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SUBJECT/REFERENT POSITIONING IN
COMPARATIVE ADVERTISING

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ABSTRACT

A conceptual approach is developed which views comparative advertising as one means to accomplish product positioning goals. The approach uses a model of consumer similarity judgements to construct comparative ads. The ads are then tested using two, very different, methods—forced exposure and natural embedding. Subject placement of advertised products directly on product spaces is used to measure reactions to the different comparative ads. The results support the conceptual foundation, highlight important differences across the two methods, and, overall, reinforce comparative advertising's role as an associative positioning tool.

INTRODUCTION

In 1971 the FTC began encouraging explicit comparisons in advertising to make the marketplace of commercial ideas more self correcting, provide consumers with informative attribute-by-attribute comparisons, and encourage competition (Federal Trade Commission 1979). From the advertiser's viewpoint, comparative ad campaigns are more complex. Comparative ads may provoke retaliation both in the marketplace and in the courtroom. And while the advertiser's goal is usually one of selective as opposed to complete information provision, comparative ad campaigns may only be suited for certain competitors (e.g. a small share or new brand as opposed to a market leader). As a result, consumers often end up hearing only one side of the story.

While debates regarding the effectiveness of comparative advertising rage on, previous research has provided relatively few insights. The results of most studies have failed the test of time and replication (for reviews see Wilson 1978, Scammon 1978, Lincoln and Samli 1979, Ash and Wee 1983, and Shimp and Gresham 1983). Interestingly, the often conflicting and generally negative empirical evidence regarding comparative advertising hardly dissuades advertising practitioners. The practice is readily apparent in all media for a number of both products and services. Moreover, Hisrich (1983) reports generally favorable perceptions toward and experience with comparative advertising among agencies. The only conclusion seems to be that, in spite of substantial research efforts, comparative advertising is a popular mystery. Its potential has yet to be determined and general guidelines for its use remain anecdotal (Philips 1983).

We feel that this state of affairs stems from at least two important factors. First, previous research does not contain a generally accepted conceptual approach that relates the promotional goals of the advertiser to

the construction of comparative ads. As a result, a wide range of effectiveness measures have been used. Second, as is the case with advertising research in general, questions exist regarding the validity and usefulness of the test procedures employed by researchers. Considering that a variety of research methods have been used across studies, and that the more popular methods are questionable, it is not surprising that nonconvergent results are often the norm.

The purpose of this study is to develop a conceptual approach to the construction of effective comparative advertisements and provide an initial test of the approach using two very different methods. Our conceptual approach follows a recent trend by emphasizing comparative advertising's role in accomplishing certain product positioning goals (Gorn and Weinberg 1984; Walker, Swasy, and Rethans 1986). Developments in the psychological study of similarity (Tversky 1977; Johnson 1986) help to provide guidelines for constructing comparative ads to meet these goals. In particular, the use of relative market leaders as subjects or referents in comparative ads should systematically affect perceptions of a product's position in a market (Johnson 1986). Using a market leader as a subject in comparison to a lower share product (which has fewer distinctive features) should make the leader's features more salient and facilitate product differentiation. Alternatively, using a leader only as a referent in comparison should minimize the effect of the leaders distinctive features and facilitate association.

We employ two very different methods--forced exposure to ads and more natural exposure to ads embedded in text--to test the effect of subject/referent positioning in comparative advertising. The forced exposure test also utilizes two different subject populations, students and mall intercept subjects, in order to study possible systematic differences in these

populations from a copy testing standpoint. Both of the research methods correct for many of the inherent problems in existing studies. We begin by briefly reviewing existing comparative advertising studies from both a conceptual and a methodological standpoint. Our conceptual approach and hypotheses are then described in detail. Finally, the two experiments and their results are presented.

CONCEPTUAL REVIEW

One would hope that existing studies of comparative advertising provide an orderly progression of useful theoretical explanations. It is important to remember, however, that interest in comparative advertising was driven by a regulatory agency rather than by conceptual or theoretical developments. The "rules of the game" had changed, and theory often got lost in the shuffle. As a result, relatively few empirical studies provide any extensive theoretical justifications.

For the most part, existing theoretical approaches have emphasized cognitive responses to comparative advertisements (Wright 1973). Belch (1981), for example, applied the cognitive response approach to the use of one-sided versus two-sided comparative messages. Accordingly, two-sided arguments should reduce the number of counter arguments produced by consumers. Similarly, Murphy and Amundsen (1981) suggest new brands claiming equality or superiority over more familiar brands may be met with resistance or skepticism. They suggest the possibility that new brands may, in fact, encounter fewer negative cognitive responses because opinions regarding new products have yet to be formed (there is little basis for counterarguing). This idea was suggested originally by Shimp and Dyer (1978). Also in the context of the cognitive response framework, Swinyard (1981) linked active counterarguing to attribution theory. Accordingly, whether or not an

advertiser is seen as either truthful or self-serving determines the strength of the counter arguments.

Although these more conceptually driven studies are in the minority, they do provide some basis for understanding comparative advertising. Nevertheless, the generally negative research results on comparative advertising remain inconsistent with more recent positive results, which emphasize using comparative advertising as a positioning tool (Gorn and Weinberg 1984; Walker, Swasy, and Rethans 1986), and positive practitioner attitudes toward its use (Hisrich 1983). This suggests that the above mentioned approaches fall short.

METHODOLOGICAL REVIEW

In reviewing previous methodological approaches to comparative advertising research we encountered an array of approaches, many of which may also contribute to the lack of consensus in results. We compared existing empirical studies on four readily apparent factors: 1) the dependent measures employed; 2) the respondents queried; 3) the context surrounding the exposure; and 4) the source of advertisements. Table 1 presents a chronological listing of the published empirical studies we found on the effects of comparative advertising. Not included are conceptual works, reviews, or tangentially related articles.

Dependent Measures

The initial stage of advertising research, indeed any research, is to precisely define the problem at hand and the relevant dependent measure or measures of interest. Advertising research usually focuses on some dependent measure of advertising "effectiveness." Given the broad base of possible comparative advertising issues (Wilkie and Farris 1975), the need for specific and directed focus is critical. Table 1's list of dependent measures was

segmented into three general categories; variables pertaining to the claim, variables pertaining to the brand, and variables pertaining to the sponsor. Overall, twenty-four claim variables, nineteen brand variables, and seventeen sponsor variables, a total of sixty-two different dependent measures, have been studied. While closer examination highlights traditional favorites - recall, believability, and informativeness for the claim; intention to buy and recall for the brand - thirty-seven of the sixty-two measures were only used once while another thirteen were only used twice. Naturally it is difficult to compare research results when very different effects are being measured. The fact that comparative advertising research has not been driven by conceptual or theoretical developments no doubt contributes to this lack of consensus regarding what in fact we should be studying.

Respondent Base

The nature of the research population may directly affect a study's generalizability. The major advantages of using nonprobabilistic sampling techniques are, of course, convenience and economy (Selltiz, Wrightsman, and Cook 1976). Nonprobability or convenience sampling may also be justified when precise representativeness is not necessary (Babbie 1973). Calder, Phillips, and Tybout (1981), for example, contend that serious attempts to study fundamental mental or cognitive processes are immune to such limitations. A brain is a brain is a brain goes the logic. However, advertising is designed to affect different people in different ways. The major problem with convenience samples is that the researcher has no way of evaluating the biases introduced by each group of respondents (Selltiz et al. 1976). In other words, an advertising response may not be an advertising response may not be an advertising response.

Table 1's list of the subjects gives as much detail as the authors provided. A glance at Table 1 is alarming. Only Levine (1976), McDougall (1978) and Swinyard (1981) used random, nonstudent samples. One study (Shimp and Gresham 1978) used both students and nonstudents while another (Belch 1981) used church groups. The remaining twelve studies used only convenience samples of students. Of these, nine are known to have used or included business administration students who may have been highly sensitized.

Exposure Context

All too often researchers downplay the possible effects of the research context on research results. Table 1's list of the study contexts tries to capture the naturalness of the respondents' interaction with the advertisements. The three general levels of natural exposure that have been used emulate the major differences across copy testing methods. Strict control, involving forced exposure to advertisements only, was employed in ten studies. Seven studies used the more natural method of embedding ads in text or programming within a controlled environment (Prasad 1976; Shimp and Dyer 1978; Murphy and Amundson 1981; Belch 1981; Demirdjian 1983; Tashchian and Slama 1984; Walker et al. 1986). Only Swinyard (1981) designed an experiment involving completely natural exposure in which there was no knowledge of whether or not the respondents "saw" the advertisements. Unlike the methodology employed in this paper, none of these existing empirical studies of comparative advertising employed and compared more than one exposure method. The fact that most studies used overt control may contribute to demand characteristics and the existing lack of empirical consensus described above.

The Advertisements

Finally, the advertisements themselves are an important criteria for evaluating the methods employed in previous studies. While the issue here is similar to that involved with the reactivity of the research setting discussed above, singular differences emerge. Table 1's list of the ad origins is divided into two possibilities - those constructed for the study and those borrowed from the media. Only Levine (1976), McDougall (1978), Wilson (1980), Gorn and Weinberg (1984), and Walker et al. (1986) actually borrowed from the media. The rest were constructed for the study. Lifelong exposure to a barrage of professional advertisements has taught consumers what an ad should look, sound, and read like. While often necessary given resource constraints, unrealistic ads stand out.

To summarize, our review of both previous conceptual approaches and methods suggests that the lack of consensus in previous research is at least partially explained by a corresponding lack of consensus regarding appropriate effectiveness measures, variance in the research methods used across studies, and/or the use of questionable contexts, ads, and respondents. In light of these observations, we propose two important criteria for research on comparative advertising and advertising in general. First, there is a need for a generally accepted conceptual approach that focuses our attention on singularly relevant and agreed-upon effectiveness measures. Second, advertising researchers should follow the generally agreed-upon practice of using qualitatively different methods to study the same research hypothesis or proposition. Relying upon any single method implies some sacrificing of internal validity for external validity or vice versa (Campbell and Stanley 1963; Webb et al. 1981). A valid test of any hypothesis requires the use of more than one method. Moreover, multimethod advertising research will provide important insights into this intricate field.

A CONCEPTUAL APPROACH TO THE DEVELOPMENT OF COMPARATIVE ADVERTISEMENTS

Conceptually, we feel that focusing on the underlying purpose of comparative ads (Shimp and Dyer 1978; Gorn and Weinberg 1984) provides an important missing link. The core of our approach is a focus on the promotional and related marketing strategy goals that comparative advertising may be used to accomplish. Rather than start with comparative ads themselves, one must start with the tactical purpose to which they may be put. In their compelling early conceptual paper, Wilkie and Farris (1975) discussed many of the issues related to comparative advertising and its effects on consumers. From a marketer's perspective, however, the most important of these is the use of comparative ads in accomplishing product positioning goals. As Wilkie and Farris suggest, two very general positioning goals are relevant: association, or using comparative ads to position a product closer to another product or set of products, and differentiation, or using comparative ads to position a product away from other products. Such goals may apply to a new product's initial position or the repositioning of an existing product. Unfortunately, with notable exceptions (see Shimp and Dyer 1978; Pride, Lamb, and Pletcher 1977; Gorn and Weinberg 1984; Walker, Swasy, and Rethans 1986), empirical studies have not focused on these marketing goals.

Having a clear statement of the relevant marketing goals allows researchers to choose only specific, relevant dependent measures. When the goal is achieving either an initial or different position, then the perceived position of the relevant products in the minds of consumers is the dependent measure of interest. As is often argued, perceived position should be assessed in a relative fashion, by measuring perceptions for products in relation to their realistic competitors (Wind and Robinson 1972). The most direct, straightforward measure of effectiveness in this case then is the

perceived similarity, either overall or on a by-attribute basis, of the product in question relative to its competitors (Gorn and Weinberg 1984; Walker et al. 1986). Quite simply, does the comparative advertisement affect the perceived similarity or dissimilarity of the sponsor's product in the desired direction?

Focusing on the psychological distance between brands, Gorn and Weinberg found a positive effect for comparative versus noncomparative ads. In their study, comparative ads by a challenger brand resulted in increased perceived similarity between the challenger and a market leader. Walker, Swasy, and Rethans (1986) extend Gorn and Weinberg's work and suggest that comparisons involving members from the same subcategory facilitate association, while comparisons involving members from different subcategories may increase dissimilarity. In other words, a comparative claim must be credible, or involve products that are reasonably similar to begin with, to facilitate association. The Gorn and Weinberg study is important because it demonstrates the positive effects of comparative advertising on a dependent measure that, compared to earlier studies, more accurately reflects the strategic goals of comparative advertising. Moreover, if perceptual proximity is the psychologically important variable, a look at how consumers judge similarity may provide guidelines regarding the development of particularly effective comparative ads (a' la Walker et al.). In the next section of the paper, a psychological model of similarity is described as well as its implications for developing comparative ads.

A Psychological Model of Similarity

Tversky's (1977) contrast model of similarity provides both a model of how similarity judgments are produced and a subsequent framework for developing comparative ads to meet particular positioning goals (Johnson

1986). For many objects, Tversky views similarity (or dissimilarity) judgments as resulting from a contrasting of the common and distinctive features we associate to those objects. Common features add to similarity while distinctive features detract. The opposite is true for dissimilarity judgments; common features detract from dissimilarity while distinctive features add (for a more detailed discussion see Tversky 1977). One aspect of the model is particularly pertinent to our discussion and relates directly to the development of comparative ads. According to the model, three different sets of features affect the similarity of any two alternatives, the features the alternatives have in common and the distinctive features of each alternative. Moreover, the weight an individual places on these three feature sets is partially determined by the context of the judgement. The judgmental context is, in turn, a controllable marketing variable. The fact that these weights may vary from situation to situation explains a variety of contextual effects on perceived similarity.

Using different products as subjects or referents in a comparative ad is one such context effect that may be particularly relevant to the construction of effective comparative ads. When judgments are made in a subject/referent format (i.e. how similar is a to b, where a is the subject and b is the referent), asymmetries in judgment often result, where a may be more similar to b than b is to a. Asymmetries of this sort have been found among several stimuli including countries, faces, and consumer products (Tversky 1977; Tversky and Gati 1978; Johnson 1981, 1986). Tversky and Gati, for instance, found subjects' ratings of the similarity of North Korea to Red China to be greater than the similarity of Red China to North Korea. Tversky uses the contrast model to explain such judgments through the relative weight placed on the various feature sets. In a subject/referent judgment, the weight is

naturally on the features of the subject. Because Red China has more distinctive features than North Korea, asymmetric judgments may result. In other words, while the features of North Korea map fairly well into the features of Red China, Red China's features do not map very well into those of North Korea. In a consumer products context, Johnson (1981) found judgments of the similarity of Shasta Cola to Coke to be larger than judgments of the similarity of Coke to Shasta. Such asymmetries can again be traced directly to the greater number of distinctive features consumers associate to Coke (Johnson 1986). When Coke is the subject of a comparison with a product that does not have as many distinctive features, perceptions of similarity will be lower than when Coke is just a referent and its many distinctive features are deemphasized.

In light of the contrast model, the positioning goals of comparative advertising can be restated as an attempt to control the weight consumers place on these different feature sets. The advertiser's goal is to emphasize common features when pursuing an association strategy while emphasizing distinctive features when differentiating a product. One very direct way to influence these weights is to take advantage of subject/referent asymmetries. If any brand with relatively few associated features wants to position itself close to a competitor with many associated features, an effective strategy may be to use that competitor as a referent in a comparative ad. If, alternatively, the goal is one of differentiation, use of the competitor as a subject may effectively use that product's distinctive features to differentiate the products. Stating this proposition formally:

When the products in a comparative ad differ in associated distinctive features, using the product with more distinctive features as a referent in comparison facilitates a strategy of association while using the same product as a subject facilitates differentiation.

The results of a pilot study provide initial support for this proposition. In the study, a hypothetical cola-flavored soft drink was compared to Coke. In two ads the hypothetical soft drink was the subject and Coke was the referent. In two additional ads the subject/referent position of the two soft drinks was reversed. Coke was assumed to have more distinctive features. Consistent with the proposition, the results showed that the hypothetical cola was positioned closer to Coke in the subjects' minds when Coke was a referent rather than a subject in the ads. The pilot study suffered from many of the methodological problems described above, including the use of only one hypothetical product, student subjects, artificial ads, and forced exposure. The results of the study do, however, suggest that the proposition deserves further research attention.

To summarize, comparative advertising should be viewed as one possible way to achieve product positioning goals. As such, a simple, direct measure of the effectiveness of a comparative ad is its ability to either create or reinforce a certain level of perceived similarity between the sponsor's product and the product or products of comparison. By understanding how proximity judgments are produced in different contexts advertisers may learn how to structure ads either to minimize or to maximize perceived similarity.

HYPOTHESES

Using Tversky's model and the proposition developed above, two hypotheses were tested in the experiments that follow. First, because a market leader is generally associated with more distinctive features than a relative nonleader (Johnson 1986), using the leader as a referent rather than a subject in an explicit advertising comparison should increase perceived proximity. Using the leader as a subject should, on the other hand, decrease perceived proximity:

H1: Using relative market leaders as referents and nonleaders as subjects in explicit advertising comparisons will result in greater perceived proximity than using leaders as subjects and nonleaders as referents.

Hypothesis one assumes that preference for the leader, as well as the number of distinctive associations that result, is homogeneous. Naturally, hypothesis one may depend on whether the overall market leader is the individual consumer's preferred alternative. If, for example, a consumer does not prefer the leader and, as a result, has fewer associations to the leader, hypothesis one would not hold for that consumer. The contrast model would no longer predict in accordance with hypothesis one. In fact, some consumers may associate more distinctive features to the nonleader. As a result, using the market leader as a subject may actually increase perceived proximity for these consumers. Thus the likelihood exists that Hypothesis one may be dependent on the individual consumers' own preference for the leader. Therefore, a second hypothesis is the following:

H2: Increased individual preference for the relative market leader increases the likelihood of H1. (That is, there is a significant interaction between individual preference for the leader and the use of the leader as a subject or a referent in affecting perceived proximity.)

TESTING SUBJECT/REFERENT POSITIONING IN COMPARATIVE ADVERTISING

Two experiments were employed to test the effect of subject/referent positioning in comparative advertising using different methods. Experiment one utilized forced exposure to comparative ads involving both student and mall intercept subjects. Experiment two utilized more natural exposure to ads embedded in text.

Proximity Measure and Instructions

Again, following our conceptual approach, the dependent measure of interest is the perceived proximity of the products in question. In the pilot study described above, subjects were first shown one of the test ads (using Coke as either a subject or referent in comparison) and were then asked to make similarity judgments among all possible pairs of brands (n=66) in the market of interest (soft drinks). Similarity scaling procedures were then 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 overall proximity between the two products was collected in the experiments reported here. In order to facilitate the task for consumers, two-dimensional multidimensional scaling spaces involving all but the target (i.e., to-be-positioned) product were given to the test consumers (using data obtained from separate groups of subjects). After exposure to a test ad, consumers were shown a space for the product category and asked to place the target 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. Spaces were only described as "pictures" or "product maps" in which the distances in the pictures corresponded to the perceived differences among the products in the minds of consumers. To avoid disagreement, no axes were labeled. Overall, the subjects had a very good intuitive grasp of the spaces and understood the task. In the response phase of both experiments, the subjects were first presented with a product space and ad combination involving a category that was not part of the main study as practice (soft drinks for experiment one, credit cards for experiment two). Subjects were

instructed to place the target (i.e. sponsor's) product "somewhere in the picture where you think the product belongs." Each subject's preferences (first, second, and third choices) were also collected for each category involved in order to test hypothesis two. Subjects were asked to list their choices, from first to third, from among the alternatives in the space.

The main advantages of the "place in the space" method are its intuitive appeal to the subjects, the straightforward nature and interpretation of the measure, and the ease of data collection. On the down side, it is important that each space be an acceptable representation of the subject's consideration set. We make the traditional assumption that while consumers differ in their preferences, perceptions are fairly homogeneous. In order to check the validity of the measure, the sponsor's products were included in the original MDS solutions whenever possible (i.e. when actual products were involved). These products were deleted from the spaces in order to collect the test data. Comparing the product's original position with the test subject's placement of the product in the space provides a validity check of the "place in the space" measure. If subjects viewing the ads place the products roughly "where they belonged," the validity of the measure is supported. (These measures are reported in the results section of each experiment.)

As discussed, one potential problem with many existing studies is an over-reliance on relatively unprofessional advertisements. All advertisements used in the first phase of experiment one were obtained with agency and client assistance. Actual print ads were obtained for two product, Republic Airlines and Budget Rent-a-car. Actual television ads were also obtained for Lincoln Mercury and Total cereal. Each of these ads involved the comparison of the target product (the sponsor) with a relative market leader (American Airlines, Hertz Rent-a-car, Cadillac, and Post Raisin Bran). Of the large number of ads

considered for use in the study, the test advertisements were chosen to allow for manipulation of the subject/referent position of the products in the comparisons while holding the copy (information) content constant. Existing copy lines, pictures, and other information were rearranged to produce subject/referent manipulations. The intent was to hold as much constant as possible except for the subject/referent position of the products in the comparisons. The one exception to this was for the Total cereal ads. Two different existing versions of the Total cereal ads very naturally contained a subject/referent juxtaposition of the target product, Total, with Raisin Bran. All other ads were professionally edited to construct the two versions of each ad. In one version of each ad, the target product (e.g. Budget) was the subject of the comparison while the market leader (e.g. Hertz) was the referent. The other version of each ad reversed the subject/referent position of the products.¹

Although using actual ads should help minimize reactivity, it was impossible to control directly for the number of distinctive features associated to the products in question or for previous exposure to the ads. While it is assumed that the target products had fewer features, actual

1. As a manipulation check, separate groups of thirty subjects were each shown one version of the ads. The check revealed no significant differences in the attractiveness of the two ads (measured on a seven point scale from "unattractive" to "attractive"). All the ads were considered real by the subjects. In fact, many subjects claimed to have seen the ads that were constructed to reverse the original subject/referent positions.

feature differences may be small or nonexistent. The validity of this assumption was checked by having approximately half of the subjects who were shown the initial set of test ads in experiment one do a memory probe (n = 147 out of 277, including 88 students and 59 mall subjects). In the probe, subjects were given two minutes to write down all of the features that came to mind in response to each of the products used in the study (features being anything people attribute to the brand). The probe preceded the experiment so that the advertisements would not contaminate the features elicited by subjects in the probe. As the probe may, in turn, have contaminated the experiment, only half of the subjects were probed. (Analysis of variance revealed no significant or near significant differences in the dependent measures of probe and nonprobe subjects. As a result, this factor is omitted from all subsequent analyses.) Products in the probe were presented in random order for half of these subjects and the reverse order for the other half. The results of the probe revealed that while our assumption is correct, the differences were, in fact, small. The target (sponsor) products elicited, on average, 4.52 attributes while the leaders elicited, on average, 4.95. This result was directionally correct for three of the four categories, while the fourth category (airlines) revealed essentially no difference. The average number of associations, by category, were 4.65 and 5.06 respectively for Total and Raisin Bran; 3.84 and 4.57 for Budget and Hertz; 5.41 and 6.06 for Lincoln and Cadillac; and 4.17 and 4.12 for Republic and American. Although a memory probe is only an imperfect measure of the features' set size and does not take into consideration the relative salience of the elicited features (Johnson 1986), our relatively close results nonetheless suggest that the subject/referent manipulation may not result in large asymmetries in perception.

In order to maximize feature set size differentials (and the potential for asymmetric perceptions), two pairs of additional ads were constructed and tested involving new, hypothetical products being compared to market leaders. One pair of ads involved the comparison of a hypothetical fast food restaurant, Hamburger Heaven, to McDonalds and the other pair involved the comparison of a hypothetical toothpaste, Dazzle, to Crest. The intent of subject/referent manipulation was explained to an advertising agency. Then the agency finalized the ad layouts and names for the hypothetical products. The assumption here is that consumers will associate many more features to the leaders than to the hypothetical product. Again, our hypothesis is that the target and leader brand will be more closely positioned in consumers' minds after exposure to an ad in which the target product is the subject of the comparison than when the leader brand is the subject. All of the ads used in the two experiments are described in Table 2.

EXPERIMENT ONE: FORCED EXPOSURE

Advertisements were presented to four separate groups of subjects. Two groups, one a population of undergraduate marketing students ($n = 158$) and one a mall intercept population obtained in a suburb of a major metropolitan area ($n = 119$), were shown the advertisements involving the four actual products (Budget, Total, Republic, and Lincoln). The student subjects were run in a classroom setting and the mall subjects were run in small groups in a consumer testing center at a mall. After analyzing the probe and finding the difference in associated features to be relatively small, two additional groups of subject, one student ($n = 71$) and one mall intercept ($n = 120$), were similarly shown the advertisements for the two hypothetical products (Hamburger Heaven and Dazzle). There were a total of 468 subjects and 1488 responses in the experiment.

Subjects were walked through the procedure by one of the experimenters so as to minimize confusion regarding the use of the methodology. As mentioned, the subjects were first shown a practice space and advertisement. The space was for sweetened soft drinks and the ad was for a hypothetical lemon-orange flavored soft drink. After explaining the space and the procedure, the subjects were instructed to view the soft drink ad and then place the soft drink in the product space for the category. Subjects were then shown the test ads one at a time. After viewing each ad, the subjects "positioned" each of the target products in the ads within the product space for each product class using a paper and pencil format (ads and spaces were presented in separate booklets to control ad exposure). Subjects were instructed to place the target product "where they thought the product belonged in the picture." After placing an X in each space and labeling it with the name of the target product, each subject was asked to list his/her first, second, and third choice from among the products in the space. Only 3 of the 468 subjects had any problems understanding the procedure. The preference measure was designed to provide some additional control over individual differences in associated features and test hypothesis two. Recall that a consumer who strongly prefers the leader may associate more features to the leader. Using the consumers' preference for the leader as a variable, therefore, we predict that the stronger the consumer preference for the leader, the more likely the subject/referent manipulation has an effect on perceived proximity of the two products in an ad.

Analysis

As described above, comparing the subject's placement of the target product with the product's original position in the space provides a validity check of the dependent measure. This was possible for four of the six

categories in experiment one (those involving actual products). Distances were obtained from the original MDS position of the product, as well as from the average placement of the product by the subjects after viewing each of the ads, to each of the other products in the space. If the distances from the original position to the other products correlate highly with the distances from the subject-based placement to the other products, validity is supported. In support of the measure, the correlations were very high for three of the four cases available. The correlations between the original placement distances and the subject-based placement of the target-subject and leader-subject ads respectively were .179 and .288 for Budget Rent-a-car, .958 and .940 for Total Cereal, .984 and .999 for Republic Airlines, and .998 and .996 for Lincoln automobiles. In other words, on average, subjects placed Total, Republic, and Lincoln very close to their original positions in the space. Only Budget was low. Even for Budget, however, consumers were very consistent in their placement across the two ad conditions ($r=.990$). We concluded that the "place in the space" represents a valid and expedient procedure to measure perceptual proximity for the purposes of this study.

Three different dependent measures were obtained from the subject's placement of the target products in the space. To test the hypotheses, the main dependent measure obtained was the absolute distance, in millimeters, between the subject's placement of target product and the leader. Although no specific hypothesis was tested, we also obtained two measures of the direction of the placement of the target product relative to the leader. These included the X and Y coordinates (in millimeters) of the placement of the target product from the origin (i.e. the leader). The four independent variables studied included subject/referent position (two levels: target-subject/leader-referent v. leader-subject/target-referent), product category (six levels:

Rent-a-car, Cereal, Airlines, Luxury Autos, Fast Food, Toothpaste), subject population (two levels: student v. mall subjects), and preference for the leader (four levels: leader as first choice, second choice, third choice, and no choice).

Results

The average distance between the target products and the leaders within each ad, category, and subject population is shown in Table 3. The analysis of variance for distance between target and leader is presented in Table 4. Overall the results strongly support the subject/referent hypothesis (H1). The main effect for subject/referent position was highly significant in the predicted direction ($p < .003$) as was product category ($p < .000$). There were two interesting nonsignificant effects. First, preference for the leader had no systematic effect on proximity either as a main effect or as an interaction with subject/referent position (H2). It is also of interest that, across categories, subject population was very nonsignificant.

Across all six categories, the average distances between targets and leaders were 41.92 and 46.84 respectively for the target-subject/leader-referent and leader-subject/target-referent ads. Looking at Table 3 we see that the main effect for subject/referent position represents a small but consistent effect across product categories. Each category showed a subject/referent effect directionally. Only airlines and fast foods, however, were significant at the product category level ($p < .05$ and $.10$ respectively). Not shown are the ANOVA's for the X and Y coordinate measures. These analyses were only conducted at the product category level (due to the individuality of the spaces used in each category) and revealed nothing over and above that revealed by the absolute distance measure. There were very few other effects within various categories. There was a significant effect for population for

automobiles ($p < .01$; students saw Cadillac and Lincoln as more similar than did the mall subjects) and a significant subject/referent by population interaction for fast food ($p < .05$; the subject/referent effect was marginally in the wrong direction for the students).

To summarize, in a forced exposure task, our subjects perceived a higher degree of similarity between target products and market leaders when shown advertisements that used the leaders as referents as opposed to subjects. This effect was small but consistent across the six product categories tested. Interestingly, neither preference for the leader nor the subject population had any systematic effect on the results. Naturally, forced exposure to the advertisements may create unpredictable demand characteristics. Therefore, before making conclusions, a second experiment was conducted using more natural exposure.

EXPERIMENT TWO: EMBEDDED ADS

Method

In experiment two, the print advertisements used in experiment one involving Rent-a-cars, Airlines, Fast Food, and Toothpaste were embedded in magazine text. Four versions of the same regional magazine were constructed. The editorial content consisted of seven neutral articles and photographs related to the region that appeared over the last several years in a limited circulation alumni magazine. Each magazine was 74 pages long and contained 53 pages of text and pictures and 21 pages of advertisements. As in experiment one, the test ads included three one-page ads for Budget Rent-a-car, Hamburger Heaven fast food, and Dazzle Toothpaste respectively 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 leader-as-subject ads while the remaining two magazines contained the leader-as-referent ads.

Each magazine contained one hypothetical product as subject, one hypothetical product as referent, one actual nonleader product as subject and one as referent (i.e. the use of the real and hypothetical products as subjects and referents was 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. As anecdotal testament to their realism, several of the respondents wanted to purchase the test copies and two copies were given away to particularly persistent subjects.

Procedure

To minimize reactivity to the procedure, only mall subjects were used in experiment two. Four groups of thirty-two mall intercept subjects were each run through the four magazine conditions (n=128). Each subject was instructed to review each page of the magazine and judge the appeal of both the stories and the ads. Subjects were told that they were not expected to read the stories but they were expected to at least look at and examine every page of the magazine (74 pages total). Subject were then shown to a table where they could sit and relax and review the magazine for 15 minutes minimum time (and more if they chose to). Subjects were timed for the 15 minute minimum exposure time. Average viewing time across subjects was 16.3 minutes. After reviewing the magazine, subjects were then shown to a separate room where they were given the test questionnaire.

The questionnaire contained, in order, a page containing six questions regarding the attractiveness of six of the stories, a page containing instructions for obtaining the product space positions (see above) as well as a sample space (for credit cards), five pages containing one warm-up (a position for Sear's Discover card which had been advertised) and four test

spaces, 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). The space for the category was then presented and subjects were instructed to mark where the target 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.

The recall question is important for two reasons. First, the hypotheses are only predicted for those individuals who were, in fact, exposed to the ads. Second, the recall measure provides an opportunity to further validate, or invalidate, the general result of the Gorn and Weinberg (1984) study, namely that comparative ads increase perceived proximity. More specifically, their results showed that forced exposure to a comparative ad results in increased perceived proximity between a leader and a challenger (target) brand relative to a noncomparative ad. In our case, a test is provided by comparing the degree of exposure to the comparative ads and perceived proximity. The prediction is that the greater the exposure to the comparative ads, the more similar the target and leader products will be perceived.

Given the nature of experiment two, subjects self-administered the questionnaire while an experimenter was present 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 useable data were 28, 26, 30, and 30 for magazines one through four respectively. There were a total of 452 useable observations.

Analysis and Results

The validity check of the subjects' placement of the target products in the product spaces was very consistent with that in experiment one. For the two categories in which comparisons were possible, the correlations between the distances from the original MDS determined placement of the target product to the other products in the space and the distances from the subjects' average placement of the target products to the other products (after exposure to the ads) were .971 and .978 respectively for the target-as-subject and leader-as-subject ads for airlines and .48 and -.03 for the same ads for rent-a-cars. Consistent with experiment one, while subjects did not place Budget back where it appeared in the original space, the correlation between the distances obtained from the two ad conditions was again high ($r=.832$). Overall, therefore, the place in the space measures again appear quite valid, or at least nonrandom, even in a self-administered setting.

As in experiment one, the dependent variables of interest were the proximity (in millimeters) between the target and leader products and the X- and Y-coordinates of the target products position relative to the leader. As in experiment one, the X and Y coordinate data provided no results that were not provided by the distance data, the main variable in the study. The remaining discussion will only, therefore, focus on the distance between the target product and the leader. The independent variables of interest were the subject/referent position of the leader (two levels), the category involved (four levels), the consumers' recall of the test advertisement (five levels), and the preference for the leader (four levels). Given the excessive number of interactions involved relative to the 452 observations, a main effects Analysis of Variance was performed initially.

As in experiment one, category was significant ($F=35.59$, $p<.000$). Unlike experiment one, subject/referent position of the products was not significant. Overall, preference was also nonsignificant. Recall, however, that only those subjects recalling the comparative ads provide a test of hypothesis one (see analysis below). Interestingly, consistent with the results of Gorn and Weinberg, there was a strong relationship between exposure to the comparative ads and the perceived proximity of the products in the ads ($F=4.06$, $p<.003$). The average distances between the target and leader products were 45.17 ($n=276$), 54.68 ($n=37$), 60.32 ($n=63$), 63.30 ($n=43$), and 81.24 ($n=33$) respectively for those consumers who indicated that they definitely saw, thought they saw, were not sure, did not think they saw, and definitely did not see the test ads. Moreover, the trend was in the same direction for each of the four categories tested in experiment two. This strongly suggests that one of the main functions of comparative advertising is to increase the perceived proximity between leaders and nonleaders.

To provide a direct test of hypotheses one and two, the data for those individuals who reported that they definitely saw the ads were analyzed using a three factor ANOVA (subject/referent position, category, and preference). The results are presented in Table 5. Once again category was significant ($p<.000$) and preference and the position by preference interaction were not significant. In contrast to experiment one, however, subject/referent position was also not significant. Moreover, the averages were in the opposite direction from that predicted by hypothesis one (averages equaled 49.15 [$n=136$] and 41.31 [$n=140$] for the target-subject/leader-referent and the leader-subject/target-referent ads respectively). While at first glance these results appeared inconsistent with experiment one, the marginally significant category by preference interaction ($p<.09$) suggests that a closer look at the

effect of consumer preference for certain category leaders may provide some explanation. In fact, if one looks only at those subjects who strongly preferred the leader, the average distance was in fact smaller for the target-subject/leader-referent ads (mean=44.03, n=35) than for the leader-subject/target-referent ads (mean=47.28, n=46) as predicted by hypothesis one. This difference was, however, not significant.

A closer look at the results within categories helps to explain the overall results. (Given the small sample sizes involved, analyses within categories were expanded to include those people who thought they saw the ad and those who were not sure. Those who did not think they saw the ad and who definitely did not see the ad remained excluded.) Analysis of variance within categories revealed three significant results. Preference for the leader had a significant effect ($p < .05$) on distance for both rent-a-cars and fast food, although neither effect was in any systematic direction. There were no significant results for toothpaste. The interesting result occurred for airlines where hypothesis two was strongly supported. There was a significant ($p < .04$) interaction between the subject/referent position of the products in the ad and the consumers' preference for the leader. When Republic Airlines was the subject of the ad and American Airlines the referent, the average distance between the airlines was 21.17, 22.82, 40.50, and 40.59 respectively for those consumers who rated American as their first choice, second choice, third choice, and no choice. The corresponding averages for the American-subject/Republic-referent ads were 45.67, 45.86, 28.78, and 22.84. As it turned out, those people who did not rate American as their first or second choice rated Republic as their first or second choice 43 percent of the time. (This was the only category in which the target product appeared frequently in the preference rankings.) Thus the systematic interaction found for airlines

is very consistent with Hypothesis two and the predictions of the contrast model.

The question remains why subject/referent position had a consistent small effect in all six categories in experiment one but only affected perceptions in one of four categories in experiment two. We offer the following explanation. For subject/referent asymmetries to occur as a result of the ads, the ads must control the subject's attention directionally from subject to referent. Now consider the difference in the control over subject's attention in the two experiments and the nature of the ads. In a forced exposure situation, if following instructions, subjects will methodically read through a print ad and then provide their responses. From an attention allocation standpoint, this controlled environment makes it fairly easy to control the focus of the subject's attention using subject/referent positions whether using print, television, or radio ads. In a natural exposure situation, subjects are likely to be less methodical in their processing of the ads. For a subject/referent position to have its desired effect, it must successfully control the consumers' allocation of attention to the products in the ad. The Republic ad was the only two-page ad among the four print ads used. Moreover, the two-page format helped separate the subject and the referent position of the products (see description in Table 2). Therefore, one particularly promising explanation of the divergent results in the two experiments is that the one-page ads in experiment two, under natural exposure, failed to actually manipulate subject/referent attention allocation. The only ad in this condition that did appear to successfully manipulate subject/referent attention allocation was the two-page ad.

Other factors may also help explain the difference in the two experiments. The creative aspects of the copy in the ads may, of course, have had some effects. Some information is also provided by the existence of an interaction between subject/referent position and preference in experiment two for airlines, supporting hypothesis two, as opposed to an overall main effect for subject/referent position in experiment one. It is interesting that, unlike the case for airlines in experiment two, consumer preference had no effect on the results of experiment one. Parenthetically, from a copy testing standpoint, more natural exposure may be more conducive to studying the mediating effects of preference.

To summarize, unlike experiment one, the only subject/referent effect in experiment two was an interaction between subject/referent position and consumer preference (as predicted by Hypothesis two) for airlines. The results suggest that it is very difficult to control subject/referent position in a natural setting as opposed to a forced exposure situation using print advertisements. Taken together with the results of Gorn and Weinberg (1984), experiment two also supports increased perceived proximity between target (challenger) and leader products after exposure to a comparative ad. Finally, when compared to the results of experiment one, experiment two suggests that consumer preference may have more mediating effects under natural exposure.

DISCUSSION

We began this paper by noting the lack of consensus across existing empirical empirical studies of comparative advertising, and suggesting both conceptual and methodological factors as explanations. The results of the experiments reported here support both explanations. Conceptually, consistent with more recent approaches to comparative advertising (Gorn and Weinberg 1984), viewing comparative advertising as a product positioning tool appears

very promising. It allows researchers to focus on a very direct measure of comparative advertising effectiveness, namely perceived proximity.

Methodologically, the differences found between experiments one and two, which used very different methods, support the effect of methodological factors on past results and underscores the importance of multimethod approaches to advertising research.

The results of experiment one demonstrate the advantages of Tversky's (1977) contrast model in designing effective comparative ads. More specifically, experiment one suggests that control over the subject/referent nature of an advertising comparison will systematically affect perceived proximity. Accordingly, using relative market leaders as subjects emphasizes their distinctive features and enhances differentiation. Using leaders only as referents deemphasizes their distinctive features and enhances association. This finding has practical value under current comparative advertising guidelines. Comparative ads are often assumed useful to new products attempting to associate themselves to existing products, including market leaders (Philips 1983). Indeed, the general associative affects of comparative advertising reported here and by Gorn and Weinberg (1984) support this guideline. It is for such products that the feature set size differential is maximized and the subject/referent positioning effect should be taken into account. The contrast model appears quite applicable to advertising, and future work should explore the conditions under which the models predictions hold. Experiment two offers some suggestions.

Regarding the objectives of comparative advertising in general, we see another important implication. The results of experiment two lend considerable support to Gorn and Weinberg's finding that comparative advertising promotes association. In experiment two, subjects who recalled

the comparative advertisements were more likely to associate the products in the ads. We suggest that manipulating the subject/referent positioning in the ads can offer control over this shift under certain conditions. Certainly improving the ability of an advertisement to accomplish positioning goals would prove useful to a number of practitioners.

The empirical differences between experiment one and experiment two are also important. Certainly an exact duplication of results would have offered much stronger credibility to the subject/referent positioning argument. The nature of the difference in results is, however, informative. Although the subject/referent manipulation in experiment two was not significant across categories, we did find some support for hypothesis two. Moreover, we argue that hypothesis two was supported for the one ad that was most likely to maintain a subject/referent attention allocation under natural exposure. A second possible and perhaps obvious conclusion, therefore, is that forced exposure advertising testing techniques allow the experimenter particular control over the attention allocation of respondents relative to natural exposure. The more controlled the procedure in terms of exposure, the more closely a contextual manipulation, such as subject/referent position, may be maintained. This implies that the more controlled the advertising medium is in this regard, the more the subject/referent position can be maintained and asymmetries in perceptions can be used. The viewer/reader/listener must experience the subject/referent direction of the communication for the subject/referent position to have any systematic effect. In hindsight, television and radio advertising would probably offer more control over subject/referent position from an attention allocation standpoint than does a print ad under natural exposure. The creative skills of the agency personnel may also become paramount.

Another result that deserves elaboration was the lack of any overall difference between the two subject groups in experiment one. Subject/referent positioning affected mall intercept and student subjects alike. This finding is consistent with previous arguments which advocate convenience samples when testing basic cognitive principles (Calder, Phillips, and Tybout 1981). The fact that the populations differed within categories, however, points out the important, and perhaps obvious, caution that generalizing from studies involving one product category and one population can be extremely dangerous. Overall, a multimethod approach offers insights both conceptually and practically. While experiments one and two support the general conceptual approach advocated here, experiment two points out the practical difficulties of controlling subject/referent comparisons.

Naturally, this study has certain limitations. Perhaps the biggest limitation is that we only studied responses based on one exposure to our test advertisements. Also, as the discussion suggests, testing subject/referent positioning under natural exposure using both television-based and radio-based comparative ads would give us all a more universal understanding of comparative advertising's effect. Finally, while ads embedded in text are natural on a relative basis (compared to forced exposure), they may be quite unnatural in an absolute sense. At minimum, the positioning effect of comparative advertising deserves future research attention. Future research should continue to explore the ability of comparative ads to affect perceptions.

The experimental procedure used here, in which respondents interact directly with a previously derived perceptual map, also appears very promising and should be explored. Although used previously in new product development to identify perceptual gaps and market potential, its use in an advertising

research context has not been documented. Moreover, based on the responses obtained in this study, the measure appears quite valid. We see several practical advantages of the method. The measure is very simple and straightforward. Several responses can be obtained in a short period of time, and the subjects' responses are evaluated directly without requiring sophisticated analysis. Finally, by giving subjects a relatively enjoyable task (especially compared to paired comparison ratings), their motivation levels are maintained and more valid/reliable responses may result.

TABLE 1

SUMMARY OF COMPARATIVE ADVERTISING STUDIES

AUTHOR(S)	DEPENDENT VARIABLE(S)	SUBJECTS	STUDY CONTEXT	AD ORIGIN
Prasad (1976)	Claim - Recall Claim - Believability Brand - Recall Brand - Believability	Students (Bus.Admin)	Laboratory 1 Exposure Booklet-with text and advertisements	Constructed for Study
Wilson (1976)	Claim-Informativeness Claim-Believability Claim-Offensiveness Claim-Interesting Brand-Ability to Change View Brand-Quality Sponsor-Trustworthiness	Students (Bus.Admin)	Laboratory 1 Exposure Booklets - Advertisements only	Constructed for Study
Levine (1976)	Claim - Believability Claim - Clarity Brand - Awareness Brand - Intention to Buy Brand - Important Difference	Female (Heads of Household)	1 Exposure TV Commercials	Borrowed from Media
Pride, Lamb, Pletcher (1977)	Claim - Informativeness	Students (Bus.Admin)	Laboratory 1 Exposure 1 Print Advertisement	Constructed for Study
Sheluga & Jacoby (1978)	Claim - Recall Claim - Information Search Claim - Comparison Shop Brand - Recall Brand - Comparison Shop Brand - Information Search	Students (Psychology)	Laboratory Information Display Board Unlimited Exposure	Constructed for Study
Shimp & Dyer (1978)	Claim - Recall Claim - Believability Claim - Interestingness Claim - Informativeness Claim - Convincing Brand - Purchase Intention Sponsor - Identity Sponsor - Truthfulness Brand - Attitude	Students (High School & College) Social & Community Groups	Laboratory 1 Exposure Booklet - with text and advertisements	Constructed for Study

AUTHOR(S)	DEPENDENT VARIABLE(S)	SUBJECTS	STUDY CONTEXT	AD ORIGIN
McDougall (1978)	Claim - Reliability Claim - Helpfulness Brand - Rating Brand - Purchase Intention	Female (Random)	Laboratory 1 Exposure Printed Messages	Borrowed from media- text only and some Constructed for Study
Golden (1979)	Claim - Believability Claim - Credibility Claim - Information Given Claim - Information Usefulness Brand - Purchase Intention	Students (Bus. Admin. & Arts and Science)	Laboratory 1 Exposure 1 Written advertisement	Constructed for Study
Goodwin & Etgar (1980)	Claim - Understandability Claim - Impersonality Claim - Useless Information Claim - Irrelevance Claim - Unbelievability Claim - Offensiveness Claim - Attractiveness Claim - Interestingness Claim - Likeability Brand - Knowledge Increase Brand - Better Buy Brand - Perceived Risk Brand - Quality Level Brand - Overall Affect Brand - Intention to Buy	Students	Laboratory 1 Exposure 1 Written Ad	Constructed for Study
Wilson & Muderrisoglu (1980)	Claim - Counterarguments Claim - Support Arguments Claim - Positive Statements Claim - Negative Statements Sponsor - Derogation Sponsor - Curiosity Sponsor - Neutral	Students (Bus. Admin.)	Laboratory 1 Exposure Print Advertisement	Borrowed from Media
Murphy & Amundsen (1981)	Claim - Recall Immediate Claim - Recall Delayed Claim - Decay Claim - Believability Brand - Recall Immediate Brand - Recall Delayed Sponsor - Position	Students (Bus. Admin.)	Laboratory 1 Exposure Booklet with text and advertisements	Constructed for Study
Belch (1981)	Claim - Aided Recall Claim - Unaided Recall Brand - Attitude Brand - Intention to Purchase Sponsor - Bias	Church Groups	Laboratory 1,3,& 5 Exposures TV Viewing with commercials	Constructed for Study

AUTHOR(S)	DEPENDENT VARIABLE(S)	SUBJECTS	STUDY CONTEXT	AD ORIGIN
Belch (1981) (con't)	Sponsor - Truthfulness Sponsor - Honesty Sponsor - Qualification Sponsor - Believability Sponsor - Sincerity			
Swinyard (1981)	Claim - Acceptance Claim - Credibility Claim - Counter Arguing Brand - Purchase Intention Brand - Actual Sales with Coupon	Random	Random Homes Flyer in Doors Unknown exposures	Constructed for Study
Etgar & Goodwin (1982)	Claim - Understandability Claim - Impersonality Claim - Useless Information Claim - Irrelevance Claim - Unbelievability Claim - Offensiveness Claim - Attractiveness Claim - Interestingness Claim - Likeability Brand - Knowledge Increase Brand - Better Buy Brand - Perceived Risk Brand - Quality Level Brand - Overall Affect Brand - Intention to Buy	Students (Bus. Admin.)	Laboratory 1 Exposure 1 Print Advertisement	Constructed for Study
Demirdjian (1983)	Brand - Actual Purchase with Coupon	Students (Bus. Admin.)	Laboratory 1 Exposure Booklet - Text with Advertisement	Constructed for Study
Tashchian & Slama (1984)	Claim - Recall Brand - Purchase Intention Sponsor - Friendly Sponsor - Reliable Sponsor - Competent Sponsor - Fair Prices Sponsor - Check Prices Sponsor - Visit Stores	Students (Bus. Admin.)	Laboratory 1 Exposure Radio - Advertisements within program	Constructed for Study
Gorn & Weinberg (1984)	Brand - Perceived Distance Brand - Perceived Choices Brand - Attitude	Students	Class Time 1 Exposure Print Advertisement	Borrowed from media
Walker Swasy & Rethans (1986)	Brand - Perceived Similarity Brand - Perceived -Dissimilarity	Students	Laboratory 3 exposures Commercials within TV program	Borrowed from media

TABLE 2

DESCRIPTIONS OF ADVERTISEMENTS

Product Category	Target to Leader	Leader to Target
Rent-a-Cars: Budget v. Hertz	Budget (R) 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 phone 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 (R) at Bottom
Cereal: Total v. Raisin Bran	[Older sisters at table] Annoc: Like to try Total? Sisters: No, we grew up on Raisin Bran Annoc: You'll have to eat 4 bowls of Raisin to equal 1 bowl of Total Sisters: 4 bowls! Annoc: 1 bowl equals 100%	[Man Camping] Annoc: Like your Rice Chex? You'll have to eat 4 bowls to get 100% of daily requirements Wife: or one bowl of Total [Men on adjoining balconies] Annoc-To man 1-You'll have to eat 4 bowls of Raisin Bran Man 2 to Man 1-Or 1 bowl of Total Annoc: 1 Bowl - 100%
Airlines:	Page 1: Republic takes delight in showing you our schedule [8 columns of airplanes each one with destination and time and Republic logo] Page 2: Republic takes even more delight in showing you Americans [1 column of airplanes each one with destination and time]	Page 1: Republic takes delight showing you American's schedule [1 column of airplanes each one with destination and time] Page 2: Republic takes even more delight in showing you our schedule [8 columns of airplanes each one with destination and time and Republic logo]
Luxury Automobiles Lincoln v. Cadillac	[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 (T)	[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 (T)
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: Crest v. Dazzle	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	[Halo next to copy] Tag line: Our Burgers are devine Headline: When Crest Gets Dull.... [Hand by sink with Crest tube] [Hand by sink with Dazzle tube] Subheadline: Get Dazzled! Dazzle Fluoride Toothpaste

TABLE 3

EXPERIMENT ONE: PERCEIVED DISTANCES
 BETWEEN TARGET AND LEADER PRODUCTS
 (in millimeters)

ADVERTISEMENTS (SUBJECT-->REFERENT)	STUDENT SUBJECTS	INTERCEPT SUBJECTS	TOTAL
BUDGET-->HERTZ	71.254	80.050	75.283
HERTZ-->BUDGET	81.302	78.814	80.290
TOTAL-->R. BRAN	33.593	32.220	33.034
R. BRAN-->TOTAL	30.986	36.583	33.492
REPUBLIC-->AMERICAN	33.028	28.338	30.894
AMERICAN-->REPUBLIC	37.442	38.492	37.869
LINCOLN-->CADILLAC	18.069	27.017	22.061
CADILLAC-->LINCOLN	23.000	27.220	24.729
H. HEAVEN-->McDONALDS	38.282	28.483	32.343
McDONALDS-->H. HEAVEN	35.562	37.700	36.956
DAZZLE-->CREST	65.375	61.133	62.608
CREST-->DAZZLE	77.410	65.850	70.404

TABLE 4

EXPERIMENT ONE: ANALYSIS OF VARIANCE RESULTS

	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE
<u>MAIN EFFECTS</u>					
SUBJECT/REFERENT POSITION	7453.942	1	7453.942	8.669	.003
PRODUCT CATEGORY	584553.819	5	116910.764	135.970	.000
POPULATION	0.18	1	0.185	.000	.988
PREFERENCE FOR LEADER	3983.45	3	1327.819	1.544	.201
<u>TWO-WAY INTERACTIONS</u>					
POSITION X CATEGORY	1588.500	5	317.700	.369	.870
POSITION X POPULATION	116.144	1	116.144	.135	.713
POSITION X PREFERENCE	271.840	3	90.613	.105	.957
CATEGORY X POPULATION	5302.141	5	1060.428	1.233	.291
CATEGORY X PREFERENCE	15424.471	15	1028.298	1.196	.268
POPULATION X PREFERENCE	4695.961	3	1565.320	1.821	.141
<u>THREE-WAY INTERACTIONS</u>					
POSITION X CATEGORY X POPULATION	6555.957	5	1311.191	1.525	.179
POSITION X CATEGORY X PREFERENCE	16877.714	15	1125.181	1.309	.189
POSITION X POPULATION X PREFERENCE	133.199	3	44.400	.052	.985
CATEGORY X POPULATION X PREFERENCE	15000.060	15	1000.004	1.163	.295
<u>FOUR-WAY INTERACTION</u>					
POSITION X CATEGORY X POPULATION X PREFERENCE	11847.594	15	789.840	.919	.543

TABLE 5

EXPERIMENT TWO: ANALYSIS OF VARIANCE RESULTS

	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE
<u>MAIN EFFECTS</u>					
SUBJECT/REFERENT POSITION	2504.301	1	2504.301	1.814	.179
PRODUCT CATEGORY	99505.034	3	33168.345	24.025	.000
PREFERENCE FOR LEADER	3261.702	3	1087.234	.788	.502
<u>TWO-WAY INTERACTIONS</u>					
POSITION X CATEGORY	1211.590	3	403.863	.293	.831
POSITION X PREFERENCE	1548.832	3	516.277	.374	.772
CATEGORY X PREFERENCE	20906.528	9	2322.948	1.683	.094
<u>THREE-WAY INTERACTION</u>					
POSITION X CATEGORY X PREFERENCE	10927.861	9	1214.207	.880	.544

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