1977

A Study of the Effectiveness of Comparative Advertising for Selected Household Appliances.

Ronald Kay Sellars

Louisiana State University and Agricultural & Mechanical College

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SELLARS, Ronald Kay, 1943—
A STUDY OF THE EFFECTIVENESS OF COMPARATIVE
ADVERTISING FOR SELECTED HOUSEHOLD APPLIANCES.

The Louisiana State University and
Agricultural and Mechanical College,
Ph.D., 1977
Marketing

Xerox University Microfilms, Ann Arbor, Michigan 48106
A STUDY OF THE EFFECTIVENESS OF COMPARATIVE ADVERTISING FOR SELECTED HOUSEHOLD APPLIANCES

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in

The Department of Marketing

by
Ronald Kay Sellars
B.A., University of Texas, 1965
M.A., Texas A & I University, 1967
August, 1977
ACKNOWLEDGMENTS

I wish to express sincere appreciation to Dr. Lee Richardson, Dr. James Willis, and Dr. Dave Smith for their individual expertise offered for this study. Special thanks are due Dr. Al Burns for devoting so much time to helping me with this study and to Dr. Fred Endsley for graciously serving as my Chairman and providing continuous support.

Two other persons must also be recognized for their contributions. Saralyn Ingram, Librarian for the American Association of Advertising Agencies, generously supplied valuable information, including two of the five comparative-ad studies discussed in this paper. Also, Cecil Button must be recognized for his technical assistance in printing the questionnaire, its ads, and the final copy of this study.

Finally, I am deeply grateful to my family: to my children, Tracy and Todd, for the many pleasures they have had to sacrifice, and to my wife Jan for her unwavering love and patience plus the many hours she has spent typing during the last four years.
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ABSTRACT

The general purpose of this study was to investigate the effectiveness of making comparisons in advertising. Based on a literature review, a communication model was developed.

Using this model, the study's hypotheses were formulated. In general, they were of two types: (1) with comparative ads, recall is greater; perceived ad informativeness, believability, interest, usefulness, and inoffensiveness are higher; plus perceived product quality, competitive position, future purchase considerations, and sponsor trustworthiness are higher, than with non-comparative ads; and (2) the comparative ad responses -- given in (1) -- are positively related to classification variables which include level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; and brand preference. And, they are negatively related to price consciousness.

A posttest-only control group methodology was developed. Interviews were conducted on a door-to-door basis to randomly selected households. Each interview consisted of a self-administered, three-part questionnaire. In the first part, respondents rated themselves on eight psychographic measures and their perception of advertising on three bases. The second part consisted of subjects viewing one of six portfolios. Each portfolio contained three common filler ads plus either
a comparative or non-comparative ad for either a dishwasher, hair styler, or microwave oven. Part three of the questionnaire consisted of collecting responses to the treatment ad as well as one of the filler ads, plus the respondent's demographics. — The final sample size was 419.

In analyzing the data, the two groups within two of the product categories were found to differ significantly on a number of common bases. Specifically, the non-comparative hair styler group and the comparative microwave oven group were found to be more price conscious, more information seeking, perceiving advertising in general more favorably, having more product interest, and being nearer to purchasing within their respective product categories. This set of common variables was associated with higher ad ratings by these two groups.

In all three product categories, positive correlations between ad ratings and product interest, nearness to purchase, sponsor preference, and the three advertising perception measures were found, while price consciousness was not highly correlated, and information seeking was more negatively correlated. — This negative correlation appeared to be the result of the wording of the measures used in determining information seeking.

In the dishwasher category, the only category with similar groups, the comparative group rated their ad higher on eight of ten bases. Though traditional levels of significance were not met, the direction of the data indicated comparatives can be more effective. This indication was supported in the comparative microwave oven group, in which the comparative ad was rated significantly higher on four bases, while in the non-comparative hair styler group, the non-comparative ad was rated significantly higher on only two bases.
Brand and claim recall were found not to differ significantly by ad type across all three product categories.

From the data analysis, it was concluded that comparative ads can be more effective under certain circumstances. In particular, when some product interest exists; more informative ads are used; and when consumers depend less on personal sources of information and have generally positive perceptions of advertising, then comparatives can be effective. It was also concluded that comparative ads can be relatively more effective with consumers who are in the latter stages of Lavidge and Steiner's hierarchy of effects model. Since brand recall was so high, the respondents in this study could not have been at the earlier stages of the model, thus, no conclusions regarding these stages were made.

Finally, a number of future research guidelines were also included in the study.
CHAPTER I

COMPARATIVE ADVERTISING: INTRODUCTION AND LITERATURE REVIEW

In the last decade, there has been a rather drastic increase in the number of advertisements which name and make comparisons between a competitor's product and the sponsor's product.

The naming of a competitor and even the making of a comparison with a competing product is not a new technique in the area of personal selling. But, it is a relatively new technique for advertising.

Due to its somewhat infant stage, little has been written concerning this technique. Most of the writings to date have been more "news" oriented than investigative. Consequently, the general purpose of this study was to investigate the use of making comparisons in advertising, which is more commonly called "comparative advertising."

The purpose of this chapter is to present a general survey of the literature related to comparative advertising. Basically, the literature can be categorized according to two perspectives -- historical and considerations for usage. Before examining these two perspectives, a definition of comparative advertising is given.

Definition of Comparative Advertising

For the purposes of this study, the definition of comparative advertising, as given by Wilkie and Farris, was adopted. That is,

comparative advertising is

advertising that (1) compares two or more specifically named or recognizablely presented brands of the same generic product or service class and (2) makes such a comparison in terms of one or more specific product or service attributes.

The above definition requires that at least one competing brand name be presented. Ads which make comparisons to "another leading brand" or "the leading brand" or to "Brand X" are not included. Advertisements which explicitly show but do not mention competing brands can qualify as being comparative.

With respect to the second part of the definition, comparative advertisements are defined as making comparisons in terms of one or more specific product attributes. Therefore, ads that merely state overall superiority over a named competitor, without any given specific basis for their superiority, are not considered comparative ads. However, most ads that mention a competitor usually mention at least one product attribute as a basis for their claimed superiority.

**Historical Perspective**

For many people, comparative ads seem to be an advertising phenomenon of the 1970's. However, this phenomenon has existed for some time.

**Early Use**

In the literature search for this study, the earliest referenced example of comparative advertising was an ad for automobile tires in the 1930 Sears catalog. In that ad, Sears compared its second line of

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tires to eight nationally known brands of tires. In 1931, Sears added another competitor for a total of nine. Also in 1931, Firestone responded with a newspaper comparative ad. Due to the unusual nature of this ad, several large newspapers rejected it, including the Chicago Tribune and the New York Daily News.

Thirty-four years later, in reaction to a Gillette ad which also pictured Wilkinson, Schick, and Personna, Time stated that such direct identification of competitors had long been a rarity and that advertisers had gone to great lengths to avoid such ads. The article also referenced other, then current comparative ads, thus marking the approximate origin of the recent surge in the naming of competitors, as compared to using "another leading brand" or "Brand X."

In general, the advertising industry has held an unfavorable view of naming competitors in ads. This is evident from the small number of comparatives which appeared until the mid-1960's. Also, the rejection of Firestone's comparative ad by several large newspapers in 1931, supports the existence of a generally negative view towards naming competitors. But, even in the mid-1960's, the industry was still not in favor of such ads. This is reflected in a quote by Fairfax Cone of Foote, Cone and Belding: "It's bad manners, and I can't believe the public will stand for it."

FTC Encourages Use

Despite the advertising industry's negative attitude towards comparative advertising, in the early 1970's, the Federal Trade

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4Ibid., p. 21.
Commission asked both the ABC and CBS television networks to change their policies which almost completely prohibited comparative ads.\(^5\) NBC at that time was the only network permitting more than just a few, though their number of such ads was quite small.

There were many reasons for the FTC's encouragement for permitting more such ads. But, two of the most obvious reasons were to provide consumers with more factual product information and to discourage deception by eliminating comparisons by innuendo.\(^6\) It was also suggested that comparisons could lead to lower prices and improved quality.\(^7\)

Given the FTC's encouragement, policy statements and guidelines were developed by various organizations. NBC's formal guides require that (1) the products must actually be in competition; (2) naming competitors should be for comparison purposes and not for upgrading by association or discrediting, disparing, or unfairly attacking a competitor; (3) comparisons should be on a dimension to dimension basis; and (4) properties that are compared must be of value and of significant measurable difference.\(^8\) In addition, NBC has also issued guidelines for comparative advertisement complaints.\(^9\)


\(^7\)Ibid.

\(^8\)Christopher, loc. cit., p. 1.

ABC's formal guidelines require that product testing and survey analysis used in developing a comparative ad must be done according to accepted scientific and technical procedures. The guidelines also require that (1) product tests be significant according to recognized statistical standards of validity, (2) the burden of proof regarding whether the best possible test has been used is on the advertiser, and (3) the nature and limits of tests used must be disclosed.

The first industry-wide guidelines were issued by the National Association of Broadcasters in 1974. The guides were a synthesis of principles already adopted by NBC, ABC and the American Association of Advertising Agencies, plus some of the NAB's own ideas. These guidelines, which became effective April 1, 1975, essentially state that comparisons should be used when significant and meaningful product performance exists and should not be used for upgrading by association.

Present Status

As illustrated above, a comparative ad must meet certain rigid regulations before exposure to the public. In fact, because of these rigid regulations, the FTC recently launched a probe to determine whether any of the self-regulating organizations were blocking comparative ads from the public. In particular, the probe was to include the

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11 Ibid., p. 77.


television networks, the National Association of Broadcasters, and the National Advertising Review Board (NARB).

The reason for the FTC's concern is illustrated by the NARB's recent ruling that a Behold ad had the capacity to deceive by implying an overall superiority over Pledge when the ad substantiated superiority in only certain areas.14

A recent comment by FTC's Stephen Nye also reflects the Commission's continuing favorable attitude towards comparative ads. Mr. Nye stated he was sympathetic to Tylenol's arguments of goodwill and investment, but that it was not fair to make the public pay twice -- this was in reference to Datril price comparative ads which forced Tylenol to drastically cut their price.15 He continued by stating that such circumstances are part of the free enterprise system, and it was a risk Johnson and Johnson took in marketing Tylenol.

Exactly how much comparative advertising the FTC would like to see has not been revealed, but apparently it is more than the current level of around 8 per cent. In the 1974-75 television season, 8.2 per cent of prime time commercials were comparatives, or 1,341 spots.16 In the fourth quarter of 1975, there were 8% comparative ads in prime time, or 750 spots. In terms of products advertised by comparison, automobiles


are the most popular, followed by personal products, soft drinks, and proprietary drugs.

Considerations for Usage

Several considerations should be made before usage of comparative ads. In this section, three general areas are presented -- general usage guides, possible results, and the legal environment.

General Usage Guides

A number of general usage guides can be found when reviewing the literature of comparative advertising. Most of these guides seem to be the result of a general observation, rather than scientific experiments.

One guideline is that the underdog wins in name-naming. It is reasoned that if the industry leader should use comparisons, then the underdog will benefit by the public giving greater credibility to claims previously made by the underdog, and through association, the underdog will be perceived as holding a higher competitive position in that industry. An example of an underdog using comparative advertising is Pepsi. In the Dallas area recently, Pepsi had only 8% of the market as compared to Coke's 28%. To rectify this, Pepsi developed a series of comparative ads in which Coke was named. However, in this case, Coke, the leader, decided to counter the "Pepsi challenge" with its own campaign of comparatives.

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17 "Underdog Advertiser Wins in 'Name-Naming:' BBDO," Advertising Age, 46 (March 10, 1975), p. 56.

A second guideline is to use comparisons only when a significant advantage exists. Tannenbaum says that there are too many comparative ads on television where not enough significant and demonstrable differences exist to merit the current usage level. He further points out that comparisons that are drastically inconsistent with consumer beliefs do risk loss of credibility.

A final general guideline that has been suggested is that comparatives should be used only where there is low brand loyalty in the product category. This last guideline has an obvious relationship with Tannenbaum's second point (given above) concerning credibility.

Possible Results

To the above general usage guidelines, one needs to include some of the results which comparative ad users have either claimed or have experienced.

On the positive side, several users have claimed increasing in — creases in market share. For example, Pepsi claims to have doubled their Dallas market share from a pre-challenge share of 8%. Shick has also claimed a doubling (8.3 to 16.4) of market share as a result of comparisons, even though Remington counterclaims that the increased industry-wide advertising expenditures have generally expanded the

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market rather than changed the market shares. Finally, Royal Doulton china claims to have increased their share six percentage points by comparisons with Lenox. Also of significance in the Doulton example is that several publications, including Seventeen, refused the ad when first approached in 1971, thus, giving additional evidence of the existence of the generally negative view of comparisons, as held by the advertising industry.

On the negative side, several aspects must also be considered. One aspect is price competition or even price wars. Earlier it was pointed out that Datril comparative ads caused Tylenol to cut their price drastically. In Dallas, the originating point of the Pepsi-Coke feud, the two soft drinks were substantially discounted as a result of comparative ads and caused smaller bottlers to be caught in the price war.

In addition to heavier price competition, another negative aspect is increased advertising competition. For example, Coke counterattacked Pepsi with not only ads which mimicked the Pepsi-Coke comparisons but used other ads which compared Fresca and Pepsi.

Other disadvantages and some advantages are revealed in the next chapter which deals with conclusions drawn from marketing studies concerned with using comparative advertising. However, before presenting

24 Ibid., p. 6.
a close examination of these studies, one additional area of usage consideration must be discussed -- the legal environment.

The Legal Environment

Due to the nature of comparative advertising, its legal limits are drawn from common law, state or federal statutes, and FTC standards.26 To discuss these legal limits, three main subdivisions are used: actions by competitors, consumer's right of action, and actions by the FTC.

**Actions by Competitors.** Two avenues are open to competitors who seek action in comparative advertising situations. Competitors can rely on tort law and state statutes or make claims under the federal Lanham Act.

**Tort Law and State Statutes.** Common law regarding defamation and disparagement can be used to provide relief in a comparative advertising situation. Defamation is said to occur when a communication tends to diminish the respect, goodwill, confidence, or esteem of the plaintiff. Disparagement is a deliberate, demonstrably false, attack on the plaintiff's product. In defamation, proof of malice is not necessary. But in disparagement cases, the plaintiff must show that a statement in the ad is false, or the existence of the intent to harm the plaintiff or to adversely affect his interest. Disparagement is usually the case in comparative advertising.

26 This section is based on the following: Stewart E. Sterk, "The Law of Comparative Advertising: How Much Worse Is 'Better' than 'Great'," *Columbia Law Review*, 76 (January, 1976), pp. 80-112.
In general, the courts have resisted using the disparagement law where one product claims to be better on a vaguely defined basis but have applied the law when a readily measurable basis exists.\(^{27}\) However, no action will be taken when the defendant accurately describes the plaintiff's product but exaggerates the merits of his own. Also, when disparagement relief is given, only damage relief is possible; no injunctive relief can be granted due to the First Amendment's protection to commercial advertising.

A second common law that can be used is the law of unfair competition. In one case, the court ruled that any disparagement case could also be presented under the unfair competition law and, therefore, no special damages needed to be proven.\(^{28}\) But, much confusion still exists as to when this law really applies. Therefore, it does not seem to provide a satisfactory solution to the problems posed by abusive comparisons.

A third common law that can be, but has not been, used much is for the tort of false advertising. To illustrate why this law has not been used much, in one case, the court held that there was no false advertising, since it was not established that the advertiser was "passing off" his goods as those of his competitor.\(^{29}\) Usually, where this law applies, so does the Lanham Act. Consequently, this provides a second reason for little use of the tort of false advertising common law.

\(^{27}\) Ibid., p. 84.
\(^{28}\) Ibid., p. 87
\(^{29}\) Ibid., p. 88.
The Uniform Deceptive Trade Practices Act which has been adopted by nearly a dozen states shows some promise as a means of obtaining relief from abusive comparatives. It grants relief in both cases of disparagement and misrepresentation of an advertiser's own goods. But, this Act also has its limits. First, only injunctive relief is possible, none for damages. However, the Act does permit relief for damages to be claimed under common law or other existing state laws. The other limit to this Act is that there seems little chance of its becoming standardized as the Uniform Commercial Code has.

Claims Under the Lanham Act. Originally passed in 1946 for preventing deceptive use of trademarks, the Lanham Act, and in particular, Section 43 (a), has more recently been applied to comparative advertising. In a recent case, the court listed five elements considered necessary to file a claim under Section 43 (a).

(1) in its comparison advertisements, (the) defendant made false statements of fact about its own product; (2) those advertisements actually deceived or have the tendency to deceive a substantial segment of their audience; (3) such deception is material, in that it is likely to influence the purchase decision; (4) (the) defendant caused its falsely advertised goods to enter interstate commerce; and (5) (the) plaintiff has been or is likely to be injured as a result of the foregoing either by direct diversion of sales from itself to (the) defendant, or by lessening of the goodwill which its products enjoy with the buying public.

Both damages and injunctive relief are available under this Act. To obtain an injunction, only a likelihood of deception is necessary.

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30 Ibid., p. 90.
31 Ibid., p. 93.
But, a claim to recover damage requires establishing that the public was deceived, and proof of either actual damages or at least the likelihood of injury to the plaintiff.

**Consumer's Right of Action.** Since in some cases, the consumer's and the competitor's interest may differ, the consumer should have the chance to vindicate his rights without relying on competitor suits. The consumer's right to action comes from both common law theories and federal statutes.

**Common Law Theories.** Relief for individuals is possible under the theory of misrepresentation. No proof of intent to deceive is necessary, but one must show proof of negligence and that the comparative ad was directed to the consuming public. In addition, the plaintiff must establish reliance on the representation and that the questioned representation was significant to justify reliance. In the comparison situation, reliance on a particular factor may be difficult to establish, particularly if it can be shown that the consumer would have bought the product without having seen the ad.

Relief may also be possible under common law's breach of warranty theory, if one can show there was a reliance upon the representation. However, having to prove reliance also greatly weakens use of this common law in comparative advertising cases.

Regardless of which of the two theories above are used by the individual, any relief that is granted probably will not be worth the
consumer's time or money spent in seeking the relief. Also, such relief will only be a minimal deterrent to a major advertiser.

Federal Statutes. Legally, action by individuals is possible under both the Lanham Act, Section 43 (a) and the Federal Trade Commission Act, Section 5, but the courts have balked at allowing consumer action under these two sections. 34

Therefore, it seems despite the consumer having the right to action, the current legal environment affords the consumer little means to exercise that right.

**Actions by the FTC.** Basically in abusive comparative advertising cases before the FTC, authority comes from Section 5 of the FTC Act which declares "unfair methods of competition in commerce, and unfair or deceptive acts or practices in or affecting commerce" as unlawful. 35

Comparative Price Advertising. This is the only area in comparative advertising in which the Commission has been able to define permissible limits in a precise manner. It has been done by defining such terms as "sale" versus "regular" price, and the "area's competitive price," and "comparable value." But, the real problem is in the variations in product features, other than price, which become part of a comparative ad. In addition, there are other considerations such as the intended use of the good by the purchaser, the exact needs of the purchaser, and other subjective factors which are viewed differently by each evaluator.


Quality Comparison Advertising. Puffery claims cause a great deal of difficulty, since the basis used for determining a product's superiority over another is not usually easy to establish. Thus, meeting any reasonably defined burden of proof may be impossible. Consequently, FTC policy concerning determinations of this type seems unlikely at this time.36

The next step an advertiser can take toward total misrepresentation is deception, but the problem here is in defining and, in particular, measuring degrees of deception or half truths. In trying to do this, several rulings have been made. For instance, an advertiser does not have to provide every finding made by an independent study group, but must not misrepresent the basic study-conclusions. Thus, Lorillard violated this concept when it stressed its Old Gold cigarettes as lowest in tars, nicotines, and resins, which was technically true, but the source of this fact was a Reader's Digest article stating that the differences found in these three smoking by-products for all cigarette brands was not significant.37

Half-truths have also been in the form of pictorial representations such as an American Home Products ad which showed its product as a 100 per cent effective roach killer as compared to a competing brand. However, the ad did not reveal that roaches of a known resistance to the active ingredient of the competitor's product were used in the comparison.38 The Commission found the ad as deceptive and issued a cease and

36 Ibid., p. 100.
37 Ibid., p. 101.
38 Ibid., p. 103.
desist order.

To further reduce half-truths, the FTC began in 1971, a policy of claim substantiation. The impact of this policy can not yet be measured, but it is felt that advertisers are not more reluctant to make claims that lack supporting evidence.

From the above it should be apparent that there are some unique problems for comparative advertising from a legal environmental perspective. In particular, the legal system needs to overhaul the current patchwork scheme of public and private enforcement of its somewhat vague standards.\textsuperscript{39} And, until this overhaul is performed, the problems and confusion will remain.

In addition, as one considers this chapter in general, it seems that further study needs to be performed before comparative advertising can be fully understood. In particular, one area needing additional investigation is the effectiveness or influence of comparisons. The following chapter presents an examination of marketing studies which have been performed and reported in the literature. Consequently, the following chapter provides some insight into the effectiveness and influence of comparative advertising.

\textsuperscript{39}Ibid., p. 112.
CHAPTER II

MARKETING STUDIES RELATED TO COMPARATIVE ADVERTISING

To date, five studies dealing with comparative advertising have been performed and reported in the literature. These five studies are examined in this chapter by using the following format: results, methodology, and other considerations.

Prasad's Experiment

Prasad conducted a laboratory analysis to determine the communication-effectiveness of comparative advertising as compared to its "Brand X" counterpart.¹

Results

Prasad's study resulted in four findings. First, unaided recall of advertised claims was greater in comparative ads than "Brand X" ads. That is, recall was better when a competitor was named instead of using terms such as "the leading brand" or "our leading competitor."

A second finding was that recall was not influenced by preference for the named competitor. But, the perceived credibility of claims was judged lower by consumers of the named competing brand. Thus, claim recall was not affected by preference for the named competing brand, but claim credibility was.

Finally, subjects did not perceive the competitive position of the comparative ad's sponsor as being higher than did subjects viewing the "Brand X" type of ads.

Therefore, from Prasad's study, the only advantage that seems to exist when using comparative ads, as compared to using "Brand X" ads, is that with comparative ads there is a significantly higher recall of the advertised claims.

Methodology

The methodology of the experiment was executed in four phases. In phase one, brand preferences were determined, particularly, preference for Kodak, since it was the named competitor used in the experiment's comparative ad.

In phase two, the subjects were divided into two groups with each subject being given a portfolio. The portfolio contained twelve pages: two articles, four filler ads, and a fifth ad designed especially for the purpose of the study. In one group, that ad was a comparative and in the other it was a "Brand X" ad. In both groups the ad was third in order of presentation.

Phase three consisted of administering a questionnaire to determine brand recall and the level of claim recall, which was scored according to how well the subject recalled the major and secondary claims. The questionnaire also required the subjects to rate the credibility of the advertised claims as well as the competitive position of the sponsoring brand.

Finally, analysis of variance was used to determine results 1, 2, and 4, and a Mann Whitney U test was used to show that perceived claim credibility was judged lower by consumers of the named competing brand.
Other Considerations

The general purpose of this section is to point out factors or influences which did or could have affected the validity and the reliability of the study's conclusions. Consequently, a similar section will follow each of the four studies that remain to be discussed. It should also be pointed out that the order in which these factors are presented is not intended in any way to be correlated with their importance or influence on the particular study under examination.

The first consideration to be made of Prasad's study deals with the subjects used. That is, all subjects were students in business administration at a mid-western university. Therefore, one should consider how representative the sample was before generalizations are developed.

The research design consisted of four groups -- exposed to the comparative ad or the "Brand X" ad, and Kodak most preferred or not most preferred. The number of students in each group ranged from 42 to 60.

A second consideration is the product used for testing -- a movie camera. It would seem college students would not have a high interest level in such a product and consequently, this low involvement could have had some effect on the results.

A third consideration is that the sponsoring brand for the two ads of interest was a name coined for the experiment. Thus, each ad represented the first exposure to the brand. The study concluded there was equal brand-recall effectiveness (about 40% correct recall) for the two ad types. This could have easily been the result of using an unknown brand for a low interest product, rather than there being little difference
in comparative ads and "Brand X" ads.

A final consideration is that the only real difference in the two ads under study was the naming of the leading competitor (Kodak) or the use of the phrase "the leading competitor." Therefore, very little difference existed in the ads. In terms of actual comparisons, only three subjective ones were used. -- "We took Kodak's great idea (the existing light camera), and added perfection to it," "... with great features to outperform Kodak's XL camera," and "Ronar outperforms and outfeatures Kodak." -- Obviously, the comparison involved the mere naming of a competitor and a few subjective product-superiority claims.

Wilson's Experiment

Wilson conducted an empirical evaluation of comparative ads which provided little or no factual information. 2

Results

The study concluded that consumers view comparative ads using subjective messages as less believable, of less information value, and more offensive. Wilson also noted random differences for the comparative ads' ability to change the consumer's view of the product, product quality rating, and trustworthiness of the sponsor. His general conclusion was that non-factual comparisons should be avoided and that they provide credence to the suggestion that comparative ads may further add to the negative image of advertising.

Methodology

Two groups were exposed to one of two portfolios containing eight ads. The ads were either all comparatives, or all single-product ads which had been modified by deleting the competitor's name or by using phrases such as "any other brand" or "other brands." Well-known brands were used, and the ad order was randomized.

After each ad, the subjects completed a page of seven-point scales. Subjects rated each ad on the basis of amount of information, believability, interest content of the ad, and offensiveness. The advertised product was rated on changed view towards the product and level of product quality. The sponsor was rated on trustworthiness. Thus, seven response variables were collected on each of the portfolio's eight ads.

The collected data were analyzed by using analysis of variance and a comparison of mean differences of the seven responses for each ad.

Other Considerations

Wilson admitted the study was conducted on a limited budget, in one geographical area, and used a small sample and number of ads.

In addition to the admittedly small samples of 35 and 40 subjects, the subjects were students enrolled in marketing classes at the University of Iowa. Therefore, the nature of the subjects must be considered when studying the results given above.

Another consideration is that Wilson collected ordinal scaling responses and assumed they were interval responses, which seems to be a common practice in marketing. In addition, he also assumed the
responses were independent even though he stated that they were all highly correlated. Factor analysis did not provide sufficient evidence as to which variables should have been eliminated, thus independence was assumed with a warning to exercise caution when interpreting the study's results.

A related consideration is that with this ordinal, highly correlated data, analysis of variance was used -- an obvious violation of the method's basic assumptions.

Still another consideration is the types of products used in the ads. Most of them were low interest products such as soap, cat food, deodorant, toothpaste and mouthwash. Two products that were used and probably had some product interest were credit cards and automobiles. With low product interest and little comparative information given, a general conclusion that comparatives are not advantageous is not any surprise.

Also of interest is the table presented with the study that shows the mean differences in the two ad types for each of the seven response variables to each of the eight ads. Of the fifty-six mean differences, seventeen were not in the expected direction, that is, the comparative ads were rated higher on the average seventeen out of fifty-six times. Eight of these seventeen responses were responses to ads for credit cards and automobiles. This seems to indicate that if some product interest exists, comparatives may be more effective. -- Note the eight responses are out of a total of fourteen responses for the two product categories.

Of further interest regarding this same table is that for five of eight products, comparative ads had higher mean responses for the
variable, changed view of the product. This result seems to counter the suggestion, not to use comparatives. This table also revealed that half the mean ratings for sponsor trustworthiness were greatest for the comparative ads. Similarly, product quality was rated higher for comparative ads in half of the product categories.

The above seems to suggest that possibly if other variables are considered, such as the amount of factual information, number of named competitors, product interest, and others, then comparisons may be more effective than single-product ads.

Finally, Wilson points out that the results were either product or ad specific. Perhaps this was the result of not enough variables being considered or controlled.

Golden's Experiment

Golden investigated the relative influence on purchase intentions of comparative and non-comparative ads in terms of the advertiser's competitive position, claim substantiation, and copy theme manipulation. 3

Results

From the investigation, Golden concluded that purchase influence ratings were not significantly different for comparative ads. But, copy theme was found to have a positive influence on purchase intention. Thus, in choosing an advertising strategy, this finding suggests that

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specific comparative themes should definitely be considered.

Golden also found a significant interaction between copy theme and competitive position of the sponsor. This interaction in turn was found to influence purchase intentions.

Therefore, the overall conclusion of the study was that only when copy theme is considered can comparatives be more effective than non-comparatives.

Methodology

Golden's first step in collecting data was brand loyalty determination. These results were then used to control for that variable.

Next, subjects were exposed to one of thirty-six ads. This was necessary in order to test for two ad types (comparative or not), three brand competitive levels (first, third, or new), two levels of claims substantiation (substantiated or not), and three copy themes (nature of these themes was not given).

After subjects were exposed to one of the ad types, a questionnaire was used to rate the likelihood of purchase and the importance of certain product attributes. The second rating was done to verify the saliency of the attributes used in the ad copy.

The data were then analyzed by use of analysis of covariance.

Other Considerations

As with the previous two experiments, college students were used as subjects. Though a sample size of 594 seems impressive when one considers that 36 ads or cells were used in the study, this yields an average of less than seventeen students being exposed to each specific ad type.
A second consideration would seem to be Golden's failure to describe the nature of the copy theme manipulations beyond a reference of one, two, or three. This seems particularly important since copy theme was shown to influence purchase intentions. Subsequent communication by the author with Golden, however, revealed that the copy themes used in the experiment were product specific. Therefore, copy theme manipulation represents a usage consideration more than a consideration to be made in accepting the results of this study.

Finally, a validation study was done to show that for a given copy theme, there were no effects due to using a comparative versus a standard ad. However, from the description given, the comparative ad in the validation study apparently contained very little comparison, as well as a very subjective one. It appears to have been little more than naming a competitor. Wilson's study, discussed above, showed comparatives which give little or no factual information are ineffective. Thus, it seems, the validation study should be questioned, particularly, since the comparatives in the main study appear to have contained a greater level of comparison.

The Ogilvy and Mather Experiment

This experiment was conducted to determine differences in the effects of 30-second television commercials that name competitors versus commercials not specifically identifying competitors.  

4The Effects of Comparative Television Advertising that Names Competing Brands (New York: Ogilvy and Mather Research, 1976).
Results

In this study three sets of ads were analyzed: all comparatives, all non-comparatives, and a mix of comparatives and non-comparatives.

From the analysis, seven major findings were made.

(1) The set of all comparatives created greater negative attitudes toward advertising in terms of believability and confusion.

(2) The comparatives did not create a higher awareness of the sponsored brands.

(3) The comparatives did generate greater sponsor misidentification with the named competitors benefiting.

(4) Despite its novelty, the only comparative (control) commercial in the non-comparative group did not increase brand awareness.

(5) The comparatives created more skepticism toward the commercials' claims and more miscommunication.

(6) In most cases, the comparative commercials were no more persuasive than the non-comparatives.

(7) When only one comparative was seen in a group of non-comparatives, it was found to be significantly more persuasive, in terms of change in past purchases versus post-purchase intentions. But, note that in result #4, this same ad did not significantly increase brand awareness.

Methodology

The experimental design was described as a pre-post copy test which included exposure to one of three sets of 30-second television commercials. The three sets of eight ads were comprised in the following manner: 7 comparatives and 1 non-comparative, 7 non-comparatives and 1 comparative; and the third group was a mixture of comparatives and non-comparatives, including a control ad of each type.

In each set the same brands were used with the only difference in the ads being whether other brands were mentioned or not. The items selected for the study were of high incidence, usually purchased by
females, had relatively short purchase cycles, and were low-ticket items. The items included three brands of one health and beauty aid, two brands of a drug product, and one brand of a second health and beauty aid product. In addition to these items, the control, comparative commercial was for a household product and the control, non-comparative was for a beverage.

Other Considerations

Since the report that presented the study only described the research design as a pre-post copy test and gave little detail of the actual methodology, very little can be pointed out as considerations to be made concerning the results. However, a few points can be made.

The sample consisted of three sets of 150 female heads of household. In the study to follow, it was found that men showed a greater positive response to comparatives than women. Thus, this consideration must be included. However, one also must note that the test products were products that are normally purchased by women.

A second consideration is that all the comparisons were 30-second television ads. But, as pointed out in the following study, can a forum as short as a 30-second commercial be adequate to fairly communicate a comparison? Even this study indirectly makes this point in its conclusion and further suggests that different effects may be found for other media, such as print.

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Related to the above is that the comparisons were apparently the mere naming of competitors. It was pointed out above, the only difference in the three sets of ads was whether the commercials named competing brands or not. Thus, it seems little information was given for the purpose of comparison.

Finally, the study used three brands of one health and beauty aid plus one brand of a second health and beauty aid. Consequently, half the ads in each set of eight ads were for health and beauty aids. With such similarity of products, plus only 30-second ads, plus the naming (and apparently only that information) of competitors, it is fairly easy to see why most of the study results were found, in particular, the misidentification of the ads' sponsors.

The Gallup and Robinson Study

The Gallup and Robinson study differs from the above studies in that they were experiments while this study was an analysis of brand contrasts which appeared on television over a two and one-half year period.

Results

From their analysis of 97 comparisons, Gallup and Robinson discovered a number of interesting results concerning usage of comparisons.6

First, correct sponsorship naming can be a problem and considerable attention can be given the named competitor. This also was found in the Ogilvy and Mather study. A second finding was that "brand

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6Ibid., pp. 1-19.
registration" differences were significant when audio and video comparisons were used versus audio only. This result seems reasonable since there would be a greater chance of a viewer perceiving a comparative ad which shows, at least, a competing brand, or even better, gives a visual demonstration of superiority over a competing brand, as compared to a mere mentioning of a competitor. It might also be noted that by using both the audio and video elements of a television commercial, a sponsor can usually provide more information that can be comprehended and retained than by audio only. Consequently, more informational comparisons are possible.

Another of the study's findings was that greater brand registration existed when two or more product attributes were compared. Greater registration also accompanied comparisons which compared two or more competitors. This correlates with the point made above concerning the use of both audio and video for comparisons. -- When more information is given, comparative ads seem to be more effective.

The study also found that when price was emphasized, brand registration was below normal while non-price emphasis had the highest registration.

Finally, the study found brand registration was significantly better for men than women.

Methodology

The study consisted of analyzing 97 comparisons on television from mid-1973 through 1975.

Recall was used to find quantitative and qualitative reactions to the comparisons. The exact nature of the qualitative variables
was not given, only that they had no significant influence on favorable buying attitude.

The study did control for commercial length, sex, time of day, and year of broadcast. The analysis evaluated each commercial against all other commercials used for the same brand, thus, brand was also controlled.

Other Considerations

Since the actual methodology was not given in detail, little can be done to suggest considerations to be made in using the study results. Therefore, it is necessary to assume that the results are valid. In general, this seems to be a reasonable assumption.

**Summarizing the Studies**

If one is willing temporarily to assume that the results found in the preceding five studies are valid, despite the shortcomings which have been discussed, then the figure on the following page can be used as a guide for comparative advertising usage.

In Figure 1, three basic communication factors are given: communicator, message, and response.\(^7\) Under each communication factor is listed various outcomes found in the preceding studies. Each of these separate outcomes was found to have certain influencing variables. These influencing variables are shown linked to the various outcomes by use of dotted lines. For example, in the Ogilvy and Mather experiment, a single comparative ad among non-comparative ads was found more persuasive than sets of all comparatives or all non-comparatives. This

\(^7\)A general discussion of communication factors is given in the next chapter.
Fig. 1

KNOWN RESULTS AND THEIR INFLUENCING FACTORS

Communicator

- Misidentification (4 & 5)
- Presence of other comparatives (4)

Message

- More claim recall (1)
- Less believable (2 & 4)
- Less information value (2)
- More offensive (2)
- Confusing (4)
- Little brand difference seen (5)
- Miscommunication (4)
- Low interest products (1, 2, & 4)
- Little given information (1, 2, 4, & 5)

Response

- More persuasive (4)
- Absence of other comparatives (4)
- Low claims credibility (1 & 4)
- Preference for named competitor (1)
- Purchase intention (3)
- Copy theme (3)
- Competitive level of sponsorship (3)
- Higher brand registration (5)
- Audio and video user (5)
- Sex (5)
- Non-price comparatives used (5)
- # of brands named (5)
- # of attributes given (5)

Note: Arrows indicate empirical linkages.

Numbers reference the corresponding studies and their findings:

(1) Prasad (2) Wilson (3) Golden (4) Ogilvy and Mather (5) Gallup and Robinson
result is shown in the upper right corner of the figure.

The purpose of Figure 1 is to help the reader to organize and summarize the findings of the studies above into a fairly simple conceptual scheme. However, the reader must be mindful of the fact that the figure was constructed under the assumption that all the study findings were valid.
CHAPTER III
STUDIES RELATED TO COMMUNICATION AND PERSUASION

The purpose of the two preceding chapters was to acquaint the reader with the existing comparative advertising literature. For this chapter, the purpose is to examine the results of studies which relate to the more general functions of communication and persuasion, and to suggest their implications for comparative advertising.

Definition of Communication

For this study, communication was defined as the process by which an individual (the communicator) transmits stimuli to modify the behavior of other individuals (the audience). ¹ From this definition, there are apparently at least three factors of communication: the communicator, the stimuli, and the audience.

Four Factors of Communication

In addition to the three apparent communication factors given above, Hovland, Janis, and Kelley also suggested three others: the response, the nature of the medium used, and the situation. This chapter basically considers the first four communication factors, while the next two chapters deal with the medium and the situation, although, some consideration of the medium is given in this chapter too.

The Communicator

The communicator can be perceived in a number of ways. For example, it may be perceived as an endorser who is cited in the message, or as the originating source of the communication. For this study, "communicator" referred to the perceived source of the communication.

Factors Influencing Credibility. The communicator is an important factor governing the effectiveness of a communication. A key characteristic of any effective communicator is credibility. Hovland, Janis, and Kelley proposed that at least three variables influence the credibility of a communicator: expertness, trustworthiness, and intentions.

In Aristotle's Rhetoric, he suggested that a listener's estimation of a speaker was based on the listener's perception of the speaker's intelligence, character, and goodwill or intentions.

More recently, Griffin listed five dimensions of interpersonal trust: (1) expertness relevant to the topic; (2) reliability, as an information source; (3) intentions of the speaker; (4) dynamism or aggressiveness of the speaker; and (5) personal attraction of the speaker. Griffin also said that various studies seem to support all five dimensions, as well as suggest a sixth dimension, the majority opinion of other listeners who are present during the communication.

\[\text{Ibid.}, \text{p. 19.}\]
\[\text{Ibid.}, \text{p. 13.}\]
\[\text{Ibid.}, \text{p. 107.}\]
Due to the similarity of the above conclusions, apparently a communicator's credibility is at least partially determined by expertness, trustworthiness, and intentions. But, one should also consider the speaker’s dynamism and personal attraction, plus the opinions of others present in the communicator's audience.

Though the communicator's credibility is important, one study has found that the level of ego involvement by the listener has a modifying effect on source credibility. That is, Johnson and Scileppi found that there was a greater change in attitudes when the audience had low ego involvement with the subject being communicated.⁶ They also found that in cases of high ego involvement, social pressure and the effects of a high source credibility were considerably reduced.⁷

In another study, credibility of the communicator was shown not to be the sole determinant of a communicator's effectiveness. Two experiments were conducted and supported the hypothesis that regardless of prestige, a source is more effective when it argues for a position opposed to its best interest than for one in its best interest.⁸ Therefore, in some cases, it was argued, a low prestige source could be more effective than one of high prestige.


⁷ Ibid., p. 36.

Implications. These results imply, in terms of comparative ads, that if such ads are to be effective, the source should try to project an image of expertness and trustworthiness. One method of doing this would be through providing more factual information when using comparative ads.

In addition, based on the findings of the last study discussed above, the information used in making a comparison might even include at least one product attribute which is somewhat deficient for the sponsoring brand. Since an advertising audience is well aware of the communicator's intention, a comparison which shows slightly less than perfection could be more effective than "a perfect product" ad.

A final suggestion from the above studies is that comparative ad usage should be preceded by some measurement of the audience's level of ego involvement. In Chapter I, one of the general usage guidelines was to use comparatives when brand loyalty was low. This guide complements this final suggestion. However, it should also be pointed out that in Chapter II was the implication that comparative ads are ineffective when low involvement products are used. Therefore, it appears that for comparatives to be effective, there must be some product involvement but little brand loyalty.

The Message

In the definition of communication, given earlier, it was stated that the communicator transmits stimuli to the audience. Encompassed in the term "stimuli" are many aspects of communication. "Stimuli" in this study were limited to include only what a communicator is attempting to present to the audience. Consequently, this section is concerned
with the message influence of a communication and ignores other possible stimuli, such as those relating to the source's personal appearance, which in themselves do communicate certain ideas.

**One- or Two-Sided Argument.** One message consideration is whether to present a one- or two-sided argument. Bauer and Buzzell have suggested using a one-sided argument when the audience is known to be in agreement with the communicator, otherwise, one should give both sides. They also suggested two sides be given to educated audiences since they know things are complicated and are likely to become suspicious if only one side is given.

In an experiment using varying educational levels of students, Faison found two-sided ads were more effective with high intelligence students, and for those students who preferred competing products. Four to six weeks after ad exposure, Faison found the two-sided ad group had a continuing increase in favorable attitudes toward the advertised product while the one-sided ad group showed diminishing effects.

Finally, Karp said that two-sided presentations can be more effective, but much depends on the audience's initial predisposition and subsequent exposure to counter-propaganda. Karp, however, admitted

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that counter-propaganda is best combatted by a two-sided presentation, since the audience will have already taken both sides into account and made a conclusion. Thus, the audience will have been inoculated against counter-propaganda, whenever it is later presented.

In summary, two-sided arguments are best for educated audiences, audiences which are known not to be fully in favor of the message to be communicated, and for inoculating audiences against counter-propaganda.

The relationship of this concept to comparative advertising is that comparatives can be considered as two-sided messages. Therefore, conditions for their use would be the same as those given above.

Other Message Considerations. Besides the presentation of one or two sides of an issue, other message considerations have been suggested by Hovland, Janis, and Kelley. For example, persons with high intelligence tend to be more influenced than those with low intelligence when exposed to persuasive messages which rely mostly on logical arguments. Those of low intelligence tend to be more influenced by messages which use unsupported generalities and illogical and irrelevant arguments.

The relationship of this to comparative advertising is that comparisons should rely primarily on logical arguments if they are to be directed to audiences of high intelligence. For audiences of low intelligence, the above suggests using comparatives which are based on subjective, illogical arguments. But in Wilson's experiment, discussed in the last chapter, it was found that comparatives using subjective, nonfactual comparisons were ineffective. In support of Wilson's finding,

in the preceding section it was pointed out that comparatives could be considered as two-sided messages which are generally not influential with those of low intelligence. Thus, the two message considerations given so far indicate that factual comparatives should be effective only with audiences of high intelligence.

Other message considerations were also proposed by Hovland, Janis, and Kelley, but because they apply more to developing advertising copy in general than specifically to comparative advertising, they are not presented here.

The Audience

A third factor of communication is the audience, the group to which the communicator has transmitted the message with the hope of modifying its behavior.

A number of audience considerations have been developed by researchers concerned with communication. However, these considerations apply more to advertising in general than to comparative advertising in particular. Therefore, only a brief examination of a few considerations is given.

Self-Esteem and Group Influence. Janis found that persons of low self-esteem seem to be easily persuaded. The reasoning is that people who lack a sense of adequacy may have a strong need for approval. Consequently, if they find themselves at odds with someone else, they will not rely on their own judgment because of their inability to handle the

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anticipated disapproval.

Related to the above, Hovland, Janis, and Kelley have suggested that the more highly a person is valued by others, the more tolerance will be shown their deviations from the group's norms, and thus the freer one will feel to accept communication contrary to those norms. 14

The combined effect of these two findings on comparative advertising appears to be that if someone is not highly valued by his peers, he will not be influenced by a comparative ad unless the group has been influenced. However, comparative ads can be effective with those individuals who have high self-esteem and with those individuals who are valued highly enough by their peers that variation from group norms is permitted, such as self-perceived opinion leaders.

Audience's Position. Hovland and Weiss found that the position or attitude of an audience as well as its evaluation of the communicator's trustworthiness significantly affect the audience's reaction to the fairness of a presentation and the justifiability of conclusions drawn in a presentation. 15 They found also that forgetting the name of the communicator was less rapid with those who agreed with an untrustworthy communicator than those who initially disagreed. Therefore, for comparatives, the prospect of being effective with those who would prefer the named competitor would be low. This suggestion is supported by Prasad's finding, in Chapter II, that the perceived credibility for

14Hovland, Janis, and Kelley, loc. cit., p. 150.

claims in a comparative was judged lower by consumers preferring the named competitor than by those lacking that preference.

Other audience influences should also be considered; however, the other major influences have either been presented in earlier sections of this chapter or are presented in the next section.

The Response

The final communication factor to be examined in this chapter is the response or the behavior taken by the audience as a result of receiving the message transmitted by the communicator, whether it is the modified behavior desired by the communicator or not.

Influencing Variables. In addition to a number of variables discussed earlier in this chapter, other variables influence the response of an audience to a communication message.

Involvement and Discrepancy. One influencing variable of fundamental importance to an audience's response is its involvement with the subject of the message. Involvement with a subject can be interpreted in two ways: (1) interest in or commitment to a particular position on an issue, or (2) a general level of interest in or a concern about an issue without reference to a specific position. In advertising terms, this would mean brand loyalty, or interest in the general product category but no definite brand loyalty exists.

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Doob found that the greater the involvement or the intensity of attitude to the message's content, the greater was the amount of recall of the communication by the audience. However, the per cent of correct message recalls was found not to be significant when a high intensity of attitude existed.

Freidman found when involvement was low, the more discrepant the message was, the greater the change was from the audience's initial position. When high involvement existed, the maximum change in the audience's initial position occurred when only a moderate amount of discrepancy existed.

In another study, the conclusion was that when an audience has little choice as to whether they are exposed to a communication, then the greater the discrepancy, the more the audience resists counter-arguments.

The implications of all this for comparative advertising correlate with some of the study results presented in the last chapter. For instance, Prasad used a product of probable low involvement for his subjects. For brand recall the comparative ad was no better than the "Brand X" ad, a result which reflects Doob's finding of recall being influenced by involvement -- in this case, low involvement. Prasad

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18 Freidman, loc. cit.

also found that the comparative ads' claim credibility was perceived lower by users of the named competitor's product. This agrees with the last finding, in that the consumers of the named competitor were obviously resisting an ad which contained a discrepancy and to which they were involuntarily exposed.

In relation to Freidman's findings, in the five comparative studies, most all of the products were low involvement but the discrepancies were less than moderate, therefore, little, if any, opinion change occurred. However, in Wilson's experiment, two products with some involvement were used and also, exhibited the greatest amount of "change in view towards the product." Thus, the "moderate" discrepancy with some involvement did yield a change in the audience's original position.

Therefore, the general implication would be that comparatives which contain some discrepancy from the audience's position can be effective if (1) the audience has some interest in the product but little brand loyalty, and (2) the audience voluntarily permits themselves to be exposed to the message.

Media Response. The medium used to communicate can influence the audience's response. With print media, communication is the result of a self-selection process, while communication by a medium like television is not so self-selecting. Consequently, when the probability of product purchase is low, the attention level accorded print ads is lower than similar ads on television.²⁰ However, when the probability

of product purchase is high, the print media permit their readers to spend more time with an ad than the broadcast media.

The implication for comparative ads is that the advertiser should present factual comparisons in printed media which will reach consumers who are about to make a purchasing decision.

Hierarchy of Effects. The above portion of this section dealing with response to a communication has discussed some general response variables. This section examines possible responses and some variables affecting these responses.

In 1961, Lavidge and Steiner developed a model of hierarchical effects that advertising could have on a consumer.\(^2\) The model which pictured the consumer as moving from a stage of perceiving an ad to the final step of purchasing the product is shown on the following page. As part of the model, Lavidge and Steiner included research methods for determining how effectively an ad had helped the consumer progress through each respective step.

Generally, this model has been widely accepted, however, some have attempted to show the model lacks validity.\(^2\) But, a recent article has suggested a basis for using the model.\(^2\) When the audience has a high

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Fig. 2

HIERARCHY OF EFFECTS MODEL

Movement

toward

Behavioral

dimension

Related research

Purchase

Conative -- the realm of motives

Split-run tests

Intention to buy

Conviction

Projective techniques

Preference

Affective -- the realm of emotions

Brand preference measures

Image measures

Projective techniques

Liking

Knowledge

Cognitive -- the realm of thoughts

Awareness surveys

Aided recall

Awareness

commitment for the advertised product and clear differences among the
alternatives exist, then the hierarchy of effects can be expected. But,
with low commitment products, this hierarchy should not be expected
since ads in this case may increase recall and purchase intentions but
have little effect on attitudes. Brand switching may also occur in
these cases, but without attitude changes, since there are no strongly
held beliefs.

Bogart indirectly made this same point when he discussed the dif­
ference in advertising usage for minor versus major purchases. For
minor purchases such as paper towels and tissues, he said advertising
serves to inject a brand into the consumer’s evoked set over the long
run.24 Advertising can also help to stress specific product advantages
or to inform the consumer of special offers and sales. For major pur­
chase situations, Bogart described the consumer as an information seeker
and more sensitive to advertising.

Thus, with minor purchase products, advertising may alert the
consumer to a special offer which could trigger a purchase, while ads
for high interest products would be sought by the consumer who is
actively seeking information as part of progressing through the hier­
archy of effects toward a later purchase.

The general implication of the hierarchy of effects model for
comparative advertising is that for those situations where the consumer
has some product involvement and is seeking information, then compara­
tive advertising may be very effective in helping the consumer progress

24 Leo Bogart, Strategy in Advertising (New York: Harcourt, Brace
through the hierarchy a little faster, however, this would be probable
more at the latter stages than at the earlier ones. For low involve­
ment products and where the audience is not actively seeking information
the hierarchy of effects model is less applicable, and comparative ads
should be avoided.

Many implications for comparative advertising have been presented
in this chapter. The general purpose of this has been to supplement
the literature review and the examination of studies given in the two
preceding chapters so that a basis for the study that follows could be
created.
In brief, the last two chapters have presented various communication factors and influencing variables for those factors, as well as their implications for comparative advertising. In this chapter, those communication factors and their influencing variables are incorporated into a general, persuasive communication model which provided the basis for establishing the objectives of this study and the hypotheses needed to achieve those objectives.1

The Communication Model

The basis used to develop this model was the research conducted by Hovland, Janis, and Kelley, footnoted on page 33. From their study, six factors of communication were suggested. Five of these factors were included in the model. The sixth, the situation in which the communication takes place, is considered later in the methodology section of this study.

The Communication Factors

The five communication factors which were included in the model are the communicator, the message, the medium, the audience, and the

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1 A model is the choice of a set of variables and a specification of their interrelationships designed to represent some real system or process in whole or in part. -- Philip Kotler, Marketing Management (Englewood Cliffs: Prentice-Hall, Inc., 1972), p. 335.
response. As shown in the model on the next page, communication begins with the communicator who develops a message which is then transmitted by some medium to the audience whose response then has some impact on the communicator. Thus, there is a circular flow of communication. However, this model is not intended to suggest that communication is a closed system, since the audience's "response" could be communication with someone other than the communicator. Therefore, because of the multitude of responses which could occur, and the intent of this study being the investigation of comparative advertising and not communication specifically, Figure 3 is intended to be a simplistic model. Also, "response" for this study was limited to include only responses such as whether a communication is remembered, its evaluation, and what future communication with the communicator is intended.

Influencing Variables

In addition to five communication factors being presented in Figure 3, various influencing variables are also presented. These variables are listed under the first four communication factors in the model: the communicator, message, medium, and audience. Under the fifth factor (response) are various possible communication responses that can be measured.

The influencing variables which are included in the model are the result of the literature review conducted for this study. Reasons for including each of the influencing variables are discussed later in this chapter where the study's hypotheses are presented. Other influencing variables were omitted from the model since they either lacked research support -- particularly by the Hovland study -- or they applied either
Fig. 3

THE COMMUNICATION MODEL

 Amount of information given
 1. # of brands named
 2. # of attributes
 3. Objective or subjective
 Less than a perfect product

Type-print

Demographics

Psychographics
 1. Price conscious
 2. Self-confident
 3. Information seeker
 4. Opinion leader

Product
 1. Interest level
 2. Nearness to purchase
 3. Brand preference
 4. Competitive position

View of advertising
 1. Trustworthiness
 2. Informativeness
 3. Usefulness

To the message
 1. Recall
    a. Brand
    b. Claims
 2. Perception ratings
    a. Informative
    b. Believable
    c. Offensive
    d. Interesting
    e. Useful

To the brand
 1. Perceived quality
 2. Would consider buying
 3. Would buy
 4. Perceived trustworthiness of the sponsor
 5. Competitive level
to advertising or communication in general rather than explicitly to comparative advertising.

The responses which are included in the model are all the responses measured in the five, previously discussed comparative advertising studies except three. These three were excluded either because they required a different methodology or because similar, or complementary responses were included in the study. (For example, Ogilvy and Mather had subjects rate how confusing ads were, while in this study subjects rated how informative and useful ads were.) In addition, the responses were limited in this study to those given in the model since they were also representative of those suggested by Lavidge and Steiner for measuring advertising effectiveness at all response levels in their hierarchy of effects model (page 45). Consequently, the communication model which served as the basis for this comparative advertising study can be graphically depicted as in Figure 3.

As is indicated by the model, when comparing two communication situations which differ only with respect to one of the influencing variables, some difference in response is expected. The degree of difference in response, however, depends on the degree of variation in the influencing variable for which the two communication situations differ and the status of the other influencing variables. For example, an audience having a low product interest should not be expected to exhibit a significantly different response to a comparative ad naming only one competitor versus a similar ad naming two competitors.

The Study's Objectives

As stated in the introduction, page one, the general purpose of this study was to investigate the use of making comparisons in
To do this, the following objectives were developed.

1. To investigate whether comparative ads are more informative, believable, interesting, useful and less offensive than non-comparative ads.

2. To investigate whether the quality of the advertised product and its competitive level is perceived to be higher; whether considerations to purchase the sponsored product in the future are greater; and whether the perceived trustworthiness of the sponsor is higher with comparative ads than with non-comparative ads.

3. To investigate the relative effectiveness of comparative ads for audiences categorized on the following bases:
   (a) Demographics: particularly, level of education.
   (b) Psychographics: price consciousness, self-confidence, information seeking, and opinion leadership.
   (c) Product: interest level, nearness to purchase, brand preference, and brand competitive position.
   (d) General view of advertising: trustworthiness, informativeness, and usefulness.

It should be pointed out that for this study, only comparative ads which would provide much factual information, such as a Consumer Reports study results table, and which would appear in some form of print media were considered. The above conditions were not expected to occur with the use of just any comparative ad. This, in fact, was established by the studies discussed in Chapter II.

The Study's Hypotheses

In order to achieve the above study objectives, a number of hypotheses were developed. These hypotheses were tested, while holding

2 The type of advertising which makes comparisons and is to be included in this study has been defined on pages one and two of this study.
the influencing variables associated with the communicator, message, and medium (in Figure 3) constant.

The hypotheses tested in this study were as follows.

H1. Recall of the sponsored brand in a comparative ad is greater than in a non-comparative ad.

H2. Recall of the advertised claims in a comparative ad is greater than in a non-comparative ad.

These two results were hypothesized for two reasons. First, comparisons are still a "novelty" to consumers. And, secondly, in Prasad's study, discussed in Chapter II, it was found that claims recall, but not brand recall, was better when a competitor's name was mentioned. Possibly if the brand name had not been newly coined and more factual data had been presented, then brand recall would have been significantly better also. Consequently, for these reasons, it was hypothesized that comparative ads make a greater impression on their audience.

It was also the intent of the study to show what the status was of the audience's influencing variables, given in Figure 3, in order for the above hypotheses to be true. Thus, the following sub-level hypothesis was developed. Actually, the hypothesis below represents a number of hypotheses but for the sake of convenience has been written in a condensed form.

H1-2a. Recall of a comparative ad is positively related with level of education; self-confidence;

3 Recall in this study referred to recall immediately following exposure to a portfolio of ads.
information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; sponsor-brand preference; and brand competitive position. It is negatively related to price consciousness.

Support for the above hypothesis can be found in the literature reviewed in the last two chapters. In Chapter III, for example it was pointed out that comparative ads could be interpreted as a form of two-sided argumentation and that such argumentation was more effective with educated audiences. Also, in that chapter was the implication that audiences having some self-confidence and opinion leadership would tend to seek information more and be less dominated by their peers -- a requirement for almost any ad to be effective. A final source of support from Chapter III is the discussion related to a communicator's credibility. In general, it was stated that credibility was at least partially influenced by the audience's perception of the communicator's expertness, intentions, and trustworthiness -- thus, the audience's perceived trustworthiness, informativeness, and usefulness of advertising in general and its perception of the sponsor's competitive position were included in this hypothesis.

Partial support for the above hypothesis can also be found in Chapter II, where a major criticism of most of the studies discussed in that chapter was the use of low involvement products or an unknown brand. In the few cases where some involvement did exist, the comparative ad measures were usually positive. Therefore, some measure of involvement had to be considered -- product interest, brand preference, and nearness to purchase were used in this study.
Finally, in that chapter, but related to the audience's psychographics discussed above, was the finding by Gallup and Robinson that brand registration for comparative ads was greatest when a non-price emphasis was used. Thus, a measure of price consciousness was included in the study.

Consequently, for the reasons given, the above sub-level hypothesis was included.

H1-2b. Recall of a non-comparative ad is positively related with level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; sponsor-brand preference; and brand competitive position. It is negatively related to price consciousness.

The above sub-level hypothesis was included so it could be determined if the correlations hypothesized in H1-2a were unique to comparative advertising or had a stronger (weaker) relationship with non-comparative advertising. Also note that like H1-2a, this hypothesis and the remaining ones below have been written in a condensed form for the sake of convenience.

H3. Comparative ads are perceived as more informative; believable; interesting; useful; and less offensive than non-comparatives.

In Wilson's evaluation of comparative ads which provided little or no factual information, he found them to be less believable, less informative, and more offensive. However, in this study more informative ads were to be used, plus the influence of product involvement was considered -- thus, suggesting the necessity of including H3 in
As with the first two hypotheses, a sub-level hypothesis had to be included here also. Support for this hypothesis was the same as that for H1-2a.

**H3a.** Perceived informativeness, believability, interest, usefulness, and inoffensiveness for comparative ads are positively related with level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; sponsor-brand preference; and brand competitive position. They are negatively related to price consciousness.

The same reasoning for H1-2b suggested the inclusion of a second sub-level hypothesis for H3.

**H3b.** Perceived informativeness, believability, interest usefulness, and inoffensiveness for non-comparative ads are positively related with level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; sponsor-brand preference; and brand competitive position. They are negatively related to price consciousness.

While H1, H2, and H3 deal with responses to the message, as delineated in the model on page 50, H4, given below, deals with responses to the brand and the sponsor.

**H4.** With comparative ads quality of the advertised product and its competitive position are perceived to be higher; future purchase considerations for the sponsored product are greater; and the perceived trustworthiness of the sponsor is higher, than with non-comparative ads.
Partial support for this hypothesis (H4) can be found in Wilson's study. For both product quality and sponsor trustworthiness, half of the ratings in that study favored use of comparative ads. Prasad's results related to product competitive ratings, however, counter that part of the above hypothesis. Nevertheless, despite the lack of concrete support, when the existing results are qualified, such as Wilson's use of low information ads and Prasad's use of a new and unknown brand, the above hypothesis seems reasonable. In terms of purchase intentions, Ogilvy and Mather found comparatives significantly more effective — thus, fully supporting that portion of the above hypothesis.

Like the previous hypotheses, the following sub-level hypothesis exists for the same reasons listed above with H1-2a.

H4a. Perceived product quality, competitive position, and sponsor trustworthiness, as well as purchase intentions for comparative ads, are positively related with level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; and sponsor-brand preference. They are negatively related to price consciousness. Perceived product quality, sponsor trustworthiness, and purchase intentions are also positively related with brand competitive position.

Using the same reasoning for H1-2b and H3b, the following sub-level hypothesis was included under H4 also.

H4b. Perceived product quality, competitive level, and sponsor trustworthiness, as well as purchase intentions for non-comparative ads, are positively related with level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to
purchase; and sponsor-brand preference. They are negatively related to price consciousness. Perceived product quality, sponsor trustworthiness, and purchase intentions are also positively related with brand competitive position.

The methodology used in testing the above hypotheses is given in the chapter that follows.
CHAPTER V

THE STUDY: SCOPE AND METHODOLOGY

The purpose of the previous chapter was to describe the objectives and hypotheses of this study. In this chapter the scope and methodology are given.

The Scope of the Study

The conceptual scope of the study has been delineated by the study's objectives, which appear on page 52. To achieve these objectives a model was constructed. The methodology used to test that model is presented below.

In applying the methodology, the following considerations existed: sampling was limited to Baton Rouge, Louisiana, and only nationally branded products were used. These considerations were not limitations and were not perceived as having had a negative effect on the study's results as discussed below.

A probability sample of the Baton Rouge population was used in the study. In view of the fact that Baton Rouge has often been chosen as a test market by many of the nation's leading marketers, a study based on a probability sample of Baton Rouge residents should provide findings which permit some generalizing beyond that study's participants. Additional support for this suggestion is implied by the other consideration, that is, only nationally branded products were used. With the absence of local brands, any existing local brand biases were removed.
from the study's results.

Thus, these two considerations did not hinder but aided in giving the study implications greater generality. A more detailed discussion concerning the generalizations of the study's results is presented later.

The Methodology of the Study

The remainder of this chapter describes the methodology of the study. To accomplish this task, four subsections are included: the experimental design, methods of analysis, the sampling procedure, and the reliability and validity of the study.

The Experimental Design

The experimental design of this study could be categorized as a three-phase, posttest-only control group portfolio design or more simply as a posttest-only control group.\(^1\) Despite the descriptive nature of such titles, a more detailed discussion of the experimental design must be given. To do this, each phase of the design is examined separately.

Phase I. In phase one, data for most of the audience classification variables were collected. The classification variables included demographics, psychographics, and three aspects of each subject's perception of advertising in general. However, the demographic data were not collected until phase three since respondents sometimes resent providing such data and refuse to continue cooperating with the experiment.

Due to the potential effect phase two (exposure to a portfolio of ads) could have had on a subject's response to questions regarding their perception of advertising in general, and due to the length of the questionnaire, data collection was done in the first and third phases. From phase one the only hint that respondents had regarding the nature of the experiment was that it involved advertising. But, this should not have had any greater effect on their perception of the portfolio ads than the instructions which preceded these ads. Therefore, the study was a posttest-only control design. -- A copy of the questionnaire can be found in the Appendix.

Psychographics. As shown in the model on page 50, four audience psychographic constructs were of interest in the study. To establish a respondent's position for each of the selected psychographic constructs, each subject was required to respond to two statements. For example, for price consciousness the two statements were "I shop a lot for specials" and "I usually watch ads for sales." The response to each of these statements was in the form of a seven-point ordinal rating in which only polar anchors were given, as shown below.

<table>
<thead>
<tr>
<th>Very much like me</th>
<th>Not very much like me</th>
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<td>5</td>
<td>6</td>
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<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Seven-point ratings were also used to determine a respondent's position on the other three psychographic constructs and to collect other data in the study. Seven-point ratings were selected in order to offer the respondents some degree of choice but not such a wide continuum that their responses would lose reliability.  

View of Advertising. The final step of phase one was the determination of the respondent's general view of advertising. This was accomplished by each subject responding to a seven-point rating for trustworthiness, plus a seven-point rating for informativeness, and a third such rating for the usefulness of advertising in general.

Upon completion of these ratings, the second phase of the experiment commenced.

**Phase II.** Phase two began with the respondents being instructed to view a set of ads as they normally would if they were looking at a magazine or newspaper. Respondents were instructed to look at all ads in the portfolio. (Interviewers were also instructed to see that respondents did view all the ads.) They then examined a portfolio of four randomly ordered ads. Four ads were used since a smaller number would have caused greater attention to be given each ad while more than four would not have permitted sufficient attention to be given in order to supply reliable responses about these ads in phase three.

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The respondents were given a fixed time limit of five minutes to view the ads. After that time had expired, the subjects were instructed not to look at the ads for the remainder of the experiment -- in fact, the portfolios were returned to the interviewers before phase three began.

Unknown to the respondents, two basic types of portfolios were in use. Both had ads for four different product categories and three of their four ads were identical. The fourth ad for one group of subjects was a comparative ad, as defined on page two, while the fourth ad for the other group was a non-comparative ad for the same brand. The only difference between the comparative and non-comparative ads was that three competitors were named in the former while "Brands X, Y, and Z" were given in the latter. -- Copies of the test ads used in the study are included in the Appendix.

Since one of the main variables in this study was product interest, three sets of comparative ads were used -- one for each of three different durable product categories. Thus, three control and three treatment groups were included in the study.

As just mentioned above, three product categories were used in the study to insure that varying levels of product interest would be included. Selection of the product categories was based on the results of a small convenience survey (N = 25) which required subjects to register their interest level in viewing ads for a number of different product categories. From these ratings, the three product categories were determined: dishwashers, electric hair stylers, and microwave ovens. -- On seven-point scales, each of these product categories had a median of 6 for the likelihood of such an ad being viewed.
In addition to an ad for one of the above product categories, an aspirin ad, a cigarette ad, and a deodorant ad were included in each portfolio.

Upon completing their examination of the portfolio, the respondents entered phase three of the experimental design.

**Phase III.** Phase three involved the collection of post-exposure data. Only responses related to the paired comparative and non-comparative ads plus one of the filler ads were collected. The responses to one of the three filler ads (aspirin) were collected so that they could be combined with the pre-exposure classification data in order to determine the degree of similarity between the respective treatment and control groups. Moreover, one would expect both the treatment and the control groups to have similar responses to all parts of the questionnaire except those which reflect the treatment effect.

**Recall.** The first set of data collected in phase three represented each subject's ability to recall the sponsoring brand and the claims made in each of the two ads. For the respondents, the ads in question were referenced by their product category, thus, it was an aided-recall procedure.

Brand recall was scored as either correct or incorrect, according to the brand name supplied by the respondent. Claim recall was scored using the same procedure as used by Prasad:

1 -- correct major claim and at least one correct secondary claim given
2 -- correct major claim and incorrect or no secondary claims given
3 -- incorrect or no major claim given but at least one correct secondary claim given
Other Data Collected. In addition to recalling the brand name and claims made, the following data were collected for the two ads. In collecting this data, the ads were referenced by their product category and not by identifying their true sponsor.

For each general product category, subjects rated on a seven-point basis their product interest level, nearness to purchase, and degree of preference for four brands within the general product category. In addition, the subjects were asked to categorize the competitive position of these four brands on the basis of sales. The four possible categories available to the respondents were (1) top 25%, (2) second 25%, (3) third 25%, and (4) bottom 25%. The sponsoring test brand was one of the four brands named for each product category.

For the two ads, the subjects gave seven-point ratings for the informativeness, believability, offensiveness, interest, and usefulness of these ads.

For the two sponsoring brands, the respondents gave a seven-point rating for perceived product quality, willingness to consider buying, willingness to buy, and the sponsor's trustworthiness.

A final set of data collected consisted of seven-point ratings for two of the psychographic constructs, plus the trustworthiness of the sponsor for the aspirin ad, and whether or not the respondents would consider buying the sponsoring brand of the treatment (or control) ad. The reason for requiring these four ratings is discussed in the "reliability and validity of the study" section given below. In addition to these four ratings, the final set of data also included the demographic
classification variables. The collected demographics included age, marital status, education, occupation, and income. Except for age and occupation, these data were collected by categories. Age and occupation were collected by open-ended responses. The actual number of years of education was also recorded.

Methods of Analysis

As mentioned above, three product categories were used for data collection. The methods of analysis to be discussed below were performed while controlling for these product categories. Differences in the results for the three categories are discussed in the following chapter.

Group Comparisons. The first step in the data analysis was to determine whether the treatment and control groups were similar. The basis for determining similarity was the group's demographics, psychographics, perception of advertising in general, and the given responses to the aspirin ad.

Since the responses to most of the demographic and recall questions were in terms of categories, such as level of education or correct-incorrect, a chi-square test was used to determine whether group similarity existed.

For those responses in the form of a seven-point rating, Kolmogorov-Smirnov was used in testing whether or not they differed significantly from one another. Use of this nonparametric test permitted avoiding the assumption that seven-point scales yield interval data. Siegel states

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that when compared to the "t" test, the Kolmogorov-Smirnov test has a power-efficiency of slightly less than 96 per cent for large samples. That is, when the assumptions and requirements underlying the proper use of the "t" test are met, the Kolmogorov-Smirnov test is around 96 per cent as efficient as the "t" test in rejecting the null hypothesis. However, if the assumptions and requirements of the "t" test are not met, then Kolmogorov-Smirnov is the more powerful test. To increase the power-efficiency of this nonparametric test, one needs to increase the sample size only slightly. Thus, with the use of a large sample (as indicated below), and the avoidance of making a possibly incorrect assumption, the Kolmogorov-Smirnov test was used and it had the equivalent power of rejecting the null hypothesis as the "t" test which would have required the interval data assumption.

After determining the degree of group similarity, each of the hypotheses given in the previous chapter were tested as indicated below.

**H1 and H2.** As mentioned above, the responses to the recall questions were nominal in nature, consequently, a chi-square test of independence was used. Specifically, the null hypotheses stated that recall (of either the brand name or ad claims) was independent of the comparative nature of an ad. Rejection of these hypotheses would have meant that recall did depend on whether the ad was comparative or not.

**H1-2a and H1-2b.** To test whether recall was related with the various audience classification or influencing variables stated in these hypotheses (given on pages 53-55), contingency coefficients were computed. Since the recall responses were nominal scalars and the other
responses could be categorized into groups, chi-square values were computed. These values were then used to compute contingency coefficients which reflected the relationships between recall and the other variables mentioned in these hypotheses. To determine the significance of a contingency coefficient, one merely determines the significance of the chi-square value used in computing the contingency coefficient.

Differences in the contingency coefficients for H1-2a and H1-2b were analyzed to determine which of the relationships (given in H1-2a) were unique to comparative advertising.

H3 and H4. To test these two hypotheses (given on pages 55 and 56), a Kolmogorov-Smirnov test was used to determine whether those variables in the form of seven-point ratings differ significantly for the comparative groups while a chi-square test was used to determine if competitive position ratings were dependent on whether an ad was comparative or non-comparative. Support for using the Kolmogorov-Smirnov test is the same as given above for using that test in determining whether the control and treatment groups were similar. The chi-square test was required for the competitive position variable's test since its responses were nominal rather than ordinal.

An example of how these hypotheses were operationalized is the null hypothesis which stated that the respondents of the comparative ad group evaluated the informativeness of the treatment ad the same as those of the non-comparative ad (control) group. Rejection of such an hypothesis implies that comparative ads are perceived as more informative -- since one-tail tests were used.
H3a and H4a. These two hypotheses (given on pages 56 and 57) also involved seven-point ratings and were concerned with whether the ad ratings were related to the audience influencing variables. For example, one operational null hypothesis was that the correlation coefficient between perceived informativeness and level of education was less than or equal to zero. To test this, a Spearman rank correlation coefficient was computed and tested for significance. If it was found to be positive and significant, then the results would imply that the above relationship did not exist. — Spearman rank correlation coefficients were computed for these hypotheses to avoid the interval assumption discussed above. Siegel reports this coefficient to have a power-efficiency of .91 as compared to the Pearson correlation coefficient which requires not only the interval assumption but that the population has a bivariate normal distribution as well. 5

Similarly, other correlation coefficients were computed and tested for significance, except when testing the relationship between the sponsoring brand's competitive position and the other variables mentioned in the hypotheses. Since the competitive position was collected as a categorizing of several brands on the basis of sales, chi-square values were computed, their levels of significance determined, and contingency coefficients calculated. The resulting coefficients were then used to reflect the relationships that existed between a brand's competitive position and the other variables.

5 Ibid., p. 213.
In addition to the above computations, for the audience classification variables (given in the latter part of these two hypotheses) either Spearman correlation coefficients or contingency coefficients were determined for each pairing of these variables regardless of product category -- on the full sample. This was done to give additional insight into the relationship each variable had with the model given on page 50, as well as to determine surrogates which could possibly be eliminated to simplify that model.

H3b and H4b. These two hypotheses (on pages 56 and 57) were tested in the same manner as their two counterparts above. The differences in these two hypotheses and the two above were analyzed to determine which of the relationships stated in the two above hypotheses were unique to comparative advertising.

Before any of the above methods of analysis could be performed, the data obviously had to be collected. Consequently, the next section deals with the sampling procedure.

Sample Size and Procedure

To collect the data, student interviewers were used on a door-to-door basis. The interviewers, like the respondents, were unaware of the true nature of the experiment until after all the data had been collected. This was done to avoid introducing interviewer bias into the results. In addition, the interviewers received some training to insure that proper data collection procedures were followed.

Interviewers were instructed to collect responses only from females who were the lady of the house. This was done in order to control for sex and to collect responses from persons who were representative of the
market for which the ads in this study would normally be intended.

**Sampling Criteria.** In addition to the above, to insure that the representative market was sampled, the respondents were chosen by using selected census tracts. These census tracts were chosen on the basis of three variables: education, income, and age. To be included in the sample, a census tract had to have (1) a per cent of high school graduates which equalled or exceeded the Baton Rouge average (58%); (2) a mean income level which equalled or exceeded the Baton Rouge average ($10,907); (3) a per cent of families below poverty income levels which did not exceed the Baton Rouge average (14%); and (4) a per cent of females over 65 which did not exceed the Baton Rouge average (8.9%) – 1970 census data.

The number of respondents chosen in each tract was determined by the proportion of that tract's population to the overall Baton Rouge population. (A chart showing how each tract rated on the four above criteria can be found in the Appendix.) Within each tract, census blocks were chosen by use of a random numbers table. In addition, a number between one and four was obtained at the same time and was used to determine the position of the first house to be interviewed on each block. After that interview, every fourth house was included in the survey. (Instructions for the interviewers can be found in the Appendix.)

For purposes of control, a follow-up telephone interview with at least one respondent per interviewer was conducted.

A minimum sample size of 120 for each product category tested was determined (as discussed below) on the basis of the statistical methods used for analysis. The 120 subjects were to be randomly divided to place 60 in a control group and 60 in a treatment group.
Sample Size Determination. In determining the sample size, two approaches were used. In the first approach, the maximum number of cells to be included in any chi-square test was determined to be eight. With the chi-square test, a minimum of 5 items per cell is required for no less than 80 per cent of all the cells, therefore, a sample size of 120 would give an average of 15 items per cell -- over three times the minimum number needed. Thus, the designated sample size was expected to permit meeting the chi-square minimum-frequency-per-cell requirement.

The second approach to determining sample size was statistically more precise but yielded similar results. This approach involved determining the required sample size for using a "t" test which would give a power of .95, such that if the difference in two sample means was greater than 1, the null hypothesis that those two means were equal would be rejected, otherwise, it would be accepted with .95 degrees of confidence. To use this approach, the standard deviation and sample size for the control and treatment groups were assumed to be equal. Since the sample size could easily be increased to insure sample size equality, and since random sampling should yield two equal groups, then when a null hypothesis was correct (when comparatives were not effective), these two assumptions would be realistic. Finally, given an assumed standard error for the difference in two group means of 1.5, the required sample size for both the control and treatment groups was 58. Since the Kolomogorov-Smirnov test has a power-efficiency of around .96, increasing the sample size to 60 yielded a level of power equivalent to that of a "t" test using 58. Thus, a total of 120 met the requirements of this second approach.
Since three product categories were used in the study, a minimum of 360 subjects existed. However, to guarantee that a minimum of 360 usable subjects would exist, a sample of over 400 was sought. The final number of usable questionnaires was 419. Approximately half were comparative and half were non-comparative. Approximately one-third of the 419 were questionnaires for each of the three product categories. The actual sample size for each group is given in the Appendix.

Reliability and Validity of the Study

A final consideration to be made as part of any study's methodology is the reliability and validity of that study.

Reliability. Reliability is concerned with the consistency or stability of test results over groups of individuals or over the same individual at different times. To estimate the reliability of this study, each subject was required to respond to four sets of two seven-point ratings per set. These ratings represented two forms of reliability estimation: (1) the use of similar but not identical (psychographic) statements and (2) the use of identical statements (for sponsor trustworthiness of the aspirin ad, and the willingness to consider buying the sponsoring brand of the treatment-control ad). The two responses to each of these four sets were (Spearman) correlated to determine their degree of consistency. The resulting correlations are discussed in the next chapter.

Knowing the level of reliability is also important because it places a limit or upper bound on the amount of validity of a study.

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Even when reliability is perfect; there is no guarantee of validity. Thus, reliability is a necessary but is not a sufficient condition for validity. Consequently, to assess the validity of this study other factors must be considered.

Validity. Before evaluating the validity of the study, a brief discussion of validity must be given, including its influencing factors. In general, validity means that a study's data must be unbiased and relevant to the characteristic being studied. When assessing the validity of an experimental design, Campbell and Stanley emphasize two types of validity -- internal and external. Internal validity is concerned with whether or not the particular treatment did in fact actually bring about the effect detected by some measuring device. External validity is concerned with knowing to which populations, settings, treatment variables, and measurement variables the experimental effects can be generalized.

Campbell and Stanley listed eight classes of extraneous variables that determine whether or not an experimental design is to have internal validity. The eight extraneous variable classes are history, maturation, testing, instrumentation, statistical regression, selection, experimental mortality, and selection-maturation. Factors affecting external validity include interaction of testing and the treatment,

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7 Nunnally, loc. cit., p. 172.
9 Campbell and Stanley, loc. cit., p. 5.
10 See Campbell and Stanley for a more detailed discussion of these variables.
interaction of selection and the treatment, reactive effects of the experimental setting, and interference resulting from previous treatments.11

In order for a design to have both types of validity, all the factors mentioned above must be controlled. The extent to which they are controlled depends on the exact design of the experiment. The experimental design for this study was a posttest-only control group design. For such a design, Campbell and Stanley perceive all eight classes of extraneous variables as being controlled, consequently, internal validity exists for this design.

Of the four factors affecting the design's external validity, Campbell and Stanley consider only three as relevant. Of those three, they perceive the interaction of testing and the treatment as controlled but indicate that the interaction of selection and the treatment, plus the effects of the experimental setting are possible sources of concern. Since in this study a large sample was used, the first source of concern should not be considered significant for those groups which were shown to be similar, or at least not as significant as the second source. The major limitation to generalizing the results of this study seems to be the effects of the data being collected in an experimental setting. However, since no other study of this nature has been conducted to examine comparative advertising, many replication studies would have to follow before any meaningful generalizations could be established.

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11 Ibid., pp. 5-6.
A basis for establishing such generalizations can be found in the following chapter which analyzes the results of this study's experimental design.
CHAPTER VI
ANALYSIS OF THE RESULTS

The objective of this chapter is to provide an analysis of the data which were collected and analyzed in accordance with the procedures described in the previous chapter. To achieve this objective, the chapter examines the following: the reliability of the data, group comparisons, and the statistical test results of the study's hypotheses.

Reliability of the Data

As discussed in the methodology chapter, four sets of reliability test statements were used in the study. Since an ordinal data assumption was made, reliability was determined by computing a Spearman correlation coefficient for each of the four sets of reliability statements. To do this, the responses to each of the statements were separately ranked for all respondents, then the rankings for each respondent were paired so a correlation coefficient for each of the four reliability sets could be determined.

Two of the four sets of statements dealt with price consciousness and self-confidence. For these two psychographic constructs, reliability was tested by using similar but not identical statements. A test statement for each of these two constructs appeared on the first and the last pages of the questionnaire. The resulting Spearman correlation coefficients for these two constructs were .75 (N = 418) and .66 (N = 416), respectively, and had a level of significance of .0001.
The other two sets of reliability test statements employed the use of identical statements which appeared in different parts of the questionnaire. One set required the respondents to rate the trustworthiness of the aspirin ad's sponsor while the other required the respondents to rate their willingness to consider buying the product which appeared in the other ad they had rated. The respondents first encountered each of these test statements while rating the two ads. Their second exposure occurred while they were completing the last page of the questionnaire. Because the aspirin ad was common to all groups and the last page of each questionnaire was common to all the questionnaires, these two reliability statements appeared on the last page as follows:

How trustworthy is the sponsor for the aspirin ad?
not trustworthy 1 2 3 4 5 6 7 very trustworthy

For the other ad you have also rated, would you consider buying the sponsor's brand?
would not consider buying 1 2 3 4 5 6 7 would consider buying

Since the second statement did not specifically state the product category (dishwashers, hair stylers, or microwave ovens), there appears to have been some confusion in the response to this question. The Spearman correlation coefficient was only .48 (N = 410) versus .68 (N = 408) for the trustworthiness rating of the aspirin ad's sponsor. The level of significance for both of these correlation coefficients was .0001.
Because these coefficients were below the traditionally accepted levels of .8 or .9, those subjects giving paired responses which differed by more than two (levels) were removed from the sample. The reliability coefficients then increased to within the traditionally acceptable range, however, the data analysis produced the same pattern of results as when the full sample was used. Consequently, the results that follow are those determined when the full sample was used.

**Group Comparisons**

The design of the questionnaire was such that approximately forty variables existed for making group comparisons. These variables included four demographics, eight psychographic statements (see Figure 4), three perceptual ratings of advertising in general, plus all the responses to the aspirin ad. Given these variables, comparisons were made between the comparative and the non-comparative ad groups for each of the three product categories.

Figure 5 shows the dissimilarities of each group by product category and their significance level. All the outcomes reported in Figure 5 are the result of Kolmogorov-Smirnov tests except those shown for the last two variables listed because their responses were nominal in nature and required chi-square tests.

**Dishwasher Group Comparisons**

Of the three product categories, the two groups within this category had the greatest similarity. Dissimilarity was found, however, (see Figure 5 for levels of significance which range for this product from .20 to .10) in that the comparative group (1) had had more bad experiences with the use of aspirins and certain brands of aspirins;
Fig. 4

PSYCHOGRAPHIC MEASURES USED IN THE STUDY

Price Consciousness #1:
I shop a lot for "specials."

Price Consciousness #2:
I usually watch ads for sales.

Self-Confidence #1:
I have more self-confidence than most people.

Self-Confidence #2:
I think I have a lot of personal ability.

Opinion Leadership #1:
My friends often come to me for advice.

Opinion Leadership #2:
I sometimes influence why my friends buy.

Information Seeking #1:
I often seek advice of friends regarding which brand to buy.

Information Seeking #2:
I spend a lot of time talking with friends about products and brands.
Fig. 5

SIGNIFICANT DIFFERENCES FOUND IN TESTING THE EQUIVALENCE OF THE COMPARATIVE AND NON-COMPARATIVE GROUPS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dishwasher</th>
<th>Hair Styler</th>
<th>Microwave Oven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Consciousness #1</td>
<td>C (.05)</td>
<td>N (.20)</td>
<td></td>
</tr>
<tr>
<td>Price Consciousness #2</td>
<td>C (.05)</td>
<td>N (.10)</td>
<td></td>
</tr>
<tr>
<td>Opinion Leader #2</td>
<td></td>
<td></td>
<td>N (.20)</td>
</tr>
<tr>
<td>Information Seeking #1</td>
<td>C (.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Seeking #2</td>
<td>C (.02)</td>
<td>N (.02)</td>
<td></td>
</tr>
<tr>
<td>Advertising Informativeness</td>
<td></td>
<td></td>
<td>N (.01)</td>
</tr>
<tr>
<td>Advertising Usefulness</td>
<td>C (.20)</td>
<td></td>
<td>N (.02)</td>
</tr>
<tr>
<td>Advertising Trustworthiness</td>
<td>C (.20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest of Aspirin Ad</td>
<td>C (.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usefulness of Aspirin Ad</td>
<td>C (.20)</td>
<td>C (.10)</td>
<td></td>
</tr>
<tr>
<td>Bad Experience with Aspirins</td>
<td>N (.10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad Experience - Aspirin Brands</td>
<td>N (.10)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Table Entry Format X (W)

X = C - Less characteristic or lower ratings for the comparative ad group on that variable

= N - Less characteristic or lower ratings for the non-comparative ad group on that variable

W = Level of significance (if blank -- not significant at .20 or less)
(2) this group rated the aspirin ad less useful; and (3) they also rated advertising in general as being less useful.

Hair Styler Group Comparisons

The two groups within this category differed significantly on a number of bases. (See Figure 5 for levels of significance which range from .20 to .02 for this product category.) In particular, the comparative group rated themselves lower on price consciousness, information seeking, trust in advertising in general, and the usefulness and interest of the aspirin ad. The two groups did not significantly differ on the remaining variables given above.

Microwave Oven Group Comparisons

Similar to the hair styler product category, the two groups in this category also differed significantly on a number of variables. (See Figure 5 for levels of significance which range from .20 to .01 for this product category.) The dissimilarities in this product category followed a similar pattern to the hair styler group. Except in this category, the non-comparative group versus the comparative group in the hair styler category rated themselves lower on price consciousness, information seeking, usefulness and informativeness of advertising in general, and on opinion leadership. Similarly, the two groups in this product category did not significantly differ on the remaining variables mentioned above.

The reason for the great dissimilarity within the last two product categories is unknown. As mentioned in the previous chapter, each interviewer collected data from randomly selected census blocks and from randomly selected houses within the selected census blocks. In
addition, each interviewer was given a set of seven questionnaires, of which six were unique. That is, from each census block, data on each of the six different portfolios (3 product categories X 2 types of ads -- comparative or non-comparative) were collected. Thus, it would seem that by chance alone, the above group dissimilarities occurred.

Since the two groups for two of the product categories were significantly different on a number of bases, their results should be considered with caution. One's first impression might be to ignore the results of these two product categories completely. But, since the two groups within each product category differed on the basis of a set of common variables, the results for these two product categories were examined in order to gain some insight into the possible relationships existing between this set of variables and the groups' responses to the different sets of portfolios.

The Study's Hypotheses

Having discussed the reliability of the data and the degree of group similarity, the remainder of this chapter is concerned with the test results of the study's hypotheses. These will be discussed by product as stated in the methodology chapter.

H1 Recall of the sponsored brand in a comparative ad is greater than in a non-comparative ad.

For all three product categories, brand recall was extremely high for both the comparative and non-comparative groups. In fact, the percent of respondents not recalling the correct brand ranged from only 4 to 9 per cent for all six groups. Consequently, with such high recall, when a chi-square value was computed for each of the three product
categories, the above hypothesis was rejected. One explanation for the high brand recall is that the study included only existing nationally-known brands versus brand names coined just for the experiment. This was done so the respondents could concentrate on the ads rather than simply trying to learn the names of the sponsor.

H2. Recall of the advertised claims in a comparative ad is greater than in a non-comparative ad.

For each product category, a chi-square test was performed. It was determined that there was no significant difference in the amount of claim recall for the two types of ads. The per cent of totally incorrect claims given by the respondents ranged from 24% for the dishwasher category to 48% for the microwave oven category. As shown in Figure 6, within each product category, the number of incorrect recalls were evenly split between the comparative and non-comparative groups. The difference in the recall patterns between the first two product categories and the microwave oven category was interest-specific. That is, when those respondents who incorrectly recalled that ad were eliminated, a significant increase in product interest and nearness to purchase existed as compared to the original microwave oven group. Therefore, the high, incorrect claim recall reflected a greater polarity of interest for this product versus the other two products -- which did not show significant differences in product interest when respondents associated with incorrect claims for those two ads were removed from the sample.

H1-2a Recall of a comparative (H1-2b -- a non-comparative) and ad is positively related with level of education;
H1-2b. self-confidence; information seeking; opinion
### Dishwashers

<table>
<thead>
<tr>
<th>Ad Type</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparative</td>
<td>21.6</td>
<td>8.6</td>
<td>7.9</td>
<td>10.8</td>
<td>48.9</td>
</tr>
<tr>
<td>Non-Comparative</td>
<td>17.3</td>
<td>8.6</td>
<td>12.2</td>
<td>13.0</td>
<td>51.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38.9</td>
<td>17.2</td>
<td>20.1</td>
<td>23.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\[\text{chi-square} = 2.16 \quad \text{df} = 3 \quad \text{p} = .54\]

### Hair Stylers

<table>
<thead>
<tr>
<th>Ad Type</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparative</td>
<td>22.8</td>
<td>2.9</td>
<td>8.8</td>
<td>14.7</td>
<td>49.3</td>
</tr>
<tr>
<td>Non-Comparative</td>
<td>19.1</td>
<td>7.4</td>
<td>9.6</td>
<td>14.7</td>
<td>50.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>41.9</td>
<td>10.3</td>
<td>18.4</td>
<td>29.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\[\text{chi-square} = 3.02 \quad \text{df} = 3 \quad \text{p} = .39\]

### Microwave Ovens

<table>
<thead>
<tr>
<th>Ad Type</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparative</td>
<td>3.5</td>
<td>1.4</td>
<td>20.1</td>
<td>25.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Non-Comparative</td>
<td>2.8</td>
<td>2.8</td>
<td>21.5</td>
<td>22.9</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6.3</td>
<td>4.2</td>
<td>41.6</td>
<td>47.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\[\text{chi-square} = .98 \quad \text{df} = 3 \quad \text{p} = .81\]

**Notes:** Cell entries are cell frequencies expressed as a per cent of the overall total.

Claim recall was coded in accordance with the four category schemes given on pages 64 and 65.
leadership; perceived trustworthiness, informativeness; and usefulness of advertising; product interest; nearness to purchase; sponsor-brand preference; and brand competitive position. It is negatively related to price consciousness.

(For convenience, these two hypotheses have been condensed and are discussed together.)

Using contingency coefficients, no significant relationships were found between brand recall and the variables mentioned in the hypotheses above. This finding occurred as a result of the (previously mentioned) high recall of the sponsor's brand in all six ad groups rather than as a result of a lack of any relationships existing with the above variables. Because no significant relationships for brand recall were found at .30 or less, a table will not be presented.

Based on contingency coefficients, recall of the advertised claims was found to have significant relationships with some of the above variables (as shown in Figure 7). In particular, for the hair styler category, the comparative group showed a higher and more significant relationship between their general view of advertising's trustworthiness and claim recall than did the non-comparative group. For the microwave oven category, the comparative group had a greater positive relationship between their claim recall and both their interest in the product category as well as their nearness to purchase than did the non-comparative group. This same group also showed a significant, negative relationship between claim recall and price consciousness while no such relationship was found for the non-comparative group.

For the other variables mentioned in the above hypotheses, no significant relationships were found in the hair styler or microwave
Fig. 7

CORRELATIONS WITH ADVERTISING CLAIM RECALL

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dishwasher</th>
<th>Hair Styler</th>
<th>Microwave Oven</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>N</td>
<td>C</td>
</tr>
<tr>
<td>Advertising Trustworthiness</td>
<td>.53(.01)</td>
<td>.44(.05)</td>
<td></td>
</tr>
<tr>
<td>Product Interest</td>
<td></td>
<td></td>
<td>.47(.02)</td>
</tr>
<tr>
<td>Nearness to Purchase</td>
<td></td>
<td></td>
<td>.50(.01)</td>
</tr>
<tr>
<td>Price Consciousness #1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price Consciousness #2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Table Entry Format Y(W)

Y = Contingency coefficient

W = Level of significance (if blank -- not significant at .20 or less)
oven categories. For the dishwasher category, no relationships were found at all that had a level of significance of less than .1. Thus, H1-2a and H1-2b were rejected except as shown in Figure 7.

In H1-2a and H1-2b above, recall was hypothesized as being related to a number of variables which were labeled in a previous chapter as audience influencing variables or classification variables. Though these variables were not highly correlated with recall (brand or claims), they were also hypothesized (H3a, H3b, H4a, and H4b) as being correlated with a reader's perception of an ad. Before their relationship with various ad perceptions is examined below, one should consider the relationships that exist within this set of variables.

Figure 8 gives the relationships which existed between the audience influencing variables (for the full sample -- not by product category) and which were significant at less than the .10 level. The relationships shown in Figure 8 were all determined by computing Spearman correlation coefficients except the three relationships associated with competitive position which were determined by computing contingency coefficients. It should be noted that no strong relationships existed between most of the variables. Correlations of .5 or more existed only for the following pairs: general view of advertising's informativeness and trustworthiness, general view of advertising's trustworthiness and usefulness, general view of advertising's informativeness and usefulness, the two price consciousness measures, the two self-confidence measures, and general product interest and nearness to purchase.

One additional reason for examining Figure 8 is to determine which variables serve as surrogates which might be eliminated from the general
Fig. 8

CORRELATIONS BETWEEN THE AUDIENCE INFLUENCING VARIABLES

<table>
<thead>
<tr>
<th>Variables</th>
<th>Education</th>
<th>Self-Confidence #1</th>
<th>Self-Confidence #2</th>
<th>Information Seeking #1</th>
<th>Information Seeking #2</th>
<th>Opinion Leadership #1</th>
<th>Opinion Leadership #2</th>
<th>Price Consciousness #1</th>
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Notes: To find the correlation between two variables, locate the one first appearing at the left, move horizontally to the diagonal and down to the row corresponding to the second variable. For example, the correlation of Price Consciousness #2 and Advertising Usefulness is .15.

Level of significance = .10 or less. (All entries are Spearman coefficients except contingency coefficients for competitive position.)
communication model given on page 50. It appears that only one measure for price consciousness, one measure for self-confidence, one measure of product interest, and one perceptual measure of advertising need to be retained. This suggestion is partially supported by the relationships reported above (Figure 7) between four of these variables and claim recall for the microwave oven category.

H3. Comparative ads are perceived as more informative; believable; interesting; useful; and less offensive than non-comparatives.

And:

H4. With comparative ads quality of the advertised product and its competitive position are perceived to be higher; future purchase considerations for the sponsored product are greater; and the perceived trustworthiness of the sponsor is higher, than with non-comparative ads.

The results of testing H3 and H4 clearly show the influence of the group dissimilarities which existed within the three product categories. For example, Figure 5 shows the comparative group in the hair styler category as significantly: less price conscious, less information seeking, and perceiving advertising as less trustworthy (alpha was only .20), as compared to their counterparts. In the microwave oven category, the non-comparative group was significantly less price conscious, less information seeking, and perceived advertising as significantly less informative and less useful than did their counterparts. Consequently, these differences seem to have influenced the results for H3 and H4, as shown in Figure 9. All the outcomes in Figure 9 are the result of Kolmogorov-Smirnov tests except those for "competitive position" which had nominal responses, thus requiring chi-square tests to be used.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Dishwasher</th>
<th>Hair Styler</th>
<th>Microwave Oven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informative</td>
<td>N(.20)</td>
<td></td>
<td>N(.20)</td>
</tr>
<tr>
<td>Believable</td>
<td>C(.10)</td>
<td></td>
<td>N(.20)</td>
</tr>
<tr>
<td>Interesting</td>
<td>C(.10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Useful</td>
<td>C(.30)</td>
<td></td>
<td>N(.20)</td>
</tr>
<tr>
<td>Offensive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Quality</td>
<td>N(.30)</td>
<td></td>
<td>N(.01)</td>
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<tr>
<td>Would Consider Buying</td>
<td></td>
<td></td>
<td>N(.01)</td>
</tr>
<tr>
<td>Sponsor Trustworthiness</td>
<td></td>
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<td>N(.01)</td>
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<tr>
<td>Would Buy</td>
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<td>N(.01)</td>
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<tr>
<td>Competitive Position</td>
<td>N(.30)</td>
<td></td>
<td>N(.10)</td>
</tr>
</tbody>
</table>

Note: Table Entry Format X(W)

- X = C - Comparative group significantly lower
- = N - Non-comparative group significantly lower
- W = Level of significance (Levels up to .30 are given to show direction; if blank, not significant at .30 or less.)
In Figure 9, the comparative (microwave oven) group rated their ad significantly higher (p at most .10) on four of the ten bases given in H3 and H4, while the non-comparative (hair styler) group rated their ad significantly higher (p at most .10) on two of the ten bases. Thus, it seems that the general form of the ads used in the study was more effective with audiences who were price conscious, information seekers and who view advertising more favorably.

The above conclusion, however, must be qualified by additional information which is descriptive of these two groups' counterparts. For the hair styler category, one reason for the non-comparative group's ratings being higher appears to be that the non-comparative group was significantly more interested (alpha = .20) in the product, and closer to making a purchase (alpha = .30) than was the comparative group. For the microwave oven category, the comparative group was significantly more interested (alpha = .10), closer to making a purchase (alpha = .20), and preferred the sponsor's brand more (alpha = .05) than did the non-comparative group. Therefore, it would seem that product interest, nearness to purchase, and brand preference must be considered in addition to price consciousness, information seeking, and perceptions of advertising in general.

For dishwashers (the only product category with two fairly similar groups), as shown in Figure 9, only the ad's informativeness, product quality, and the brand's competitiveness were found to be significant (at alpha = .20, .30, and .30, respectively). Though it appears that the effectiveness of comparative ads is somewhat questionable, if one examines the distributions of the ratings for the dishwasher ads, one finds that the comparative ad received higher ratings for more
of the ad perception measures than did the non-comparative ad.

In Wilson's study, a table of differences in mean ratings was presented to show the ineffectiveness of non-informative comparative ads. If Wilson had not assumed the use of interval rating scales, his mean-difference table would have been a frequency-difference table, such as Figure 10. To construct this table, the difference between the cumulative distributions for the comparative and the non-comparative groups was calculated at each of the one to seven rating levels for each variable listed on the left of Figure 10. The maximum difference was then determined and its direction reported in Figure 10 by product category.

In Figure 10, one can see that for the dishwasher category, the non-comparative group dominates the lower end of the rating scale for eight of the ten ratings. Therefore, even though in the traditional sense no significant differences existed at the .10 level (or less) and thus H3 and H4 had to be rejected, the trend was favorable for the comparative ad. For the other two product categories, their results (in Figures 9 and 10) can only be considered in view of the group differences discussed above.

H3a Perceived informativeness, believability, and

H3b interest, usefulness, and inoffensiveness for comparative (H3b -- non-comparative) ads are positively related with level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; sponsor-brand preference; and brand competitive position. They are negatively related to price consciousness.
Fig. 10

FREQUENCY DIFFERENCES FOR AD RATINGS OF THE COMPARATIVE AND NON-COMPARATIVE GROUPS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dishwasher</th>
<th>Hair Styler</th>
<th>Microwave Oven</th>
</tr>
</thead>
<tbody>
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<td>N*</td>
</tr>
<tr>
<td>Believable</td>
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<td>C*</td>
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</tr>
<tr>
<td>Interesting</td>
<td>N</td>
<td>C*</td>
<td>N</td>
</tr>
<tr>
<td>Useful</td>
<td>N</td>
<td>C*</td>
<td>N*</td>
</tr>
<tr>
<td>Offensive</td>
<td>C</td>
<td>N</td>
<td>C</td>
</tr>
<tr>
<td>Product Quality</td>
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<td>N</td>
<td>N*</td>
</tr>
<tr>
<td>Would Consider Buying</td>
<td>N</td>
<td>C</td>
<td>N</td>
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<tr>
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<td>C</td>
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<td>Competitive Position</td>
<td>N*</td>
<td>N</td>
<td>N*</td>
</tr>
</tbody>
</table>

Note: Table Entry Format X

X = C - Comparative group gave lower scale ratings
    = N - Non-comparative group gave lower scale ratings

* Level of significance given in Figure 9
And:

H4a  Perceived product quality, competitive position, and sponsor trustworthiness, as well as purchase intentions for comparative (H4b -- non-comparative) ads, are positively related with level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; and sponsor-brand preference. They are negatively related to price consciousness. Perceived product quality, sponsor trustworthiness, and purchase intentions are also positively related with brand competitive position.

(For convenience these hypotheses have been condensed and will be discussed together.)

The results of statistical tests for H3a, H3b, H4a, and H4b are given in Figures 11 (dishwashers), 12 (hair stylers), and 13 (microwave ovens). Given in these three figures are Spearman correlation and contingency coefficients with levels of significance of less than .10.

In general, most of the relationships hypothesized above with regard to education and the psychographic constructs appear to be either insignificant or significant on a random basis, and in many cases, negative relationships exist rather than positive ones as hypothesized.

In Figure 8, education is shown as having a negative correlation with the three measured perceptions of advertising used in the study. Consequently, it appears that this negative view of advertising carried over to the ads used in the study, particularly for the dishwasher ads. For information seeking, almost all the relationships are negative rather than positive as hypothesized. A possible explanation for this is that the two statements used to measure this characteristic generally
### Fig. 11

**CORRELATIONS BETWEEN AD RESPONSES AND AUDIENCE INFLUENCING VARIABLES FOR DISHWASHERS**

<table>
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<th>Offensive</th>
<th>Quality</th>
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<th>Trustworthy</th>
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**Note:** Significant correlations for the comparative group are in the upper position of the intersection for each pair of variables in the table while significant correlations for the non-comparative group are in the lower position. The level of significance for each is .10 or less.
**Fig. 12**

**CORRELATIONS BETWEEN AD RESPONSES AND AUDIENCE INFLUENCING VARIABLES FOR HAIR STYLERS**

<table>
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<th>Variables</th>
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<th>Useful</th>
<th>Offensive</th>
<th>Quality</th>
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<th>Would Buy</th>
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</table>

**Note:** Significant correlations for the comparative group are in the upper position of the intersection for each pair of variables in the table while significant correlations for the non-comparative group are in the lower position. The level of significance for each is .10 or less.
**Fig. 13**

**CORRELATIONS BETWEEN AD RESPONSE AND AUDIENCE INFLUENCING VARIABLES FOR MICROWAVE OVENS**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Informative</th>
<th>Believable</th>
<th>Interesting</th>
<th>Useful</th>
<th>Offensive</th>
<th>Quality</th>
<th>Would Consider</th>
<th>Trustworthy</th>
<th>Would Buy</th>
<th>Competitive Position</th>
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<td>Nearness to Purchase</td>
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<tr>
<td>Sponsor Preference</td>
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<td>.47</td>
<td>.39</td>
<td>.55</td>
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</tbody>
</table>

**Note:** Significant correlations for the comparative group are in the upper position of the intersection for each pair of variables in the table while significant correlations for the non-comparative group are in the lower position. The level of significance for each is .10 or less.
stressed personal sources of information rather than non-personal sources. Thus, for those consumers who do not depend heavily on personal sources of information, the correlations would be negative, while positive for consumers who seek personal sources but do not have strong, negative attitudes toward non-personal sources of information.

In comparing the information seeking levels for each of the six groups, the non-comparative hair styler group significantly rated higher than the other five groups. For this group, Figure 12 reveals a predominance of positive correlations, though few in number. Figure 13 presents all four negative correlations for the non-comparative microwave group which was significantly less information seeking compared to its comparative counterpart.

If the interpretation is correct that the information seeking statements did tend to stress personal source dependence and that negative correlations reflect a relationship between low personal source dependence and higher ad ratings, then Figure 11 presents an interesting finding. In Figure 11, nine negative correlations exist for the comparative ad group and none for the non-comparative group. This indicates that in a product category where no difference in information seeking existed, the more consistently the comparative ad group rated their ad higher, the less they indicated dependence on personal informational sources, than did the non-comparative group. Thus, the finding shows greater effectiveness of comparative ads versus non-comparative ads for consumers who do not seek personal sources of information. If the above interpretation is incorrect, then that part of the hypothesis must be rejected.
For self-confidence, opinion leadership, and price consciousness, the significant relationships do not appear to be consistent enough to accept that portion of the above hypotheses.

In examining Figures 11, 12, and 13, nearly all the remaining variables have significant, positive relationships with the variables listed (in H3 and H4) across the top of each figure. It should be noted that, particularly in Figure 11 (dishwashers), the higher relationship between each set of paired variables generally is associated with the comparative ad group, thus showing that a stronger relationship exists between the comparative ad responses (H3 and H4) and the following variables: trustworthiness, informativeness, and usefulness of advertising in general; general product interest; nearness to purchase; preference for the sponsor; and brand competitive position.

The one exception to this finding is that these variables have no significant relationship with the variable ad "offensiveness." This result is not surprising since 70% of the respondents rated the six test ads either a "6" or "7" for "not very offensive." The exact reason for this ranking pattern is not known. Several interviewers did report a number of respondents found this particular rating confusing. Thus, the resulting zero relationship to the offensiveness variable appears to be due to the presence of confusion or simply none of the six test ads were thought to be offensive. One consideration that must be made in view of this finding is that the concept of offensiveness can be viewed as meaning unpleasant or in bad taste as well as insulting. The intent of the measure was to determine whether the ads were considered as being insulting and not as being in bad taste. Apparently, the ads were rated on the latter basis.
To summarize the results for H3a, H3b, H4a, and H4b for the dish-
washer category, the correlations for education and the psychographic
constructs were predominately negative or insignificant, thus that part
of the hypotheses must be rejected. For the remaining variables,
positive and higher correlations existed between the audience influencing
variables and the ad perception responses, except offensiveness, for the
comparative ads, thus permitting the acceptance of that part of the
hypotheses. Since the other two product categories had dissimilar
groups, certain relationships existing for these two product categories
have been discussed, but their results in terms of differences in
relationships existing for comparative versus non-comparative ads were
not considered in accepting or rejecting the above hypotheses.

Having learned which variables were significantly related to the
ad response variables (in H3 and H4), it seems appropriate to examine
differences in these variables for the three groups which rated their
ads higher than their counterparts. Figure 14 shows the direction and
the magnitude of the significance of the differences in the dishwasher
comparative group versus the microwave oven comparative group, and the
microwave oven comparative group versus the hair styler non-comparative
group. To determine these differences, Kolmogorov-Smirnov tests were
used except in determining differences for "competitive position" which
required that chi-square tests be used. For the first pairing, four
significant differences existed which helped to explain the difference
in the outcomes of these two groups as shown in Figure 9. Note in
Figure 9, over two times as many hypotheses were supported for the
microwave oven group as for the dishwasher group. For the other pairing,
no significant differences existed in the groups but as shown in Figure
Fig. 14

COMPARISON OF THE THREE HIGHER AD RATING GROUPS
ON SIX CLASSIFICATION VARIABLES

<table>
<thead>
<tr>
<th>Variable</th>
<th>DC Vs. OC</th>
<th>OC Vs. HN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising Trustworthiness</td>
<td>OC (.10)</td>
<td>HN</td>
</tr>
<tr>
<td>Advertising Informativeness</td>
<td>OC (.05)</td>
<td>OC</td>
</tr>
<tr>
<td>Advertising Usefulness</td>
<td>OC (.01)</td>
<td>OC</td>
</tr>
<tr>
<td>Product Interest</td>
<td>OC</td>
<td>HN</td>
</tr>
<tr>
<td>Nearness to Purchase</td>
<td>OC (.30)</td>
<td>HN</td>
</tr>
<tr>
<td>Sponsor Preference</td>
<td>OC (.01)</td>
<td>OC</td>
</tr>
<tr>
<td>Competitive Position</td>
<td>OC</td>
<td>HN</td>
</tr>
</tbody>
</table>

Note: Table Entry Format U (W)

U = DC - Dishwasher comparative group rated higher
   = HN - Hair styler non-comparative group rated higher
   = OC - Microwave oven comparative group rated higher

W = Level of significance (if blank -- not significant at .30 or less)
9, two times as many hypotheses were found significant for the comparative (microwave oven) group as for the non-comparative (hair styler) group.

Thus, it would seem that this finding suggests that comparative ads are more effective when the variables listed in Figure 14 are in effect.

Using the results of the data analysis presented in this chapter, the following chapter will complete the reporting of this study by providing a general summary and the conclusions of this study's investigation.
Chapter VII
SUMMARY AND CONCLUSIONS

The general purpose of this study was to investigate the effectiveness of making comparisons in advertising. With this stated, general purpose, the study encompassed a literature review which included news-type articles, five comparative advertising studies, and a number of general communication research projects.

Model Development and Formulation of Hypotheses

Based on knowledge gained from the literature review, a communication model was developed. Encompassed in this model were five factors of communication: the communicator, message, media, audience, and response. Under the first four factors, a number of influencing variables, such as product interest and brand preference, were listed, while under the fifth factor a number of measurable responses were listed, such as brand and claim recall, ad informativeness, and future purchase intentions.

Using this model, the study's hypotheses were formulated. In general, the hypotheses were of two types: (1) with comparative ads, recall is greater; perceived ad informativeness, believability, interest, usefulness, and inoffensiveness are higher; plus perceived product quality, competitive position, future purchase considerations, and sponsor trustworthiness are higher, than with non-comparative ads; and (2) the comparative ad responses — given in (1) — are positively
related to classification variables which include level of education; self-confidence; information seeking; opinion leadership; perceived trustworthiness, informativeness, and usefulness of advertising; product interest; nearness to purchase; and brand preference. And, they are negatively related to price consciousness.

The Methodology of the Study

To test these hypotheses, a posttest-only control group methodology was developed. Interviews were conducted on a door-to-door basis to randomly selected households.

The Questionnaire

Each interview consisted of a self-administered, three-part questionnaire. In the first part, respondents rated themselves on eight psychographic measures and their perceptions of advertising on three bases. (See Figure 15.) The second part consisted of respondents viewing one of six portfolios used in the study. (See Figure 16.) These six sets of ads each contained four ads -- an aspirin, cigarette, and deodorant ad were common to all six sets. The fourth ad in each set was either a comparative or a non-comparative ad for either a dishwasher, hair styler, or microwave oven. (Three product categories were included in the study to insure that various levels of product interest existed. The basis for selecting the three products was a small convenience survey.) The only difference between the comparative and non-comparative ads was that in the former, three competing brands were named while in the latter "Brands X, Y, and Z" were named. After viewing the ad portfolio, part three of the questionnaire consisted of collecting responses to the treatment ad as well as the aspirin ad plus the
### PSYCHOGRAPHIC AND GENERAL ADVERTISING PERCEPTION MEASURES USED IN THE STUDY

<table>
<thead>
<tr>
<th></th>
<th>Not much like me</th>
<th>Very much like me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I shop a lot for &quot;specials.&quot;</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. I have more self-confidence than most people.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. My friends often come to me for advice.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. I usually watch ads for sales.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5. I often seek advice of friends regarding which brand to buy.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6. I think I have a lot of personal ability.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7. I sometimes influence what my friends buy.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8. I spend a lot of time talking with friends about products and brands.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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In my opinion, advertising in general is:

<table>
<thead>
<tr>
<th></th>
<th>1 2 3 4 5 6 7</th>
<th>very informative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. not informative</td>
<td>1 2 3 4 5 6 7</td>
<td>very useful</td>
</tr>
<tr>
<td>2. not useful</td>
<td>1 2 3 4 5 6 7</td>
<td>very trustworthy</td>
</tr>
<tr>
<td>3. not trustworthy</td>
<td>1 2 3 4 5 6 7</td>
<td>very trustworthy</td>
</tr>
</tbody>
</table>
Fig. 16

ADS INCLUDED IN THE SIX PORTFOLIOS

<table>
<thead>
<tr>
<th>Portfolio I</th>
<th>Portfolio II</th>
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</thead>
<tbody>
<tr>
<td>Aspirin</td>
<td>Aspirin</td>
</tr>
<tr>
<td>Deodorant</td>
<td>Deodorant</td>
</tr>
<tr>
<td>Cigarette</td>
<td>Cigarette</td>
</tr>
<tr>
<td>Dishwasher (Comparative)</td>
<td>Dishwasher (Non-Comparative)</td>
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</tbody>
</table>

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<th>Portfolio III</th>
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<td>Deodorant</td>
<td>Deodorant</td>
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<tr>
<td>Cigarette</td>
<td>Cigarette</td>
</tr>
<tr>
<td>Hair Styler (Comparative)</td>
<td>Hair Styler (Non-Comparative)</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Portfolio V</th>
<th>Portfolio VI</th>
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<td>Aspirin</td>
<td>Aspirin</td>
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<tr>
<td>Deodorant</td>
<td>Deodorant</td>
</tr>
<tr>
<td>Cigarette</td>
<td>Cigarette</td>
</tr>
<tr>
<td>Microwave Oven (Comparative)</td>
<td>Microwave Oven (Non-Comparative)</td>
</tr>
</tbody>
</table>
respondent's demographics.

Sample Size

The final sample size of 419 consisted of approximately two equal groups — one having viewed a comparative ad and the other a non-comparative ad. The 419 subjects were also equally divided among the three product categories — dishwashers, hair stylers, and microwave ovens. Thus, the size of each of the six groups ranged between 67 and 72 subjects.

Analysis of the Data

In analyzing the data, the two groups within two of the three product categories were found to differ significantly on several bases. In particular, the non-comparative group for the hair styler category and the comparative group for the microwave oven category were found to be more price conscious, more information seeking, perceiving advertising in general more favorably, having more product interest, and being nearer to purchasing within their respective product category than were their counterparts. The presence of this set of common variables was associated with higher ad ratings by these two groups. That is, the hair styler non-comparative group rated their ad higher on six of ten bases while the microwave comparative group rated their ad higher on nine of ten bases, as compared to their respective counterparts.

Ad Perceptions and Their Correlations with the Audience Influencing Variables

In all three product categories, positive correlations between the ad ratings (such as informative, believable, and useful) and product interest, nearness to purchase, sponsor preference, and the three
advertising perception measures were found, while price consciousness was found not to be highly correlated and information seeking was found to be more negatively correlated with these ad ratings.

In examining the information seeking measures, it appeared they tended to stress personal sources of information. Consequently, with this interpretation, negative correlations were expected. For dishwashers, the only product category with two similar groups, the comparative group had nine negative correlations between their two information seeking measures and the ten ad rating measures. This finding illustrates the relative effectiveness of comparative ads over non-comparative ads, since no negative correlations existed for the non-comparative ad for that product. Thus, for that product category, the comparative ad was more effective with information seekers who depended less on personal sources than was the non-comparative ad.

Also in the dishwasher category, the comparative ad group rated their ad higher on 8 out of 10 bases. Though the traditional levels of significance were not met, the direction of the data indicated that comparative ads can be more effective than non-comparative ads. This indication was supported in the microwave oven category where the comparative ad was viewed by a group that was more interested in the product and closer to making a purchase, and as a result, rated the comparative ad significantly higher (with alpha less than .10) on four bases. In contrast, the non-comparative hair styler group was also more interested in the product and nearer to making a purchase than its counterpart, but this group significantly rated its non-comparative ad higher on only two bases (alpha equal to .10). To contrast these two groups further, the comparative microwave oven group's four significant ratings were for
product quality, sponsor trustworthiness, willingness to buy and competitive position versus believability, and ad interest for the non-comparative hair styler group. Thus, it appears that comparative ads can be more effective in affecting perceptions and attitudes toward a product and its sponsor. Figure 17 depicts the above findings.

Brand and Claim Recall

Comparative ads, however, were not found to have better brand or claim recall than non-comparative ads. The reason for brand recall not being greater for either ad type was probably that well-known brands were used, consequently, the group with the least brand recall, regardless of product or ad type, had less than ten per cent of its respondents recalling an incorrect brand. For claim recall, the number of incorrect recalls was evenly split by ad type for all three products. The dishwasher and hair styler categories had incorrect claim recalls of less than thirty per cent, while incorrect recalls were made by 48 per cent of the respondents in the microwave oven category. Further analysis showed changes in the interest level for the third product category but not for the first two when the incorrect recall respondents were removed from the sample. This indicated a greater polarity of interest for microwave ovens versus the other two products. Thus, the distribution of claim recall was interest specific but not dependent on ad type.

The Study's Conclusions

From the data analysis results summarized above, several conclusions regarding comparative advertising, as examined in this study, were made.
### Fig. 17

SUMMARIZING THE RELEVANT GROUP CHARACTERISTICS AND AD PERCEPTIONS

<table>
<thead>
<tr>
<th>Product</th>
<th>Characteristics</th>
<th>Ad Perceptions</th>
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<tbody>
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<td>Dishwasher</td>
<td>C - Advertising Usefulness</td>
<td>N - Informative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N - Product Quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N - Competitive Position</td>
</tr>
<tr>
<td>Hair Styler</td>
<td>C - Price Consciousness</td>
<td>C - Believable</td>
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<td></td>
<td>C - Information Seeking</td>
<td>C - Interesting</td>
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<td>C - Advertising</td>
<td>C - Useful</td>
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<tr>
<td></td>
<td>C - Product Interest</td>
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<tr>
<td></td>
<td>C - Nearness to Purchase</td>
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</tr>
<tr>
<td>Microwave Oven</td>
<td>N - Price Consciousness</td>
<td>N - Informative</td>
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<td>N - Opinion Leadership</td>
<td>N - Believable</td>
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<td>N - Information Seeking</td>
<td>N - Useful</td>
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<td>N - Product Quality</td>
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<td></td>
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<tr>
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<td></td>
<td>N - Competitive Position</td>
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<tr>
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<td>Nearness to Purchase</td>
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<tr>
<td></td>
<td>Sponsor Preference</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Table Entry Format \( X \) = \( V \)

- \( X = C \) - Less characteristic or lower ratings for the comparative group on that variable
- \( N = \) Less characteristic or lower ratings for the non-comparative group on that variable
- \( V = \) A group characteristic or an ad's perception

Levels of significance are given in Figures 5 and 9.
1. Comparative ads can be more effective than non-comparative ads under certain circumstances.

This conclusion was obviously an important one in view of the conclusions made in the five comparative advertising studies discussed previously in the literature review. In those studies comparative advertising was generally concluded as being not more effective than non-comparative advertising. The data collected in this study, however, indicated the contrary.

Given the conclusion that comparative ads can be more effective, the study's second conclusion related to those circumstances under which greater effectiveness can be expected. To appreciate the circumstances required for effectiveness, one needs to examine the decision-making process that consumers use in selecting products for consumption. Though a number of different decision-making processes have been hypothesized, they generally suggest consumers first recognize the existence of a problem or need, then collect information from personal and non-personal sources, develop a set of attitudes and predispositions, and make a decision. The length of time devoted to decision-making plus the amount and type of information collected is said to vary with such variables as the amount of interest in the product, the amount of internally stored information, the amount of risk associated with the purchase, and the complexity of the product. Thus, the study's second conclusion was:

2. The circumstances under which comparatives can be effective are at least partially determined by those variables which affect the length of time devoted to decision-making as well as the nature of information collected for decision-making.
As discussed earlier, previous comparative advertising studies used products which were of low interest, low risk, little complexity, and promoted by low-informational ads. But, in this study, products which permitted higher interest levels to exist, had higher associated risks (financial, and possibly health in the microwave oven case), and had some product complexity were used; plus, more informative ads were used to promote these products. -- The finding that these more informative ads (for products of some complexity) tended to be more effective complements the usage consideration (on page 8 of this study) that comparative ads should only be used when significant and demonstrable product differences exist.

With a decision-making perspective, it is apparent that in those circumstances where more information is required to make a decision, comparative advertising can be more effective. -- It can actually help to decrease the amount of time spent in search of information because a comparative ad has assembled for the consumer information regarding a number of alternatives (brands) on the basis of a number of product attributes.

Effectiveness, however, is not solely dependent on comparative advertising's information-assembling quality. Before a consumer seeks information from advertising, there must be a desire for information -- some product interest -- and there must exist a generally positive perception of advertising as being trustworthy, informative, and useful. These last two conditions are needed for any ad to be effective, but the study showed that given these conditions, comparatives can be more effective, as shown in the comparison above between the comparative (microwave oven) group and the non-comparative (hair styler) group.
Using the decision-making perspective, two conclusions (3 and 4, given below) were made concerning consumers with whom comparative ads can be effective.

3. For comparatives to be effective, consumers must collect information from non-personal sources and use it in their decision-making.

This does not mean that personal sources of information are excluded but means that non-personal sources play an important role in the decision-making process. This also means that decisions are made after an objective evaluation has been done and are not made on the basis of whims or pure emotions. Obviously, this is a necessary condition for effectiveness.

The other conclusion regarding consumers (with whom comparatives can be effective) was:

4. Comparative ads can conceivably be more effective in helping post-purchase consumers by providing reinforcement for their purchase decisions as well as by acting as a factor which aids these consumers in maintaining cognitive consistency.

Since post-purchase consumers evaluate their purchase decisions and are known to be more attentive to ads involving the purchased product, comparative ads can be more effective because the sponsoring brand is always presented as superior over named-competitors on a number of product attributes. Thus, there can be reinforcement of the purchase decision, and the presentation of favorable information can aid the individual in maintaining cognitive consistency regarding his attitudes related to the purchased product.
The final conclusion of the study was also related to the effectiveness of comparative ads. This conclusion was concerned with how or in what way comparatives can be effective (in addition to possibly providing post-purchase reinforcement). Specifically, the conclusion was:

5. Comparative ads can be more effective in terms of brand perceptions and attitudes as well as future purchase intentions.

In Chapter III, Lavidge and Steiner's hierarchy of effects model was presented, and it was stated that the general implication of this model was that for those situations where the consumer has some product involvement and is seeking information, comparative ads may be very effective. It was also stated that comparatives may even help move the consumer through the hierarchy a little faster at the latter stages but probably not at the earlier ones. In this study, brand recall and claim recall were found not to differ significantly for comparative and non-comparative ads. Since well-known brands were used and correct brand recall exceeded 90 per cent for all groups, the respondents could not have been at the earlier stages of the model. Thus, the respondents were in the latter stages where attitudes and purchase intentions are determined. The responses for measures reflecting these latter hierarchical stages were consistently higher for the comparative ad -- indicating its effectiveness relative to the non-comparative ad.

One requirement for a consumer to be associated at the latter hierarchical stages is the presence of some interest in the product. For dishwashers, the only product category with similar groups, correlations of .62, .60, and .74, respectively, were found between product interest and the variables: product quality, would consider
buying, and would buy, for the comparative ad. But, for the non-comparative ad, correlations for these variables were only .30, .38, and .52, respectively, thus indicating the relative effectiveness of comparatives at the latter stages of the model. For that same product, correlations between nearness to purchase and those same three variables ranged from .26 to .36 for the comparative ad. Though these correlations were lower, for the non-comparative ad only one coefficient was found significant for these three variables and its value was .22, as compared to the comparative ad's coefficient of .36. These correlations also suggested the relative effectiveness of comparative ads with consumers who are in the later stages of the hierarchy of effects model. Thus, this result represents one of the major findings and conclusions of this study.

**Guides for Future Research Suggested by the Study**

Having stated the study's conclusions, several suggestions for future research can be given.

1. Before ad responses are collected (for a comparative analysis), an initial questionnaire should be used to screen out potential respondents who are not interested in the product that is to be used in the study.

   This first questionnaire should also screen out potential respondents with negative perceptions of advertising in general and who tend to seek information mainly from personal sources.

2. Greater care should be taken in operationally defining the variables to be investigated.

   For example, in this study "offensiveness" was intended to measure whether an ad insulted a respondent's intelligence, but respondents
apparently viewed it as a measure of bad taste. Similarly, the information seeking measures tended to stress personal source dependence rather than non-personal source dependence or information seeking in general.

3. Use response measures which permit using parametric statistical tests without having to make an interval data assumption.

Such measures would permit using the generally used statistical tests by marketers but would also permit using these tests under the appropriate conditions determined by statistical theory.

4. Consider the model given on page 50 as a basis for investigation.

The model's construction was based on a literature review, and as a result, it contained many variables found in the study to be significantly related to comparative ad responses, which were also included in the model. Those variables not found to be relevant by this study should be investigated again by using different operational measures and possibly different statistical tests.

The above suggestions, as well as the study in general, should serve as useful guides for future researchers wishing to investigate the effectiveness of comparative advertising.
BIBLIOGRAPHY

Books


Articles and Reports

"ABC Comparative Rules Stress Test Procedures," Advertising Age, 45 (March 18, 1974), 1.


Cohen, Stanley E. "Widespread FTC Probe Will Seek Codes Than Hinder Comparative Ads," Advertising Age, 47 (February 23, 1976), 1.


"Doulton Credits 6% Share Gain to Ad Comparing Its China with Lenox Line," Advertising Age, 44 (February 5, 1973), 4-6.


"Open Way for Comparative Ads, Canada Meet Told," *Advertising Age*, 46 (May 12, 1975), 5.


The Effects of Comparative Television Advertising that Names Competing Brands. (New York: Ogilvy and Mather Research, 1976), 1-8.


"Underdog Advertiser Wins in 'Name-Naming:' BBDO," Advertising Age, 46 (March 10, 1975), 56.


APPENDIXES
APPENDIX I

Interviewer Instructions
INTERVIEWER INSTRUCTIONS

You are to conduct your interviews on block ________ in census tract ________. Your interviews are to start with the ________ house on the side of the street where an "X" appears on the attached map. After interviewing that household, proceed down that side of the street and interview every fourth house. Once you reach the end of the assigned block, cross the street and continue interviewing every fourth house. -- Following this pattern could result in interviewing a house near the corner on one side of the street and then walking past a couple of houses on that same side, crossing the street at the corner, walking past one more house, and having your next interview at the next house which is second from the corner on the opposite side and the opposite end of the block from your original starting point.

You are to interview only those persons residing in a house, duplex, or townhouse. Do not interview persons living in mobile homes, apartments, or any other multiple housing units such as nursing homes. Also, do not interview anyone at a place of business.

If after interviewing on both sides of the street, you have not completed all your interviews, then continue interviewing households on both sides of the streets which border your assigned census block until all your interviews are completed.

At each selected household, one of three situations will transpire. In each situation, you are to follow the prescribed procedure as given below.

Case I. The "lady of the house" (not a teenage daughter or a grandmother) is home and grants an interview: Conduct the interview and continue down the street interviewing every fourth house.

Case II. The "lady of the house" refuses to grant an interview: Thank the lady for her time and pass to the next house. After this interview, you will then interview the third house away, but from there, continue your original pattern of going to every fourth house.

If this substitute house also refuses, then continue going to the next house until an interview is secured. Then start a new sequence of interviewing every fourth house.

Case III. The "lady of the house" is not at home: Proceed down the street as if you had been granted the interview. Later you should return to that skipped household one more time in order to secure the interview. (Try a different time of day or consider a weekend interview.)

If after two times, the "lady of the house" is still not available, then select the house which is next door and in the direction you
had been following as you proceeded earlier down the street. For this substitute house, follow the procedures as given below.

Case A. The "lady of the house" is home: Conduct the interview and continue your current interviewing pattern until you have completed all the required interviews.

Case B. The "lady of the house" refuses to grant an interview: Thank her for her time and pass to the next house. Continue this until an interview is granted. However, be sure you do not attempt to secure an interview from a household which you have previously contacted.*

Case C. The "lady of the house" is not home: Follow the same procedure as described above in Case B.

What to Say

The following is suggested to be said upon first meeting the "lady of the house." Also, at this time hold the cover letter so the LSU letterhead can easily be seen.

To: The Lady of the House

Hi, my name is __________________________. I am a student at LSU. In one of my courses this semester we are conducting a survey on advertising as part of a class project. Your home was randomly selected to be interviewed as part of our study. Most of the questions can be answered by merely placing a check in the appropriate place.

Is there some place where we can sit down to do the study?

In addition to the above, during the interview there may be questions regarding the questionnaire. In responding, try repeating the instructions and/or the question that has caused the problem, but avoid giving your interpretation or viewpoint.

At the end of the questionnaire, ask the lady if you could have her name and phone number. Tell her that your teacher wants this so he can call some of the people with whom you have talked to see if you have really interviewed them. Also, tell her that this information will be placed on a separate piece of paper so her responses will remain anonymous.

* Also, regardless of whether or not an interview is granted, you should record the address of each household you contact. This will help prevent your contacting the same household twice if it turns out that you must make more than one visit to your assigned block in order to conduct all the required interviews. Place an "X" beside those addresses you have interviewed so they can be distinguished from your refusals.

The best place to record your names, addresses, and phone numbers would be on the back of these instructions.
If, at any time during the interview, some member of the household becomes upset due to your presence, do not antagonize that person; terminate the interview. Treat this household as a refusal and follow the prescribed procedure above for refusals.

**What to Bring**

1. Questionnaires  
2. Instructions  
3. Pencils  
4. Watch

**If You Should Have Any Questions**

1. See me at school.  
2. Call me at school - 388-8684.  
3. Call me at home - 769-2728.

**When You Finish All Interviews**

After all your interviews are completed, place your name on the cover letter of each one. Then copy from the questionnaire all the information you need for making your report. Record the information separately; do not combine the responses from the various questionnaires. In addition to making a copy of the responses you intend to use in your report, be sure you have a description of the ads to which those responses refer — including type of ad, type of product, product information given, and brands which are mentioned. There are a number of different groupings of ads, and responses should vary according to which ads are viewed.
APPENDIX II

Sample Questionnaire
ADVERTISING STUDY

Your cooperation is appreciated. This student-conducted study is not funded by the Marketing Department nor any other source, nor will the results be used except for educational purposes. The questionnaire is not coded in any way so your name can be identified with your responses. Your participation is to be voluntary and you may withdraw at any time if you desire.

The study involves three phases. Most of the questions can be answered in a matter of seconds merely by placing a check mark in the appropriate place. The instructions at the beginning of each section will guide your response to questions in that section.

If you should have any questions during the study, please ask the representative for assistance. Thank you for agreeing to participate in this advertising study.

Cordially yours,

Ronald K. Sellars
Ph.D. Candidate

For information or any question about this research, please call the Department of Marketing.

RKS:jas
ADVERTISING STUDY

Phase I. In this phase, you are to respond to two groups of statements.

For the following statements, how would you rate yourself on a scale of 1 to 7, where 1 represents a statement which is not much like you and 7 represents a statement which is very much like you?

For Example: If you are somewhat interested in clothing fashions, then you might mark the following statement as shown below.

I usually have one or more outfits of the latest style. 1 2 3 4 5 6 7

Please consider each of the following statements and then place a check in the space which most accurately indicates your rating for each statement.

1. I shop a lot for "specials." 1 2 3 4 5 6 7
2. I have more self-confidence than most people. 1 2 3 4 5 6 7
3. My friends often come to me for advice. 1 2 3 4 5 6 7
4. I usually watch ads for sales. 1 2 3 4 5 6 7
5. I often seek advice of friends regarding which brand to buy. 1 2 3 4 5 6 7
6. I think I have a lot of personal ability. 1 2 3 4 5 6 7
7. I sometimes influence what my friends buy. 1 2 3 4 5 6 7
8. I spend a lot of time talking with friends about products and brands. 1 2 3 4 5 6 7

How do you rate advertising in general? Your ratings are to be on a 1 to 7 scale.

In my opinion, advertising in general is:

1. not informative 1 2 3 4 5 6 7 very informative
2. not useful 1 2 3 4 5 6 7 very useful
3. not trustworthy 1 2 3 4 5 6 7 very trustworthy

Please check to see if you have answered all the questions above, then notify the representative that you are finished.
Phase II. In this phase, you are to look at four ads. Please look at them as if you were looking at a newspaper or magazine. You will be given up to five minutes to look at all of the ads. This should be enough time, but be sure that you do look at each of the four ads.

After four minutes, the representative will instruct you that only one minute remains. If you do not need the entire time, you may return the ads to the representative and move to the next step. However, if you have not looked at all the ads, use the extra time to do so and then return the ads to the representative.

Please do not discuss the ads with the representative while you are viewing them.

Tell the representative when you are ready to begin viewing the ads. Then turn the page.
Bayer Aspirin provides an important therapeutic action.

Although other brands do relieve pain, many do little or nothing for inflammation which can be a major cause of most pain. But Bayer not only relieves the pain but helps reduce inflammation as well. Reducing inflammation can be important in relieving headaches, backaches, minor arthritic pain – so many pains that can be part of daily living.

Hospital study shows 99 out of 100 times, people got no stomach upset with Bayer.
YOU WILL HAVE FEWER REPAIR BILLS
WHEN YOU BUY A GE DISHWASHER

According to an independent testing agency, no other brand of dishwashers can exceed General Electric's record for having fewer repairs. Not only that, test results also show that a GE washer will get your glasses cleaner.

Here are some of the test results from that independent agency.

<table>
<thead>
<tr>
<th>WASHING PERFORMANCE</th>
<th>ENERGY USE</th>
<th>REPAIR RECORD*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATES</td>
<td>GLASSES</td>
<td></td>
</tr>
<tr>
<td>General Electric</td>
<td>Good</td>
<td>Fair</td>
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<td>Whirlpool</td>
<td>Good</td>
<td>Fair</td>
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<tr>
<td>Sears</td>
<td>Good</td>
<td>Fair</td>
</tr>
<tr>
<td>Westinghouse</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

* Key: ++, Much above average; +, Above average; Av, Average; —, Below average; ——, Much below average

It figures only GE could make a dishwasher which would last.

Progress for People.
GENERAL ELECTRIC
Introducing . . .
The Most Effective
Anti-Perspirant Formula
You Can Buy

We’re Sure
True
slashes tar
in half!

Down to only 5 mgs. tar per cigarette. Down to only 100 mgs. tar per pack.

And a taste worth changing to. Think about it.


Regular: 5 mgs. "tar", 0.4 mgs. nicotine av. per cigarette, FTC Report October 1976.
II. Please answer the following questions regarding the aspirin ad.

1. For that ad, what was the name of the sponsor's brand? (The sponsor of an ad is the firm which makes the product and pays for the ad.)

2. What was the major point made by the sponsor in that ad? (Answer this question even though you may not be able to recall the sponsor's brand name.)

3. What were the other points made in that ad?

4. Please rate that ad on the following bases. Your ratings will be on a 7 point scale similar to ones used in previous sections. Please consider each of the following separately.

- a. not informative 1 2 3 4 5 6 7 very informative
- b. not believable 1 2 3 4 5 6 7 very believable
- c. not interesting 1 2 3 4 5 6 7 very interesting
- d. not useful 1 2 3 4 5 6 7 very useful
- e. very offensive 1 2 3 4 5 6 7 not offensive

5. Based on what you remember about that ad, how would you rate the sponsor and the sponsor's brand on the following bases?

- a. low quality 1 2 3 4 5 6 7 high quality
- b. would not consider buying 1 2 3 4 5 6 7 would consider buying
- c. not trustworthy 1 2 3 4 5 6 7 very trustworthy

6. If you were to make a purchase in this product category today, how likely are you to buy that sponsor's brand? (Answer the question on the basis of what you remember about the ad.)

   would not buy 1 2 3 4 5 6 7 would buy

7. For aspirin in general, how would you rate your interest level and nearness to making a purchase in that product category?

   a. not interested 1 2 3 4 5 6 7 very interested
   b. not near to making a purchase 1 2 3 4 5 6 7 very near to making a purchase
8. What is your preference for these brands in that product category?

<table>
<thead>
<tr>
<th>Not Preferable</th>
<th>Very Preferable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceldrin</td>
<td>1  2  3  4  5  6  7</td>
</tr>
<tr>
<td>Tylenol</td>
<td>1  2  3  4  5  6  7</td>
</tr>
<tr>
<td>Bayer</td>
<td>1  2  3  4  5  6  7</td>
</tr>
<tr>
<td>St. Joseph</td>
<td>1  2  3  4  5  6  7</td>
</tr>
</tbody>
</table>

9. Considering all the brands within this product category, how would you rate the following in terms of their sales position? Place a check in the appropriate blank for each brand. (You may place more than one check in any one column.)

<table>
<thead>
<tr>
<th>top 25%</th>
<th>2nd 25%</th>
<th>3rd 25%</th>
<th>bottom 25%</th>
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</table>

10. Have you ever (or has a close friend ever) been very disappointed with an aspirin's performance? Check one of the following.

- No. I have never (nor has a close friend ever) been disappointed with an aspirin's performance.
- Yes. I have (or a close friend has) been very disappointed with an aspirin's performance.

11. Have you ever (or has a close friend ever) been very disappointed with one of the brands named in question #9? Check one of the following.

- No. I have never (nor has a close friend ever) been very disappointed with one of the above brands.
- Yes. I have (or a close friend has) been very disappointed with one of the above brands.
Which one?
II. Please answer the following questions regarding the dishwasher ad.

1. For that ad, what was the name of the sponsor's brand? (The sponsor of an ad is the firm which makes the product and pays for the ad.)

2. What was the major point made by the sponsor in that ad? (Answer this question even though you may not be able to recall the sponsor's brand name.)

3. What were the other points made in that ad?

4. Please rate that ad on the following bases. Your ratings will be on 7 point scales similar to ones used in previous sections. Please consider each of the following separately.
   a. not informative 1 2 3 4 5 6 7 very informative
   b. not believable 1 2 3 4 5 6 7 very believable
   c. not interesting 1 2 3 4 5 6 7 very interesting
   d. not useful 1 2 3 4 5 6 7 very useful
   e. very offensive 1 2 3 4 5 6 7 not offensive

5. Based on what you remember about that ad, how would you rate the sponsor and the sponsor's brand on the following bases?
   a. low quality 1 2 3 4 5 6 7 high quality
   b. would not consider buying 1 2 3 4 5 6 7 buying
   c. not trustworthy 1 2 3 4 5 6 7 very trustworthy

6. If you were to make a purchase in this product category today, how likely are you to buy that sponsor's brand? (Answer the question on the basis of what you remember about the ad.)
   would not buy 1 2 3 4 5 6 7 would buy

7. For dishwashers in general, how would you rate your interest level and nearness to making a purchase in that product category?
   a. not interested 1 2 3 4 5 6 7 very interested
   b. not near to making a purchase 1 2 3 4 5 6 7 very near to making a purchase
8. What is your preference for these brands in that product category?

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</tr>
<tr>
<td>Sears</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
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<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Westinghouse</td>
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</tbody>
</table>

9. Considering all the brands within this product category, how would you rate the following in terms of their sales position? Place a check in the appropriate blank for each brand. (You may place more than one check in any one column.)

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</tr>
<tr>
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</tbody>
</table>

10. Have you ever (or has a close friend ever) been very disappointed with a dishwasher's performance? Check one of the following.

__ No. I have never (nor has a close friend ever) been disappointed with a dishwasher's performance.

__ Yes. I have (or a close friend has) been very disappointed with a dishwasher's performance.

11. Have you ever (or has a close friend ever) been very disappointed with one of the brands named in question #9? Check one of the following.

__ No. I have never (nor has a close friend ever) been very disappointed with one of the above brands.

__ Yes. I have (or a close friend has) been very disappointed with one of the above brands.

Which one?
Phase III. In this final phase, you are to rate two summary-type statements for the two ads. You will also be asked a number of questions concerning yourself.

1. How trustworthy is the sponsor of the aspirin ad?
   not trustworthy 1 2 3 4 5 6 7 very trustworthy

2. For the other product ad you have also rated, would you consider buying the sponsor's brand?
   would not consider buying 1 2 3 4 5 6 7 would consider buying

3. How would you rate yourself on these two statements?
   Not much Very much
   like me like me
   a. I shop a lot for "bargains." 1 2 3 4 5 6 7
   b. I have more self-confidence than most individuals. 1 2 3 4 5 6 7

Please answer these last few questions which are also about yourself.

4. How old are you?   

5. How many years of education have you completed?
   ___ 0-12, but did not graduate from high school
   ___ high school graduate
   ___ some college, or professional school
   ___ college graduate (4-year degree)

6. Give the number of years of education you have completed.   

7. Marital status:
   ___ single
   ___ married
   ___ other

8. Your occupation: ____________________________________________
   Your husband's occupation: ___________________________________

9. In which category does your annual family income (before taxes) fall?
   ___ under $8,000
   ___ $8,000-$16,000
   ___ $16,001-$24,000
   ___ over $24,000

This concludes the study. Please check to see if you have answered all the questions above. Thank you for your cooperation.
APPENDIX III

Test Ads
YOU WILL HAVE FEWER REPAIR BILLS WHEN YOU BUY A GE DISHWASHER

According to an independent testing agency, no other brand of dishwashers can exceed General Electric's record for having fewer repairs. Not only that, test results also show that a GE washer will get your glasses cleaner.

Here are some of the test results from that independent agency.

<table>
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* Key: ++, Much above average; +, Above average; Av, Average; —, Below average; ——, Much below average

It figures only GE could make a dishwasher which would last.

Progress for People.

GENERAL ELECTRIC
YOU WILL HAVE FEWER REPAIR BILLS WHEN YOU BUY A GE DISHWASHER

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<th>Washing Performance</th>
<th>Energy Use</th>
<th>Repair Record</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plates</td>
<td>Glasses</td>
<td></td>
</tr>
<tr>
<td>General Electric</td>
<td>Good</td>
<td>Good</td>
<td>Fair</td>
</tr>
<tr>
<td>Brand X</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
</tr>
<tr>
<td>Brand Y</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Brand Z</td>
<td>Fair</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

* Key: ++, Much above average; +, Above average; Av, Average; —, Below average; ---, Much below average

It figures only GE could make a dishwasher which would last.
Clairol has recently introduced a new generation lightweight electric hair styler. It is the styler of the future. Right Now.

This styler is the lightest and has the best drying ability of all electric hair stylers recently tested by an independent laboratory. To see how Clairol compares, see the table below, then see your nearest Clairol dealer.

<table>
<thead>
<tr>
<th></th>
<th>Weight (Ounces)</th>
<th>Drying Ability</th>
<th>Number of Settings</th>
<th>Amount of Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clairol</td>
<td>9</td>
<td>Best</td>
<td>2</td>
<td>Average*</td>
</tr>
<tr>
<td>Northern</td>
<td>10</td>
<td>Good</td>
<td>1</td>
<td>Average</td>
</tr>
<tr>
<td>General Electric</td>
<td>12</td>
<td>Good</td>
<td>2</td>
<td>Average</td>
</tr>
<tr>
<td>Gillette</td>
<td>13</td>
<td>Fair</td>
<td>2</td>
<td>Very Little</td>
</tr>
</tbody>
</table>

* Slightly above average noise at the high setting

No wonder more people are asking for .

clairol
the beauty makers
a little beauty by
Clairol

Clairol has recently introduced a new generation lightweight electric hair styler. It is the styler of the future. Right Now.

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<table>
<thead>
<tr>
<th></th>
<th>WEIGHT (Ounces)</th>
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<th>AMOUNT OF NOISE</th>
</tr>
</thead>
<tbody>
<tr>
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<td>9</td>
<td>Best</td>
<td>2</td>
<td>Average*</td>
</tr>
<tr>
<td>Brand X</td>
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<td>1</td>
<td>Average</td>
</tr>
<tr>
<td>Brand Y</td>
<td>12</td>
<td>Good</td>
<td>2</td>
<td>Average</td>
</tr>
<tr>
<td>Brand Z</td>
<td>13</td>
<td>Fair</td>
<td>2</td>
<td>Very Little</td>
</tr>
</tbody>
</table>

* Slightly above average noise at the high setting

No wonder more people are asking for . . .
Recent research by an independent testing agency shows that Litton excels in features and in performance. Here is how Litton compares.

<table>
<thead>
<tr>
<th>RELATIVE HEATING SPEED</th>
<th>USEABLE OVEN VOLUME (CU. FT.)</th>
<th>REDUCED POWER SETTING</th>
<th>MAXIMUM TIME SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litton</td>
<td>Very</td>
<td>1.2</td>
<td>Yes</td>
</tr>
<tr>
<td>Hotpoint</td>
<td>Fast</td>
<td>1.3</td>
<td>Yes</td>
</tr>
<tr>
<td>Sears</td>
<td>Medium</td>
<td>0.6</td>
<td>No</td>
</tr>
<tr>
<td>Tappan</td>
<td>Fast</td>
<td>0.9</td>
<td>Yes</td>
</tr>
</tbody>
</table>

See your nearest Litton dealer for a free microwave cooking demonstration.

Litton... changing the way America Cooks.
Recent research by an independent testing agency shows that Litton excels in features and in performance. Here is how Litton compares.

<table>
<thead>
<tr>
<th>RELATIVE HEATING SPEED</th>
<th>USEABLE OVEN VOLUME (CU. FT.)</th>
<th>REDUCED POWER SETTING</th>
<th>MAXIMUM TIME SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litton</td>
<td>Very</td>
<td>1.2</td>
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</tr>
<tr>
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<td>1.3</td>
<td>Yes</td>
</tr>
<tr>
<td>Brand Y</td>
<td>Medium</td>
<td>0.6</td>
<td>No</td>
</tr>
<tr>
<td>Brand Z</td>
<td>Fast</td>
<td>0.9</td>
<td>Yes</td>
</tr>
</tbody>
</table>

See your nearest Litton dealer for a free microwave cooking demonstration.

Litton... changing the way America Cooks.
APPENDIX IV

Survey Sheet Used to Determine Products to Include in the Study
Please indicate how likely it would be that you would read an advertisement in a magazine or newspaper for each of the products below. To do this, place an "X" on one of the broken lines to the right of each product named. Choose a position on the line which best represents the chance of your reading an ad for each product.

Example: If you were very interested, but not extremely interested, in 35 millimeter cameras, you would respond as follows:

<table>
<thead>
<tr>
<th>Product</th>
<th>Extremely Likely</th>
<th>Extremely Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 mm Camera</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please mark your responses for these products.

<table>
<thead>
<tr>
<th>Product</th>
<th>Extremely Likely</th>
<th>Extremely Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarettes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothes Washer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Television Set</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American-made, Mid-size Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange Juice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toothpaste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouthwash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deodorant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mini-calculator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor Tile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mattress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspirin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee Maker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacuum Cleaner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microwave Oven</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric Hair Styler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trash Compactor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen Fried Chicken Dinner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooking Oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radial Tires</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pocket Camera</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothes Dryer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dishwasher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scouring Powder</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX V

Sampling Criteria
## FACTORS USED IN SELECTING RESPONDENTS

<table>
<thead>
<tr>
<th>Census Tract</th>
<th>High School Graduates (%)</th>
<th>Mean Income ($)</th>
<th>Below Poverty Level (%)</th>
<th>Females Over 65 (%)</th>
<th>Number to be Sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.01</td>
<td>64.7</td>
<td>11,035</td>
<td>5.0</td>
<td>4.1</td>
<td>35</td>
</tr>
<tr>
<td>11.02</td>
<td>80.5</td>
<td>11,401</td>
<td>5.7</td>
<td>3.5</td>
<td>35</td>
</tr>
<tr>
<td>20.00</td>
<td>83.8</td>
<td>16,592</td>
<td>2.8</td>
<td>4.2</td>
<td>56</td>
</tr>
<tr>
<td>26.02</td>
<td>87.2</td>
<td>21,824</td>
<td>4.5</td>
<td>4.9</td>
<td>35</td>
</tr>
<tr>
<td>35.03</td>
<td>74.5</td>
<td>13,856</td>
<td>2.4</td>
<td>2.7</td>
<td>14</td>
</tr>
<tr>
<td>36.01</td>
<td>81.5</td>
<td>17,313</td>
<td>2.6</td>
<td>2.8</td>
<td>56</td>
</tr>
<tr>
<td>36.02</td>
<td>94.0</td>
<td>15,178</td>
<td>1.8</td>
<td>1.3</td>
<td>56</td>
</tr>
<tr>
<td>37.01</td>
<td>86.0</td>
<td>18,657</td>
<td>1.3</td>
<td>4.3</td>
<td>98</td>
</tr>
<tr>
<td>37.02</td>
<td>90.7</td>
<td>17,282</td>
<td>3.7</td>
<td>5.6</td>
<td>49</td>
</tr>
<tr>
<td>37.03</td>
<td>87.0</td>
<td>17,600</td>
<td>1.2</td>
<td>3.7</td>
<td>63</td>
</tr>
<tr>
<td>38.01</td>
<td>98.6</td>
<td>30,879</td>
<td>0.0</td>
<td>3.9</td>
<td>28</td>
</tr>
<tr>
<td>38.02</td>
<td>83.4</td>
<td>13,613</td>
<td>3.4</td>
<td>6.7</td>
<td>7</td>
</tr>
<tr>
<td>39.00</td>
<td>73.7</td>
<td>13,448</td>
<td>3.2</td>
<td>2.6</td>
<td>28</td>
</tr>
<tr>
<td>Baton Rouge</td>
<td>58.0</td>
<td>10,907</td>
<td>14.0</td>
<td>8.9</td>
<td>560</td>
</tr>
</tbody>
</table>


The large sample size of 560 was set in anticipation of student-interviewer resignations, as well as other reasons which normally occur and require certain questionnaires not to be included in a study.
## SAMPLE SIZE BY PRODUCT AND TYPE

<table>
<thead>
<tr>
<th>Ad Type</th>
<th>Dishwashers</th>
<th>Hair Stylers</th>
<th>Microwave Ovens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparative</td>
<td>68</td>
<td>67</td>
<td>72</td>
<td>207</td>
</tr>
<tr>
<td>Non-Comparative</td>
<td>71</td>
<td>69</td>
<td>72</td>
<td>212</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>136</td>
<td>144</td>
<td>419</td>
</tr>
</tbody>
</table>
APPENDIX VII

Approval by Committee on Humans and Animals as Research Subjects
Louisiana State University
Baton Rouge Campus

From: Committee on Humans and Animals as Research Subjects.

To: Vice Chancellor for Advanced Studies and Research
David Boyd Hall

RE: Proposal of Marketing Department
Principal Investigator

Entitled "Comparative Advertising"

This is to certify that a quorum of the Committee on Humans and Animals as Research Subjects reviewed the above proposal. The Committee evaluated the procedures of the proposal with appropriate guidelines established for activities supported by federal funds involving as subjects humans and/or animals.

Recommendation of Committee

Comments: Approved

A review of this proposal by the Committee will be accomplished at least on an annual basis and at more frequent intervals depending on the element of risk.

Date March 25, 1977

Copy: Ronald K. Sellers, Marketing Student
L. Richardson
I. A. Berg

Chairman, Committee on Use of Humans and Animals as Research Subjects
VITA

Ronald K. Sellars, son of Ralph and Olga Sellars, was born on April 9, 1943, in Houston, Texas. He graduated from Houston's Stephen F. Austin High School in June, 1961.

He entered the University of Texas in the fall of 1961, and received a Bachelor of Arts in Mathematics in August, 1965. Upon graduation, he began work on a Master of Arts in Business Administration at Texas A & I University and graduated in August, 1967. Also, in August, 1967, he married Joyce Anne Pulliam, daughter of Mr. and Mrs. T. R. Pulliam.

From September, 1967, to May, 1969, Mr. Sellars taught at Sam Houston State University in Huntsville, Texas. From June, 1969, to May, 1973, he taught at Pan American University in Edinburg, Texas. Also during this time, he became the father of Tracy Lynn and Todd Keith Sellars.

In September, 1973, he began work toward his doctoral degree at Louisiana State University in Baton Rouge, Louisiana, with a major in Marketing, a minor in Quantitative Methods, and a support area in Experimental Statistics. During this time he was a Teaching Assistant and represented the Department of Marketing as a Fellow of the 1975 American Marketing Association's Doctoral Consortium.

He is currently a candidate for the degree of Doctor of Philosophy in the Department of Marketing at Louisiana State University.
EXAMINATION AND THESIS REPORT

Candidate: Ronald Kay Sellars

Major Field: Marketing

Title of Thesis: A Study of the Effectiveness of Comparative Advertising for Selected Household Appliances

Approved:

Fred K. Embrey
Major Professor and Chairman

James G. Fraynham
Dean of the Graduate School

EXAMINING COMMITTEE:

Lee Richardson

John P. Burns

David L. Smith

James E. Milli

Date of Examination:

June 21, 1977