

The Contrast Model of Similarity and Comparative Advertising

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ABSTRACT

Tversky's (1977) contrast model of similarity is used to predict the effects of comparative advertising on consumer perceptions. Two qualitatively different experiments, one involving forced exposure to comparative ads and one involving more natural exposure to comparative ads embedded in text. Test the model's predictions. The results demonstrate both the general tendency for comparative ads to promote association between brands and the potential for different ad layouts to foster or inhibit this association. Even though comparative ads often appear to differentiate brands, the result may be association.

INTRODUCTION

In 1971 the Federal Trade Commission began encouraging explicit comparisons in advertising to help make the marketplace of commercial ideas self-correcting, to provide consumers with informative attribute-by-attribute comparisons, and to encourage competition (Federal Trade Commission, 1979). Unfortunately, this regulatory posture provided little guidance for researchers interested in comparative advertising's influence on consumers. In their early conceptual paper, Wilkie and Farris (1975) laid

out a number of possible effects that comparative advertising might have and, in doing so, provided a starting point for research.

Most of the subsequent research on comparative advertising has contrasted a wide range of effectiveness measures, cognitive responses, and/or situational covariates between comparative and noncomparative ad conditions. For example, studies by Prasad (1976), Sheluga & Jacoby (1978), Shimp & Dyer (1978), McDougall (1978), Swinyard (1981), Etgar & Goodwin (1982), Demirdjian (1983), Gorn & Weinberg (1984), Walker, Jwasy & Rethans (1986), Droge & Darmon (1987), and Sujun & Dekleva (1987) all offer some level of support for comparative advertising being more "effective" than noncomparative ads, at least under some circumstances. In contrast, studies by Wilson (1976), Levine (1976), Pride, Lamb, & Pletcher (1977), Golden (1979), Goodwin & Etgar (1980), Wilson & Muderrisoglu (1980), Murphy & Amundsen (1981), Belch (1981), and Taschian & Slama (1984) all found comparative ads "no-more" or even less effective than noncomparative ads.

Unfortunately, this research offers limited insight for marketing practitioners. From a marketing standpoint, comparative advertising is foremost a product positioning tool (Shimp & Dyer, 1978; Wilkie & Fanis, 1975). The important yardstick for comparative ads should be their ability to affect a product's perceived position or similarity relative to other products. Yet few studies have examined the effects of comparative advertising on perceived similarity. Gorn & Weinberg (1984), using actual ads taken from three different product categories (toothpastes, cigarettes, and golf balls), showed that comparative ads increased the perceived similarity of leading brands and challengers relative to noncomparative ads. Walker, Swasy, & Rethans (1986) later found directional though

nonsignificant support for comparative ads increasing the perceived similarity of brands of beer relative to noncomparative ads, but only when the beers were taken from the same category. More recently Droge & Darmon (1987) and Sujan & Dekleva (1987) have reinforced Gorn & Weinberg's initial finding that comparative ads associate products relative to noncomparative ads. This association or similarity effect may be why Hisrich (1983) reports generally favorable attitudes toward and experiences with comparative advertising among advertising agencies.

However, these studies have basic shortcomings that limit their value to practitioners. In each case perceptions based on comparative ads were compared to perceptions based on noncomparative ads. As a result, these studies only demonstrate the associating effect of comparative ads relative to noncomparative ads. The absolute effect of exposure versus nonexposure to a comparative ad campaign on a product's perceived position, whether association or differentiation, has not been documented. This is an important question for practitioners who decide to pursue a strategy of association or differentiation and are considering the use of comparative advertising.

Another question of interest to practitioners that has not been addressed in these studies is how an advertising layout may foster or limit any associating or differentiating effects of comparative ads. Finally, all of these studies rely on forced exposure to comparative ads. The positioning effects of comparative ads have not been demonstrated under more natural or qualitatively different exposure conditions.

This paper attempts to correct for these limitations and demonstrate comparative advertising's effect on product perceptions. Using a conceptual framework based on a

psychological model of similarity (Tversky, 1977), we argue that the general effect of comparative advertising is association. Whether an ad appears to associate or differentiate competitors, the end result is association. Our conceptual framework also suggests how systematic differences in ad layouts may foster of temper comparative ad based association. Finally we present two qualitatively different studies that test the research hypotheses. Experiment 1 uses forced exposure to different comparative ads while Experiment 2 uses a more natural exposure to comparative ads embedded in text. The results strongly support the potential for comparative ads to promote association. Limited support is also provided for particular ad layouts fostering association.

PSYCHOLOGICAL SIMILARITY AND
COMPARATIVE ADVERTISING

The Contrast Model:

Tversky's (1977) contrast model of similarity appears particularly promising for marketers interested in understanding how comparative advertisements affect perception. Tversky argues that when people judge similarity they extract and compile from memory a limited list of features that they associate to the stimuli in question. Proximity judgments are simply the result of a contrasting of the common and distinctive features we associate to the stimuli. Common features add to similarity while distinctive features detract.

Tversky also argues that the salience or weight of different common and distinctive features may vary with the context of the judgment. In judgments of similarity, for example, it is natural for people to focus attention on common

features. Dissimilarity judgments, in contrast, should focus attention on distinctive features. If two products have many common features and many distinctive features, the model predicts that they may be judged as very similar in a similarity context as well as very dissimilar in a dissimilarity context. For example, Johnson (1981) found one group of consumers judging Coke and Pepsi as the most similar pair among an array of colas, while a second group of consumers judged these same colas to be the most dissimilar pair among the same array.

A second contextual prediction, which is particularly pertinent to our discussion, concerns subject/referent similarity judgments. When making judgments of the form, "How similar is A to B?", where A is the subject and B is the referent, people naturally focus on the features of the subject. The contrast model predicts that subject/referent judgments may be asymmetrical (where A is more similar to B than B is to A) whenever the distinctive features of one product are greater and/or more salient than the distinctive features of another product (Johnson, 1981). In Johnson's study, for example, consumers rated the similarity of Shasta Cola to Coca-Cola to be higher than the similarity of Coca-Cola to Shasta Cola. Because Coke has more distinctive features than Shasta (Johnson, 1986), Coke is not as similar to Shasta as Shasta is to Coke. In other words, the features of Shasta Cola map into the features of Coke more than the features of Coke map into the features of Shasta.

Research Hypotheses:

Overall, the contrast model offers marketers a general framework for understanding the effects of comparative advertisements on consumers. The model describes product similarity as a simple contrasting of common and distinctive

features. If two products have many common features, a comparative ad should reinforce the similarity of the products in the minds of consumers. If, alternatively, the products have inherently more distinctive features, a comparative ad should promote differentiation.

In order to make predictions for comparative advertising, we assume that brands from the same basic product category, by their very nature, have more common than distinctive features. Consider, for example, the correspondence between traditional product categories and the basic level categories described in the psychological literature (Rosch et al, 1976; Murphy & Smith, 1982; Tversky & Hemenway, 1984). Both exhibit a high degree of category inclusiveness, defined as the ratio of common to distinctive attributes among the members of the category (Rosch et al., 1976).

Under this assumption, the contrast model predicts that a comparative ad involving brands from the same category should reinforce the similarity of the products in the minds of consumers. Because brands from the same category have more common than distinctive features (or by definition are more similar than they are dissimilar), the overall result of exposure to a comparative ad should be association. Naturally, as the category from which the brands are taken is expanded to include more distant competitors, association should diminish and differentiation may then occur (Walker, Swasy & Rethans, 1986). This predicted general effect of exposure to comparative advertising is Hypothesis 1:

H1: Comparative advertisements involving products from the same basic product categories will increase the perceived similarity of the products.

This hypothesis suggests, for example, that ads which appear to be comparatively differentiating brands may perceptually associate them. Thus, Wilkie and Farris's (1975) original contention that comparative ads may be used to associate or differentiate products may not apply to brands within a category. Comparative ads may predominantly associate the brands being compared.

Tversky's model, by considering the effects of context on perception, provides an additional insight and prediction for comparative advertising. Advertisers may view the layout of a comparative ad as a means to partially control the context of the desired product comparison. In particular, whether the ad focuses or anchors on a particular product may systematically affect ad-based perceptions (Johnson, 1986). Recall from our discussion of subject/referent similarity judgments that focusing on a particular product in a comparison may increase the salience or weight of that product's features. One very direct way to maximize the associative effect of a comparative ad may be to take advantage of this focus.

For example, a brand with relatively few distinctive features, such as a low-share or new product entry, may want to position itself close to a relative market leader. Previous research has shown that relative market leaders are typically associated with a greater number of distinctive features (Johnson, 1986). Therefore, an effective comparative advertising strategy may be to focus or anchor on the nonleader to limit the salience of the market leader's distinctive features. Alternatively, focusing or anchoring the comparison on the leader should place more emphasis on the leader's larger distinctive feature set and limit the advertisement's ability to promote association. The results of a recent pilot study

(Johnson & Home, 1987), involving ads for a new soft-drink, support the potential for such an effect.

Our second hypothesis centers on this contextual prediction. First we assume that a relative market leader is associated with more distinctive features than a relative nonleader.

The prediction, then, is that comparative ads which focus on nonleaders should foster ad-based association while comparative ads which focus on relative leaders should temper any association.

H2: Comparative ads which focus on relative nonleaders will result in greater perceived association than comparative ads which focus attention on relative market leaders.

The experiments reported below test both of these hypotheses. Experiment 1 uses forced exposure to comparative ads. Experiment 2 embeds the print ads used in experiment one in text to provide a more natural exposure condition.

RESEARCH DESIGN

Advertising Stimuli:

All the advertisements used in the two experiments involved explicit comparisons of two product or service alternatives. The products compared in each ad were offerings from the same traditional product or service categories. Recall that one of the goals of this study is to examine the overall effect of exposure versus nonexposure to comparative ads. Therefore, we compare ad-based perceptions to a control (nonexposure) group to

test Hypothesis 1 and we compare perceptions based on different versions of the same comparative ads to test Hypothesis 2.

Five different advertisements were used to test the hypotheses. Three of the five ads were actual comparative advertisements obtained with agency and client assistance. Actual print ads were obtained for two products. Republic Airlines and Budget Rent-A-Car. An actual television ad was obtained for Lincoln Mercury. All of these actual ads were either taken from a different region of the country (Budget) or were just breaking (Republic, Lincoln). This insured minimal prior exposure to the ads for the test subjects. (A sixth ad, a television ad for Total Cereal, was dropped from the study because of a high likelihood that our subjects had been previously exposed to this ad.) Each of these ads involved the explicit comparison of a sponsored, lower-share product with a relative market leader at the time of the study (i.e., American Airlines, Hertz Rent-A-Car, and Cadillac). These particular ads were chosen because (1) they contained an implicit product focus

TABLE 1
Descriptions of Advertisements

Product Category	Nonleader Focus	Leader Focus
Rent-a-Cars	Budget ® at Top [Picture of 4-Door Lincoln] Headline: A BIG LINCOLN AT BUDGET COSTS LESS THAN A COMPACT CAR AT HERTZ [Outline of a small car] ONLY \$39.95 For a Lincoln at Budget [Text with rate comparison + 800 number]	[Outline of a small car] Headline: A COMPACT CAR AT HERTZ COSTS MORE THAN A BIG LINCOLN AT BUDGET [Picture of 4-Door Lincoln] Only \$39.95 For a Lincoln at Budget [Text with rate comparison + 800 number] Budget ® at Bottom
Airlines	Page 1: REPUBLIC TAKES DELIGHT IN SHOWING YOU OUR SCHEDULE [8 columns of airplanes each one with destina- tion and time and Republic logo] Page 2: REPUBLIC TAKES EVEN MORE DELIGHT IN SHOWING YOU AMERICAN'S [1 column of airplanes each one with destina- tion and time]	Page 1: REPUBLIC TAKES DELIGHT IN SHOWING YOU - AMERICAN'S SCHEDULE [1 column of airplanes each one with destina- tion and time] Page 2: REPUBLIC TAKES EVEN MORE DELIGHT IN SHOWING YOU OUR SCHEDULE [8 columns of airplanes each one with destina- tion and time and Republic logo]
Luxury Automobiles	[Hotel valet parking - man and woman] Man: Lincoln Town Car, please [Shows three different Lincolns but no confusion] [Hotel valet parking - man and woman] Man: Black Cadillac, please [Confusion, which is which] Man: No, No, this is the Cadillac Lincoln (TM)	[Hotel valet parking - man and woman] Man: Black Cadillac, please [Confusion, which is which] Man: No, No, this is the Cadillac [Hotel valet parking - man and woman] Man: Lincoln town car, please [Show 3 Lincolns, but no confusion] Lincoln (TM)

(one of the two products served as an anchor or initial focus of comparison), and (2) they could be modified in order to reverse the product focus while holding the copy (information) content constant. Existing copy lines, pictures, and other information were professionally rearranged to produce the leader/non leader focus manipulation. The intent was to hold as much constant as possible except for the initial product focus. In one version of each ad the sponsor's product (e.g. Budget) was the starting point or focus of the comparison while a relative market leader (e.g. Hertz) was the referent. The other version of each ad reversed the sequence with the relative market leader serving as the initial anchor or focus and the sponsor's (nonleader) product serving as the referent.

The final two ads were print ads involving the comparison of new, hypothetical products with market leaders. One ad involved the comparison of a hypothetical fast food restaurant, Hamburger Heaven, to McDonald's and the other involved the comparison of a hypothetical toothpaste, Dazzle, to Crest. An advertising agency finalized the ad layouts and the names for the hypothetical products. The agency also created two versions of the ads, one using the new product as the focus and one using the established leader as the focus of the ad (again holding information content constant). All of the ads used to test the hypotheses are described in Table 1. Notice that at least on the surface, all of the ads in Table 1 might be described as differentiating the leader and the nonleader. None of the ads overtly communicates the similarity of the two products in the ads. We shall return to this point in our discussion.

Proximity Measure and Instructions:

Our dependent measure of interest is the perceived position of the sponsor's product, specifically the perceived similarity of this product relative to the target product of comparison. In the pilot study (Johnson & Home, 1987), subjects were shown comparative ads and then asked to make pair-wise similarity judgments among all the relevant brands in the product category. Then, similarity scaling procedures were used to analyze changes in product positions across ad conditions. Unfortunately, this requires subjects to answer a large number of questions per advertisement.

A more direct measure of the products' positions was collected in both of the experiments reported here. In order to facilitate the task for consumers, two-dimensional multidimensional scaling spaces (perceptual maps) involving the relevant brands in a particular market (e.g. fast food alternatives, rent-a-car agencies) were used to measure consumer perceptions. The spaces themselves were constructed using MINISSA (Roskam & Lingoos, 1970) based on paired comparison judgments obtained from separate groups of subjects. The number of products in the spaces ranged from ten to twelve. The sponsored products in the test ads were included in the original judgments and scaling solutions and then removed from the spatial representations for subsequent data collection purposes. If the sponsored product was a hypothetical brand, it

TABLE 1 (continued)
Descriptions of Advertisements

Product Category	Nonleader Focus	Leader Focus
Fast Food Restaurants	Headline: SEND YOURSELF TO HAMBURGER HEAVEN [Halo next to copy] Subheadline: When the golden arches begin to fade [Fading arches] Tag line: Our Burgers are devine	Headline: WHEN McDONALD'S GOLDEN ARCHES BEGIN TO FADE [Fading arches next to copy] Subheadline: Send yourself to Hamburger Heaven [Halo next to copy] Tag line: Our burgers are devine
Toothpastes	Headline: GET DAZZLED [Hand by sink with tube of Dazzle] [Hand by sink with tube of Crest] Subheadline: When Crest Gets Dull Dazzle Fluoride Toothpaste	Headline: WHEN CREST GETS DULL. . . . [Hand by sink with Crest tube] [Hand by sink with Dazzle tube] Subheadline: Get Dazzled! Dazzle Fluoride Toothpaste

was not originally included and no adjustment was necessary. A separate perceptual map was constructed for each advertised category in the study (average Kruskal's stress of 0.09).

After exposure to a test ad, subjects were shown a space for the product category and then asked to place the advertised product where they felt the product belonged in the space. Subjects were instructed to place an "X" in the space to indicate the position of the product and then to label the X with the product's name. To practice the procedure, subjects were first shown a space/ad combination from a category that was not being tested. The practice space was described as a "picture" or "product map" in which the distances in the "picture" corresponded to the perceived differences among the products in the minds of consumers ("the closer together two brands, the more similar they are; the further apart two brands, the more dissimilar'*). To avoid disagreement on the subjective interpretation of the spaces, no axes were labeled. The resulting dependent measure using this technique was the distance in millimeters from their "X" to the relative market leader mentioned in the comparative ad.

The main advantages of this direct perceptual measurement methodology are its intuitive appeal to the subjects, the straightforward nature and interpretation of the average distance, and the efficiency of data collection. However, it is important that each perceptual depiction be an acceptable representation of the subject's consideration set. We make the traditional assumption that while consumers differ in their preference, overall perceptions are reasonably homogeneous. The subjects in both Experiments 1 and 2 had a good grasp of the spaces and understood the task. None of these subjects indicated that the spaces were inconsistent with their own perceptions of the products.

EXPERIMENT 1: FORCED EXPOSURE

Procedure:

The experiment was performed using both undergraduate students from a large midwestern university ($n = 313$) and adult mall intercept subjects recruited in a suburban mall of a major metropolitan area ($n = 239$). Our analysis revealed no systematic differences between these two groups. As a result, all of the analyses and discussion reported below is based on a combination of the two populations. Overall, one group of subjects ($n = 278$) was shown the comparative ads for the existing products (print ads for Republic and Budget, television ad for Lincoln). A second group of subjects ($n = 191$) was exposed to the new (hypothetical) product ads (print ads for Hamburger Heaven and Dazzle). A control group ($n = 83$) saw no ads. Within each ad exposure group, half of the subjects saw one version of each ad and half saw the remaining version.

The experimental procedure was identical for both ad exposure groups. After describing the product maps and the placement task, a soft-drink space and ad were given to the subjects so they could practice the procedure. Subjects were then shown the test ads one at a time. Ad/stimulus order was counterbalanced across all subjects. After viewing each ad, the subjects placed the sponsored product directly in the space using a paper and pencil format (ads and spaces were presented in separate booklets to control ad exposure). After placing an "X" in each space and labeling it with the name of the product, each subject was also asked to list his/her first, second, and third choice from among the products in the space. This

information was used to operationalize a preference measure in case individual differences in preference may be affecting the perceptual results.

The control group was given the same description of the product maps and the placement task. They also used a soft-drink space to practice the procedure by placing an excluded, existing product (Mountain Dew) into the space. Then, with no advertising stimuli, these control subjects were presented with the category spaces, one at a time, and asked to place and label the nonleader brands in their respective spaces. This control group performed the task very comfortably even for the hypothetical products, apparently on the basis of the names alone. The first, second, and third choice preference data was also collected. In the short time between our gathering of the ad-based perceptions and the perceptions of the control group, the airline industry changed radically (Northwest buying Republic, People's Express and Eastern acquired by Texas Air Corp). Therefore, no control group perceptions were collected for Republic and the airline category was excluded from the testing of Hypothesis 1.

Analysis

Three different measures were obtained from the subject's placement of a sponsored product in a space, an absolute distance, an X coordinate, and Y coordinate, all in millimeters and all measured from the relative leader mentioned in an ad. The absolute distance measure is the primary dependent variable used to test the research hypotheses. (The results for the X and Y coordinate measures did not provide additional insight in either experiment and, therefore, are not reported.)

Prior to testing the hypotheses, the coordinate measures for the control group were averaged for each existing, nonleader product (in this case Budget and Lincoln). These average perceived positions were then compared with the products' original positions in their respective spaces to check the validity of our dependent measure. If the control group subjects place the nonleader products roughly back in their original positions (from the original MDS solution), the validity of our measure is supported. Distances were measured from the original MDS position of each nonleader product, and from their average placement by the control group, to each of the other products in the space. The correlation between these two sets of distances (with a possible range of - 1 to 1) provides a validity check of our dependent measure. The resulting correlations were 0.89 and 0.99 respectively for the Budget and Lincoln perceptions, supporting the validity of the measure.

The absolute distance measures between the sponsored products and the relative leaders were used to test the hypotheses within each product category. The distance measures were also standardized within each category and then combined to perform across category tests of the hypotheses. The independent variables included ad exposure (two levels: yes or no), focal position (two levels: initial focus on the nonleader versus initial focus on the leader), and the product category involved (five levels: airlines, rent-a-cars, luxury autos, fast food, and toothpaste). (The subjects' relative preference for the leader, as an independent variable, was tested separately and found to have no significant effects on perceived similarity within or across categories.)

Simple single factor analysis of variance models were estimated to test the research hypotheses within each category. Two mixed effects models, including the dependent variable of

interest (e.g. exposure) and a category interaction term (e.g., exposure by category), were used to test the hypotheses across categories. (A category level main effect was not included due to the standardization of the distance measures in the across-category tests.) As noted above, the across category test of Hypothesis 1 did not include the airline category. The mixed effects model for Hypothesis 2 used only the ad-based perceptions. Again, Hypothesis 1 predicts increased proximity of the leader and nonleader brands for those subjects exposed to the comparative ads. Hypothesis 2 predicts increased proximity for those ads focusing on the relative nonleader as opposed to the leader.

Results

The within-category results for both hypotheses are presented in Table 2. For Hypothesis 1, three of the four within-category differences were significantly different in the predicted direction. Overall the across-category ANOVA reveals a significant main effect for ad exposure on perceived similarity ($F = 52.46, p < 0.001$). Comparative ads for products in the same basic category appear to promote association between the products. The across-category results also reveal a significant category by exposure interaction ($F = 11.75, p < 0.001$). Driving this interaction was the nonsignificant exposure effect for the Lincoln ads. This may suggest that the association effect is greater the newer or less familiar the product. Any relative familiarity of Lincoln over the other nonleader products may have mitigated an increase in association. However, at least two other factors may have contributed to this finding. First, the perceived proximity of the two cars by the control group (mean = 20.00) suggests a possible ceiling effect. These two products

were already very similar in the consumers' minds. Second, the Lincoln ad was the only television ad used in the study.

The results for Hypothesis 2 are presented at the bottom of Table 2. Although all five within-category ad layout differences were in the predicted direction, only one was significant (airlines). However, the across-category ANOVA did reveal a significant effect for ad layout ($F = 9.74, p < 0.01$). As predicted, an initial focus on the nonleaders presumably limited the emphasis placed on the leaders distinctive features and fostered association, (The category by layout interaction was not significant.) Overall Hypothesis 2 was supported. This result suggests that a very controllable advertising variable (i.e., product focus) may either enhance or temper the associative effects of a comparative campaign.

EXPERIMENT 2: EMBEDDED ADS

In order to test our hypotheses under more natural conditions, the advertising agency that constructed and manipulated the ads for Experiment 1 was used to construct four versions of a "new" magazine. The print ads used in Experiment 1 involving rent-a-cars, airlines, fast food, and toothpaste were embedded in the magazine text. The editorial content consisted of seven neutral articles and two photo essays. Each magazine was 74 pages long and contained 53 pages of text and pictures and 21 pages of advertisements. As in Experiment 1, the test ads included one-page ads for Budget Rent-A-Car, Hamburger Heaven, and Dazzle Toothpaste and one two-page ad for Republic Airlines. There were fourteen other ads in the magazine (from one to four pages long). Two of the test magazines contained the nonleader-focus version of an ad while the remaining two magazines contained the leader-focus version. Each magazine contained one

TABLE 2
Experiment 1: Perceived Distances Between Advertised Products
Hypothesis 1: Ad Exposure

Comparative Ad	Ad Group	Control Group	F (sign.)
1. Budget versus Hertz	77.91 (276) ^a	97.87 (83)	14.45 (0.000) ^a
2. Lincoln versus Cadillac	23.64 (274)	20.00 (83)	2.46 (0.117)
3. Hamburger Heaven versus McDonald's	34.57 (191)	47.15 (83)	21.53 (0.000)
4. Dazzle versus Crest	66.65 (191)	105.83 (83)	59.38 (0.000)

Hypothesis 2: Ad Layout

Comparative Ad	Nonleader Focus	Leader Focus	F (sign.)
1. Budget versus Hertz	75.28 (131) ^a	80.29 (145)	0.98 (0.334) ^a
2. Republic versus American	30.89 (132)	37.87 (145)	4.24 (0.040)
3. Lincoln versus Cadillac	22.06 (130)	24.73 (144)	1.37 (0.243)
4. Hamburger Heaven versus McDonald's	32.34 (99)	36.96 (92)	2.21 (0.138)
5. Dazzle versus Crest	62.61 (92)	70.40 (99)	1.74 (0.189)

^aCell sizes in parentheses.

hypothetical product as focus ad, one hypothetical product as referent ad, one actual nonleader as focus ad, and one actual nonleader as referent ad (i.e., the use of both the real and hypothetical products as well as the ad layout manipulation were counter-balanced across the magazines). The positions of the ads in the magazines were also reversed in the two magazines that contained the same ads. The magazines were all black and white copies, but were center stapled to appear genuine.

Procedure

Four groups of thirty-two mall intercept subjects were each run through one of the four magazine conditions ($n = 128$). Each subject was asked to review the magazine and judge the appeal of both the stories and the ads. Subjects were then shown to a quiet room where they could sit and review the magazine for 15 minutes minimum time. Subjects were timed for the 15-minute minimum exposure time. The average viewing time across subjects was 16.3 minutes. Although this procedure still, in an absolute sense, constitutes forced exposure, it is very different from and much more natural than the forced exposure used in both Experiment 1 and previous studies. After reviewing the magazine, subjects were shown to a separate room where they were given the test questionnaire.

TABLE 3
Experiment 2: Perceived Distances Between Advertised Products
Hypothesis 1: Ad Recall (Exposure)

Comparative Ad	Recall Group	No Recall Group	F (sign.)
1. Budget versus Hertz	75.86 (71) ^a	89.50 (42)	1.80 (0.182) ^a
2. Republic versus American	29.58 (77)	42.58 (36)	3.98 (0.048)
3. Hamburger Heaven versus McDonald's	29.42 (88)	42.29 (24)	4.73 (0.032)
4. Dazzle versus Crest	55.04 (77)	78.27 (37)	7.69 (0.006)

Hypothesis 2: Ad Layout			
Comparative Ad	Nonleader Focus	Leader Focus	F (sign.)
1. Budget versus Hertz	86.40 (30) ^a	67.65 (26)	1.94 (0.170) ^a
2. Republic versus American	27.31 (32)	29.08 (36)	0.06 (0.814)
3. Hamburger Heaven versus McDonald's	30.02 (41)	28.88 (42)	0.05 (0.829)
4. Dazzle versus Crest	60.24 (33)	49.00 (36)	1.16 (0.285)

^aCell sizes in parentheses.

The questionnaire contained, in order, a page with six questions regarding the attractiveness of six of the stories, a page containing instructions for obtaining the product placements (as in Experiment 1) as well as a sample space (for credit cards), five pages containing one practice space (a placement task for Sear's Discover card which had been advertised) and the four test spaces (order rotated), and a last page containing two overall questions about the price and purchase likelihood of the magazine. The pages containing both the practice and test spaces first asked subjects to recall whether or not they remembered seeing the advertisement for the target product on a five-point scale (1 = definitely yes, 2 = I think so, 3 = not certain, 4 = I don't think so, 5 = definitely no). This recall measure, treated as an indicator of exposure, was used to test Hypothesis I. The space for the category was then presented and subjects were instructed to place an "X" where the sponsor belonged and label the product. At the bottom of each page, subjects were again asked for their first, second, and third choice from among the products in the space.

Given the nature of Experiment 2, subjects self-administered the questionnaire while an experimenter was near by to answer any questions. Overall, 114 of the 128 respondents (89%) filled out the questionnaires as instructed. Only these subjects' data were used in the analysis. The actual number of respondents providing usable data were 28, 26, 30, and 30 for magazines one through four respectively. There were a total of 452 usable observations.

Analysis

The analysis for Experiment 2 was identical to that for Experiment 1 with the exception of recall replacing overt

exposure as a means of testing Hypothesis 1. Given sample size restrictions at lower levels of recall, the five-point recall scale was collapsed into a recall/no recall measure similar to the exposure/nonexposure variable in Experiment 1. Those subjects who reported definitely seeing or thinking they saw an ad (i.e., recall = 1 or 2) were included in the recall group and those reporting they were not certain, did not think they saw, or definitely did not see an ad (i.e., recall = 3, 4, or 5) were included in the no-recall group. Hypothesis 2 was tested by comparing perceptions across the ad layout conditions for those subjects who reported definitely seeing the ads (i.e., recall = 1). A validity check of our dependent measure, identical to that performed in Experiment 1, was performed using those consumers who reported not seeing or thinking they did not see the Budget and Republic ads. The correlations between the MDS and low-recall subject distances were again quite high (0.69 and 0.99 respectively for Budget and Republic) supporting the validity of the dependent measure. (The effect of individual level consumer preference was again checked and had no overall effect on perceptions.)

Results

The within-category results for Experiment 2 are reported in Table 3. Consistent with Experiment 1, Experiment 2 strongly supports Hypothesis 1 both within and across categories. Three of the four within-category differences between the recall and no recall groups were significant in the predicted direction. The across-category ANOVA reveals a significant overall main effect for recall ($F =$

16.98, $p < 0.001$) and no category by recall interaction. Overall the perceived similarity between the comparatively advertised products increased with the subjects' ability to recall the ads.

Unlike Experiment 1, Experiment 2 failed to support Hypothesis 2. While three of the four within-category differences between the ad layouts were actually in the opposite direction from that predicted, they did not approach significance. The across-category ANOVA revealed no overall difference for ad layout and no ad layout by category interaction.

DISCUSSION

Overall, the two experiments reported here strongly support a general association effect for comparative ads involving brands from the same product category. Brands, by definition, have more common than distinctive features and an explicit comparative ad appears to reinforce these commonalities. This empirical result is consistent with Tversky's (1977) contrast mode and supports the usefulness of the model in an advertising context. Our second hypothesis received limited support across the two experiments. The ad layout manipulation significantly affected the ability of the comparative ads to promote association under forced exposure. However, there was no significant difference for the same manipulation when the ads were embedded in text.

There may be several reasons why the ad layout manipulation had a small, predictable effect on perceptions only in Experiment 1. First, we do not know whether subjects in the more natural exposure condition had the same "level" of exposure as those in the forced exposure condition, A second possible

explanation is that forced exposure advertising testing techniques allow the experimenter more control over the consumers' attention. The more controlled the procedure, the more closely a contextual manipulation such as focal position may be maintained. What this suggests is that the more control an advertiser has over attention, the more focal position may be manipulated and used to foster association. Television and radio advertising may, for example, offer more control over the focus of attention than the print ads used in Experiment 2. A third explanation may be that focal position was not adequately or uniformly operationalized in the test ads.

These results provide several implications for marketing practitioners using or considering using comparative advertising. First, the associating effect of comparative advertising observed here adds credence to an existing industry view that comparative advertising is especially useful for low-share or new market entries (Philips, 1983). Such products often attempt to associate themselves with existing products, including market leaders. Comparative ads may be used effectively in cases where association is a viable strategy. (Consider, for example, low-share products that compete predominantly on price.) This associative effect also makes it obvious why market leaders avoid comparative ads. Leaders strive to maintain their existing position. Although leaders may be tempted to "react" to the comparative campaigns of challengers with comparative ads of their own, this may only improve the challengers position.

A second, related implication is that using comparative advertising to differentiate brands may backfire. As alluded to earlier, association may occur even though an ad, on the surface, appears to be differentiating the brands. Anecdotal evidence supports this contention. When discussing the

experimental results with the practitioners who provided the original Republic Airlines ad, the practitioners argued that their overall strategy was to associate Republic with the market leaders, even though the ad in question clearly differentiates Republic and American Airlines on flight schedules. While the large difference in schedules draws attention to the ad, the comparative format accomplishes a strategic objective of association rather than differentiation.

Our results also suggest that advertisers may consider the layout of a comparative ad as a means of controlling product focus and its resulting influence on perception. Nonleaders interested in positioning themselves close to leaders should be careful how they use the leader in a comparative ad. A layout that focuses attention on the sponsor's product rather than the leader may limit the influence of the leader's distinctive features on consumer perceptions. As the research present here shows, however, layout manipulations may only affect perceptions under certain conditions.

Finally the experimental procedure used here, in which respondents interact directly with previously derived perceptual maps, appears very promising and should be explored further. These direct perceptual measures appear quite valid and offer several practical advantages. They are very simple and easy for consumers to provide, straightforward for researchers and practitioners to interpret, and can be obtained in a relatively short period of time.

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