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**The Importance of Brand-Specific Associations in Brand
Extension: Further Empirical Results.**

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Abstract

This paper reports a replication of Broniarczyk and Alba's study on the influence of brand-specific associations on brand extensions. The results broadly support the original study showing brand-specific associations (attributes which differentiate a brand from the competition) can dominate the effects of the parent brand to the point where they reverse extension evaluations. Thus the study provides further evidence to challenge the commonly held assumption that the effect associated with the original brand name and product category is automatically transferred to the brand extension.

Introduction

A brand extension strategy involves using an established brand name in one product class to enter another product class. Many firms have used this strategy in the last decade to further leverage brand equity. A "good" brand extension strategy is one where the brand name aids the extension while a "very good" brand extension also enhances the brand name (Aaker 1991).

Consumer evaluation of a brand extension is often described as a process by which core brand association of the parent brand transfers to the extension. Thus a key aspect contributing to the success of such strategies is understanding how consumer perceptions towards the brand in the established and new category are altered by the extension. This is an area where considerable research has been undertaken (Barwise 1993).

Brand extension research has focussed mainly on the consumer perceptions of brand extensions. Two factors have emerged as important in extension evaluations, one is the effect of the parent brand and the secondly the similarity between the original and the extension categories. Boush et al. (1987) noted the greater the similarity between the current product and the extended product the greater the transfer of brand affect. Attitudes towards

the extension were higher when there was a perception of “fit” and the parent brand had a higher perceived quality (Aaker and Keller 1990). Brand extensions can have a positive effect on the brand (Keller and Aaker 1992) but a bad extension can dilute the parent brand (Loken and Roedder-John 1993). Brand quality plays an important part in brand extension strategy (Dacin and Smith 1994) and Dawar and Andersen (1994) showed that undertaking brand extensions in a consistent direction also increased purchase likelihood.

While these studies emphasise product attributes such as “fit” and product similarity, other research highlights the role of non-product attributes in brand extension. Brand esteem and familiarity were important with stock market reaction to extensions (Lane and Jacobson 1995). Bridges (1992) found building associations not tied to the physical product could enhance a brand’s growth prospects. A brand’s image is also more likely to transfer to an extension if it is more general rather than product specific Nakamoto, MacInnis and Jung (1993). Park, Milberg and Lawson (1991) compared brand concept consistency (functional versus prestige brands) and product level similarity and found the prestige brand had greater extendibility when product similarity was low.

There are two major limitations with most of the recently published research about brand extension. One is that many studies have been exploratory and thus have limited generalisability. Secondly some research designs have used fictitious brands. This has lead Barwise (1993) to question the practical implications of the results and to suggest that there is the need for more research, which replicates and extends the exploratory studies. The need for publishing more replication studies in marketing journals is also highlighted by Hubbard and Armstrong, (1994). Of the 1,120 papers sampled from three major marketing journals less than 2% involved replications and extensions and only 15% of the studies fully confirmed the results of the original studies with 60% having strongly conflicting results. For example Sunde and Brodie (1993) replicated Aaker and Keller’s (1990) pioneering study into brand extensions. Their results did not entirely support the original findings and subsequent replications (Nijssen and Hartman 1994, and Bottomley and Doyle 1996) confirm the Sunde and Brodie findings rather than the Aaker and Keller findings.

This paper reports the replication of Broniarczyk and Alba’s (1994) widely cited exploratory study (hereafter BA) which used a number of experiments to examine the influence of brand

affect and brand-specific associations on brand extension evaluations. Their results showed that brand-specific associations dominate the effects of the brand and category similarity, to the point where they reverse consumer extension evaluations.

The BA study was chosen to replicate because the results challenge the commonly held assumption that the effect associated with the original brand is automatically transferred to the brand extension. It was also chosen because unlike a number of brand extension studies it used actual rather than fictitious brands. For this initial replication it was decided that it was more appropriate to undertake a “close” replication (Lindsay and Ehrenberg 1993).

The paper is divided into three sections. The first section compares the research approaches of the BA study and the replication. The second section compares the results of the original and replication studies. The final section develops implications and discusses the areas requiring further research.

Research Approach

The BA study involved a series of three experiments on potential brand extensions to examine how associations unique to the brand influenced brand extension evaluations. The first experiment (replicated in this study) investigated the following two questions:

1. Can brand-specific associations moderate the influence of brand affect in the evaluations of brand extensions?
2. If brand-specific associations are highly relevant in the extension category, will they be evaluated more favourably than the extensions of the original competitors, even if the competitors are more favourably evaluated in the original product class?

The second experiment (BA study) further examined the influence of brand-specific associations and product category similarity. These results also confirmed that relevant brand-specific associations dominate the impact of product similarity. Where the brand-specific association was relevant, the brand extension evaluation showed a preference in the dissimilar product category rather than a similar category where the association was not

relevant. The third experiment considered the moderating influence of brand knowledge. This experiment evaluated the influence of brand associations depending on whether the subjects were experts or novices in the computer category. Brand-specific associations were relevant only when consumers had some expertise with the brand. For consumers with low knowledge, brand awareness was dominant.

Experiment 1 was chosen for the replication study because it was the most important part BA's study in that it directly compared brand affect and brand-specific associations in extension evaluations. Experiments 2 and 3 depend on the results of experiment 1 it was decided that it would be more appropriate to consider them in subsequent research.

For experiment 1 the subjects were required to evaluate potential brand extensions of two competing brands from the same product category. These brands had different brand-specific associations that were either relevant or not relevant to the extension category. To demonstrate the impact of brand-specific associations, the evaluations of brand extensions from a preferred brand were compared with a less preferred brand within the product category.

As with the BA study, the replication involved extensive pre-testing to identify product categories and candidate brands with brand-specific associations.

For the replication the following hypotheses were developed.

H₁: Brand-specific associations moderate the influence of brand preference on extension evaluations.

H_{2a}: When a preferred brand has a brand-specific association relevant to an extension category then that brand's extension would be more favourably evaluated than an extension of a less preferred brand with an irrelevant brand specific association.

H_{2b}: When a less preferred brand has a brand-specific association relevant to an extension category then that brand's extension would be more favourably evaluated than an extension of a preferred brand with an irrelevant brand-specific association.

Comparison of Research Approaches

To meet the requirements of the BA experiment 1, pre-testing was conducted together with relevant manipulation checks to find brands that:

- were familiar to all respondents,
- had specific associations that were highly salient, but not based on prestige,
- had associations that differentiated them from the product category and the competition,
- had not been extended before.

The results of the BA and the replication pre-tests are compared in Table 1a and differences in the sample sizes and stimulus sets used between the replication and BA are summarised in Table 1b.

Table 1a about here.

Table 1b about here.

The selection of suitable brands for the experiment followed a similar pattern in both studies. The manipulation checks eliminated eight of the ten potential categories because the relevance of the brand-specific associations obtained in pre-test 2 to the extension categories could not be corroborated. Thus two categories, soft drinks and breakfast cereals, containing two differently preferred brands met the requirements for the replication of experiment one. A comparison of stimulus sets for the replication and the BA study is given in Table 2.

Table 2 about here.

The replication used the hierarchical nested statistical design of BA. This design was a 2 (brand affect) by 2 (extension relevance) by 2 (product category) by 2 (set) mixed design. Subjects evaluated potential extensions of one brand within a product category. Two brands, one preferred and the other less preferred from each category, were used. The less preferred brand was the focal brand and the more preferred brand was the comparison brand or control. Brand affect was a between-subjects factor of a comparison brand or the focal brand. The second factor was the relevance of potential extensions, either a relevant and non-relevant

extension, a within-subjects factor. One extension category in each set was consistent with the focal brand's specific association and the other was consistent with comparison brand's association. Two sets of potential extensions from each product category were used. These last two factors, set and product category were replicates included by BA to improve the generalisability of the results.

Identical questions and scales to the BA study measured the evaluation of the extensions. The first question asked whether the extension was one of the best or the worst in the category, while the second measured preference for the extension. Open-ended responses about the extensions were obtained from the subjects. As a manipulation check, brand preference of the parent brand was then measured using a like/dislike scale. A final task in which the subjects ranked their preference for the focal and comparison brands and another brand in the extension category was given. Measures of brand familiarity and brand prestige were also obtained and were covariates in the analysis.

The subjects were undergraduate students enrolled in the Commerce Faculty of the Auckland Institute of Technology. The subjects selected were not enrolled in marketing courses. This was to avoid any influence of prior knowledge that the students may have been exposed to regarding the topic of branding. They also did not receive course credit for participation. The use of a student sample did not limit the relevance of the study as they were consumers of the products tested. As two product categories were evaluated the task burden on the subjects in the replication was less than the BA study which had five categories.

The evaluation and preference ratings though separately measured were highly correlated ($r = 0.86$) and was consistent with BA where ($r = 0.84$). These two measures were averaged to form a single dependent variable. The results of the brand preference manipulation check were consistent with those of the pretest. Coco-Pops (6.56) was preferred to All Bran (4.87) $p < 0.0001$ and Sprite (6.65) was preferred to Diet Coke (5.61) $p < 0.0001$. The manipulation check was consistent with the overall direction in the BA study where the comparison brand (6.86) was preferred to the focal brand (6.16) $F_{(1,375)} = 7.42, p < 0.001$. Least squares mean scores for the evaluation of comparison and focal brands against relevant and non-relevant extensions, were then analysed using analysis of variance techniques. The similarities and

differences in these results were then compared with the BA study.

Comparison of Experimental Results

The overall extension evaluation ratings for the focal and comparison brands for the BA and replication studies are given in Table 3.

Table 3 about here.

The replication results indicate also support H_1 : “Brand-specific associations moderate the influence of brand preference on extension evaluations”. The brand affect by extension relevance interaction tested this hypothesis. The replication confirmed a significant brand affect and extension relevance interaction, $F_{(3,210)} = 3.76, p < 0.01$. In comparison the BA study brand and extension interaction was $F_{(4,218)} = 4.48 p < 0.00$.

The replication results indicate also support H_{2a} : “When a preferred brand has a brand-specific association relevant to an extension category then that brand’s extension would be more favourably evaluated than an extension of a less preferred brand with an irrelevant brand specific association.” As predicted in hypothesis 2A, the comparison brand extension with a relevant brand-specific association (5.30) was preferred to the focal brand (3.45). This compares with the BA study where the comparison brand extension (5.73) was preferred to the focal brand extension (4.94).

Finally there is support for H_{2b} : “When a less preferred brand has a brand-specific association relevant to an extension category then that brand’s extension would be more favourably evaluated than an extension of a preferred brand with an irrelevant brand-specific association.”. As predicted the focal brand extension was preferred to the comparison (4.24 versus 3.38). This compares with the BA results (6.15 versus 5.04).¹

The brand extension evaluations for the six product categories in the BA study and the two product categories in the replication are summarised in Table 4.

¹ The hierarchical nested design precluded significance tests being conducted on the mean scores. This approach was consistent with the BA Study.

Table 4 about here.

The replication results showed that preference reversals did occur in three sets out of four. In the soft drink category the reversal occurs in set 1, but is not significant. In set 2 the model is significant but there is no preference reversal. In the BA study the preference reversal was significant in eight out of ten extension categories. However support for hypothesis 2B was only significant in 2 of the 4 sets.

It can also be noted the preference reversals occurred despite the extension evaluation ratings being at lower levels for the replication than the BA study.

The replication results were also analysed using a random effects model which also showed there were significant interactions for brand affect by extension relevance, $F(2, 408) = 6.471$ $p < 0.000$. The random effects model confirms the generalisability of these findings beyond the brands and extensions tested, that brand-specific associations dominate brand affect.

In the soft drink category a preference reversal did not occur in the Diet Coke extensions and was confirmed by the forced choice task. Looking at the extension categories reduced calorie ice cream and snack bars, it could be said subjects had the advantage of a prime or prompt. The results suggest either the presence of another brand association for Diet Coke or the existence of an extension category association that negated the association identified in the pre-test.

An inspection of open-ended responses suggests that other associations, e.g. the taste of Diet Coke may not be relevant in these extension categories. The evaluation of the reduced calorie aspect of soft drink does not equate with the reduced calorie aspect of an ice cream dairy product and may be relevant to soft drink associations. Cola flavours are not typical in dairy-based products.

A large number of brands were eliminated through the pre-testing process in both the replication and the BA studies. The pre-tests showed some brands had more than one association; while other brands had associations were not unique and did not show clear

competitive differentiation. Many brands were also strongly associated with the product category. Jap (1993) suggests brands have a combination of associations and that a particular association may dominate in certain circumstances. Thus Diet Coke's low calorie association (one calorie) is brand-specific but when linked to other products such as reduced calorie ice-cream the relevance of that association may superseded by other associations. In this instance the influence of extension category may dominate.

The brand familiarity covariate was not significant $F(1, 420) = 1.17, p < .2803$, unlike the BA study in which familiarity was marginally significant $F(1, 219) = 3.70, p < .06$. The prestige covariate was significant $F(1, 420) = 18.27, p < 0.0001$ unlike the BA study where prestige was not significant. However the influence of prestige did not change the significance of the main effect for extension relevance $F(2, 420) = 2.94, p < 0.05$.

One further difference in the replication was the greater number of female subjects versus male. The model was tested using gender as a covariate and showed no significant interaction $F(1, 408) = 2.34, p < 0.1267$.

Implications and Conclusions

The replication confirms the results of the original study. Thus it can be concluded that the relevance of the brand-specific association is important when managers are considering a brand extension strategy and that a relevant brand-specific association can reverse the initial brand name preference. Hypothesis 1 'that brand-specific associations mediate brand extension evaluations' is supported and the ANOVA using a random effects model adds further support for the generalisability of the conclusion. Hypotheses 2A and 2B were also supported. Thus the BA and the replication studies both confirm the influence of relevant brand-specific associations, which means this should be a further consideration when examining the perceived fit of a brand extension.

The findings of the BA and replication studies give managers additional scope for extending and leveraging brands. The leverage provided by a relevant brand-specific association could

mean additional opportunities for the brand to be extended to distant categories. A recent example is the extension of Jif bathroom cleaner (cleans and shines without harsh scratching) into glass cleaners and cleaning cloths. Conversely managers may find the brand-specific associations limit brand potential as the associations may not be relevant in other categories. The importance of brand-specific associations may be relevant in other areas besides brand extensions for instance when considering changing brand advertising and communication strategies.

Prestige a factor that eliminated many brands from consideration in the experiment, was a significant covariate in the replication unlike the BA study. However prestige did not change the brand-specific association influence. If a halo effect (Bridges 1992) is relevant then the prestige influence could be present in some degree even in functional brands. Prestige could act as a subtle differentiation device between brands in a functional category such as biscuits where a particular brand conveys status e.g. special occasion (Tim-Tam chocolate) versus everyday usage (Digestive plain).

Further research into the influence of brand-specific associations could examine the influence of extension category associations and brand extensions. Although this research showed that brand associations were relevant, this was from the parent brand's perspective not the extension category perspective. For instance a chocolate brand extending into an ice-cream category may have to have certain associations relevant in the new category to be successful.

Although the brand-specific association was relevant in the extended category, this association may not be enough to compete against other existing brands in the extended category. A recent example is the extension of Milo chocolate drink into the ready to drink milk and chocolate bar products. Although the Milo brand is dominant in the original category it is very much a niche brand in these extended categories. Research has tended to focus on parent brand and extended brand comparisons. Future research could focus on the evaluations of brand extensions versus established brands in the extended category.

Finally, the interpretation of these results depends on how closely the experimental design represented consumer evaluations of brand extensions. The experimental evaluation may not be reflective of regular consumer decision processes. The extensions used were potential

extensions rather than actual extensions. The stimuli were presented to subjects in written form, without the usual stimuli such as packaging, colour and other cues that accompany brand communication.

Although the use of actual brands increases the external validity of these results, the experimental task itself lasted a few minutes per extension. In a real world setting this evaluation process may take place over longer periods, weeks or months. Consumer experience of the brand extension may also increase or decrease the acceptance of the extension. In a natural setting consumer acceptance may be enhanced with brand extensions being presented 'fait accompli' and consumers automatically modifying their perception of the brands in the category. The extension categories were not evaluated in relation to existing brands within the extension category.

In conclusion the BA study highlighted the role of brand-specific associations in brand extension evaluation. A brand with a relevant brand-specific association in the extension category has an advantage over brands with less relevant associations. This replication study supports their findings.

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Table 1a. *Comparison of Research Approach: BA and Replication Studies.*

		BA Study		Replication	
Purpose of test:		No. of Product Categories Tested	Sample Size	No. of Product Categories Tested	Sample Size
Pre-test 1	Selection of Product Categories	119		100	
Pre-test 2	Identify Brand-Specific Associations	31	102	31	140
Pre-test 3	Identify Focal & Comparison Brands	22	60	21	76
Pre-test 4	Identify Extension Categories	5	33	10	40
	Manipulation checks	5	14	2	20

Table 1b. *Comparison of Research Approach Experiment One: BA and Replication Studies.*

Number of:	BA Study	Replication
Categories	5	2
Stimulus Sets	10	4
Extensions	20	8
Sample Size	76	108
Males	37	38
Females	39	70
Sample Size per set	12	27

Table 2. Stimulus Set Comparison: BA & Replication Studies.

Original Brand Preference a	Association	Brand Relevance b	Extension Category Relevance c
BA Study			
TOOTHPASTE			
FOCAL: Close-Up (5.97)	Breath Freshening	2.50	Mouthwash (8.86) Breath Mints (9.00)
COMPARISON: Crest (7.07)	Dental Protection	-4.46	Dental Floss (8.50) Toothbrush (8.93)
CEREAL			
FOCAL: Cheerios (5.10)	Healthy Grains	3.81	Oatmeal (8.07) Waffles (5.57)
COMPARISON: Froot Loops (6.48)	Flavour, Sweet	-5.47	Toasted Pastry (7.86) Lollipops (8.57)
SOAP			
FOCAL: Camay (4.24)	Skin Softening	6.38	Moisturiser (8.71) Cleansing Cream (7.50)
COMPARISON: Irish Spring (5.14)	Scent	-4.91	Deodorant (7.71) Cologne (8.86)
COMPUTER			
FOCAL: Apple (6.52)	User Friendly, Kids	2.65	Video Games (7.25) Instructional Tape (6.79)
COMPARISON: IBM (8.14)	Technological	-1.45	Stereo (7.86) Cellular Phone (8.29)
BEER			
FOCAL: Coors (5.58)	Spring Water	3.25	Wine Cooler (5.79) Bottled Water (8.86)
COMPARISON: Budweiser (6.84)	High Alcohol, Logo	-2.05	Beer Mug (8.00) Scotch (9.00)
Replication Study		Brand Relevance d	
BREAKFAST CEREAL			
FOCAL: All Bran (4.36)	Healthy	8.03	Sliced Bread (6.86) Muesli (7.50)
COMPARISON: Coco-Pops (5.61)	Chocolate	7.86	Chocolate Bar (8.71) Flavoured Milk (7.36)
SOFT DRINKS			
FOCAL: Diet Coke (4.00)	Lo Calorie	8.13	Reduced Calorie Ice-Cream (7.44) Low Cal Snack bar (7.36)
COMPARISON: Sprite (5.95)	Refreshing Lemonade	7.16	Cordial (5.47) Alcoholic Lemonade (5.41)

a The focal brand was significantly less preferred than the comparison brand in all product categories (ps < .05), except soap (p < .09).

b Mean difference between the focal and the comparison brands on 9-point rating scale. All differences were significant (ps < .05).

c Mean rating of association relevance in extension categories on 9-point scale.

d for replication study brand relevance scores are given.

Table 4. Comparison Experiment One Results BA Study vs Replication:
Least Squares Evaluation Means.

A.	BA STUDY		FOCAL BRAND	COMPARISON BRAND
			Close-Up	Crest
TOOTHPASTE				
SET 1	FOCAL EXT	Mouthwash	6.80	7.36
	COMPARISON EXT			
SET 2	FOCAL EXT	Dental Floss	6.20	6.69
	COMPARISON EXT	Breath Mint b	7.58	6.17
		Toothbrush b	5.95	6.81
CEREAL				
SET 1	FOCAL EXT	Oatmeal	6.07	3.26
	COMPARISON EXT			4.77
SET 2	FOCAL EXT	Toasted Pastry	5.25	
	COMPARISON EXT	Waffles	5.20	3.88
		Lollipops	3.84	6.52
SOAP				
SET 1	FOCAL EXT	Moisturiser	6.35	4.13
	COMPARISON EXT	Deodorant	4.53	5.19
SET 2	FOCAL EXT	Cleansing Cream	5.97	4.86
	COMPARISON EXT	Cologne	3.40	3.33
COMPUTER				
SET 1	FOCAL EXT	Video Games	6.45	6.08
	COMPARISON EXT	Stereo	4.82	4.66
SET 2	FOCAL EXT	Instructional Tape	6.85	7.34
		Cellular Phone	6.21	7.22
BEER				
SET 1	FOCAL EXT	Wine Coolers	5.67	3.29
	COMPARISON EXT	Beer Mug	6.83	6.43
SET 2	FOCAL EXT	Bottled Water	5.91	3.03
	COMPARISON EXT	Scotch	3.68	4.71
B.	REPLICATION		FOCAL	COMPARISON

STUDY		BRAND	BRAND
SOFT DRINKS		Diet Coke	Sprite
SET 1	FOCAL EXT	Low Cal Snack Bar	3.46 3.32
SET 2	COMPARISON EXT	Cordial	4.26
	FOCAL EXT	Reduced Calorie Ice-Cream	3.88 6.07
	COMPARISON EXT	Alcoholic Lemonade	3.81
CEREAL		All Bran	Coco- Pops
SET 1	FOCAL EXT	Muesli	4.77 3.69
	COMPARISON EXT	Chocolate bar	3.33
SET 2	FOCAL EXT	Sliced bread	4.85
	COMPARISON EXT	Flavoured milk	2.28 5.20

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.

Table 3. *Overall Extension evaluations BA study vs Replication: Focal and Comparison Brands*

Mean Scores	Replication		BA study	
	Focal Brand	Comparison	Focal Brand	Comparison
Extension relevant	4.24	5.30	6.15	5.73
Extension not relevant	3.45	3.38	4.94	5.04