s association was relevant. In the mainframe extension category, the less preferred brand, Compaq, had a relevant association and therefore was expected to be more preferred as an extension than Apple by subjects high in brand knowledge. However, subjects low in brand knowledge would not have the ability to recognize the connection between the brand and extension category, and consequently it was expected that brand affect would drive their evaluations. A significant brand affect X brand knowledge interaction was obtained for the mainframe extension ($F_{1,39} = 5.64, p < .03$). Simple effects show that this was the result of experts’ preference for Compaq over Apple (4.65 versus 2.50, respectively; $F_{1,41} = 10.82, p < .01$), and novices’ preference for Apple over Compaq (6.40 versus 6.07, respectively), though this latter effect was not significant ($F < 1$). Thus, the experts were more influenced by brand-specific associations than brand affect in their extension evaluations.

In summary, brand-specific associations were shown to moderate the effect of brand affect on extension judgments only for consumers high in brand knowledge. For these consumers, as for those in Experiment 1, extension judgments were based predominantly on whether the brand-specific associations were relevant in the extension category. For consumers with low brand knowledge, extension judgments appeared to be driven by brand affect or brand awareness.

GENERAL DISCUSSION

Prior research on brand extension emphasizes the importance of brand affect and category similarity. Our research provides strong evidence for the importance of brand-specific associations. A variety of brand-specific associations were shown to moderate the effect of brand affect and product category similarity across several product categories. Moreover, the impact of brand-specific associations was found to be so influential that it dominated brand affect and product category similarity. In Experiment 1, brand-specific associations caused preference reversals from the
original to the extended category. When a brand's association was relevant in the extension category, it was more preferred as an extension than a brand from its original product category possessing higher affect. Although this result was quite robust in Experiment 1, the range of affect was not large, and other results are possible. If two brands lie at opposite ends of the affect continuum, affect may dominate. Although the marketplace does not support unlike brands, brands that engender more extreme positive affect may be found among prestige brands, which were excluded purposely from the present investigation.

The real world did not constrain the manipulation of similarity in Experiment 2, in which we found that brand-specific associations enabled a brand to extend to dissimilar product categories. Brand-specific associations moderated the role of product category similarity in brand extension judgments such that a brand extension was more preferred in a dissimilar category that valued its association than in a similar category that did not value its association. Thus, opportunities to exploit a brand's value are not limited to similar extension categories. It is noteworthy that this conclusion is derived from a study that focused on functional brands (cf. Park, Milberg, and Lawson 1991).

This does not imply that there are no boundary conditions. Experiment 3 shows that brand knowledge serves as a potent boundary condition. Other research suggests that consumers may reject an extension if they believe it is beyond the firm's technological abilities (Aaker and Keller 1990; but see Chakravarti, MacInnis and Nakamoto 1990). In addition, our research did not examine the relative accessibility of competing cues. Subjects' judgments of brand extensions were based on information they could retrieve from memory. However, the local environment may influence the salience of cues. For example, in-store factors such as the spatial proximity of a brand and its extension may enhance (or reduce) the influence of similarity. Researchers should investigate these and other conditions further.

The Evaluation Process

Due to the nascent character of brand extension research, many issues remain unresolved. Among these is the process by which consumers evaluate extensions. As noted, some researchers have advocated an affect-transfer model (cf. Fiske and Pauelschak 1986), in which the affect associated with the brand transfers from the original brand to the extension when similarity between the categories is high. However, direct evidence for any particular process is sparse (but see Boush and Loken 1991). The results of our studies seem to indicate an inference process. It appears that subjects evaluated each extension after assessing the ability of the extended brand to deliver desired benefits in the extended category. At a minimum, the preference reversals observed in Experiment 1 rule out any simple affect-transfer process, especially because the procedure controlled for product class similarity. Experiment 2 goes further and demonstrates that evaluation of the extension may be inversely related to similarity, depending on the brand-specific associations.

An examination of the open-ended responses provided by subjects after they evaluated the extensions also suggests an inference process. Although concurrent protocols would have provided a more reliable measure, subjects' retrospective rationales were entirely consistent with their evaluations and indicate that the perceived attractiveness of an extension is based on the benefits implied by its brand-specific associations. The most frequent response across and within potential extensions involved the inference that the extended brand possessed the brand-specific association of the original product and judged whether this feature was appropriate in the context of the extended product category. For example, the predominant response to the Close-Up breath mint extension (Experiment 1) was favorable and based on the rationale that Close-Up is associated with the key benefit of fresh breath. Some subjects went even further to infer that the breath mints would have the same red and white color and cinnamon flavor as Close-Up toothpaste. In general, the relatively few references to brand affect and category similarity occurred when the brand's specific association was not relevant in the extension category.

An inference process also is consistent with psychological theory and market structure models (Day, Shocker, and Srivastava 1979; Murphy and Medin 1985). Insofar as consumers view a product as a means to an end, their evaluations should reflect the estimated likelihood that the brand will help achieve the consumption goal. However, it would be naive to assume that even very favorable inferences by themselves will enable an extended brand to compete effectively. For example, evidence suggests that typicality judgments in goal-derived categories are driven not only by the efficacy of a member for achieving the goal but also by the frequency with which the member has been experienced as a way of achieving the goal (Barsalou 1985). Thus, even a highly appropriate extension may require high levels of exposure before it becomes competitive with existing brands and is evoked spontaneously as a choice option.

Indeed, an important direction for further research is to examine the attractiveness of brand extensions vis-à-vis established members of the extension category. In spite of the problems inherent in the introduction of any new product, brand extensions may enjoy advantages that are bestowed by their brand-specific associations and are unrelated to brand affect or brand name familiarity (Smith and Park 1992). For example, the mere process of extending into a new category could allow the brand to reframe the decision process in the extended category. Metaphor research suggests that the salient features of the original brand may determine which of its features are salient in the extended brand (cf. Ortony 1979a, b). Concurrently, these features may become more salient in the extension category as a whole. Insofar as such “promoted” features become more memorable and important, they should affect preference, particularly if they were previously nonsalient (cf. Wright and Rip 1980). And because these attributes represent a particular strength of the extended brand, they can be parleyed into a significant, brand-specific competitive advantage. For example, a Coppertone extension into cosmetics should highlight the sun protection attribute offered in make-up foundations.

Ortony (1979a,b) also refers to “attribute introducing comparisons.” Here, the salient attributes of the original brand introduce new attributes into the representation of the
extended category. That is, people may draw inferences about features of the extension that previously did not exist in the extended product category. For example, Crest gum might introduce the attribute of dental protection into the gum category (Aaker and Keller 1990).

Brand extensions also can reinforce the specific associations of the brand. An extension into a category that shares the same benefit may strengthen that association with the brand name and thereby increase the brand's value in its original product category. Thus, proper extension may nullify the much-feared "dilution" effect (Loken and Roedder John 1993).

In conclusion, brand extension is inherently a managerial topic; therefore, brand X product class interactions are of supreme importance. Product class effects may have limited value to brand managers. A brand's specific associations strongly influence how consumers evaluate brand extensions and may dominate product class effects. Although experimental isolation of brand effects requires extensive pretesting and careful manipulation of real world brands, it is exactly these effects that demand attention.

REFERENCES
Loken, Barbara and Deborah Roedder John (1993), "Diluting Brand Beliefs: When Do Brand Extensions Have A Negative Impact?" *Journal of Marketing*, 57 (July), 71-84.
Standard & Poor's Industry Surveys (1990), "Computers & Office Equipment" (June 28), C78.