DECEPTIVE ADVERTISING: AN EXPERIMENTAL EVALUATION OF AN ATTITUDE CHANGE APPROACH TO DETECTING DECEPTION AND MEASURING THE EFFECT OF CORRECTIVE ADVERTISING

BY

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ABSTRACT

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The research objectives identified for this study were: (1) to empirically test an attitude change approach to detecting deception in advertising; and (2) to measure the effectiveness of a corrective advertisement on eliminating the effects of previous deception.

Both the Fishbein attitude model and the extended behavioral intention model were used in an experimental design to test for possible deception contained in advertisements of three product categories: mouthwash, pantyhose and footwear. The experiment took the form of a two-stage non-equivalent control group design. Subjects consisted of 147 high school students in two Michigan cities. Pretest-posttest gain scores for the control and experimental groups were analyzed using a t-test of independence. No significant differences in gain scores were found for either the attitude or behavioral intention model.

Two beliefs from each product class were selected for further investigation. Mean scores of the brand under investigation were compared with an average of the mean brand belief scores of the other three brands. This technique identified deception for three beliefs.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Since man first discovered that goods could be bartered, the seller has sought to get the highest price for his product. This has sometimes resulted in the use of deception for the purpose of gaining a higher price for a product or a larger share of the market than would otherwise be obtained. For many centuries, the marketplace operated under a philosophy of "caveat emptor." In modern times, this philosophy has gradually changed to one more concerned with protection of the consumer.

In 1914, the Federal Trade Commission was created to regulate commerce. For many years, the Commission sought to protect the consumer from the use of outright lies in advertisements. Since 1960, however, the Commission has gradually become more concerned with advertisements which seem to give false impressions, even though the claims may be literally true (Armstrong and Russ, 1975).

While the FTC has seemed to expand its concern with deception, it has also devised methods to correct effects of previous deception and to insure the truthfulness of claims made to the consumer. The Commission has initiated an advertising substantiation program in which substantiating data for product claims must be publicly disclosed. Affirmative disclosure requires specific types of information to be disclosed in all advertising of a certain product class. Counter advertising has been required in certain cases, as in the provision for anti-smoking commercials to counter cigarette advertisements. Corrective advertising has been required in some cases in order to eliminate

the effect of past deception on future consumer decision-making.

The increased concern with deception and the increasing efforts to remedy its effects are dependent on the supposition that deception in advertising can be detected. The FTC has generally relied on an intuitive approach, in which the judgement of FTC members is used to detect deception in advertising. However, in recent years, advertisers (Dillon, 1973), market researchers (Pollay, 1969; Haefner and Permut, 1974; Bernacchi, 1974; Wilkie and Gardner, 1974; Armstrong and Russ, 1975; Gardner, 1975), lawyers (Gellhorn, 1969; Mann and Gurol, 1978), and even a former Commissioner of the Federal Trade Commission (Jones, 1971), have written of the need for an objective methodology for detecting deception in advertising.

I. JUSTIFICATION

The existence of a consumer-based research procedure to determine deception would be of benefit to regulators, advertisers, and to consumers. It would aid regulators such as the Federal Trade Commission in its selection of cases, prosecution, and in determination of remedies (Armstrong and Russ, 1975; Mann and Gurol, 1978). It has been suggested that consumer research could be incorporated into the existing FTC advertising substantiation program, making research data available on certain product categories, such as those in which public health and safety are involved (Rotfeld and Reid, 1977). Consumer research would aid in determining remedies such as cease and desist orders, affirmative disclosure, counter advertising, and corrective advertising, since the actual existence of deception as well as deceptive characteristics must be determined before these methods can be used effectively (Armstrong and

Russ, 1975).

In addition, behavioral science research could aid the FTC in determining whether or not what the advertiser considers to be puffery is actually deceptive (Preston and Johnson, 1973). The law has generally seen puffery as a statement of mere opinion which no reasonable consumer would rely upon in purchase decisions. However, there has been little attempt to substantiate this position. Consumer research evidence would help to demonstrate whether or not consumers do indeed treat puffery as fact and if they are subject to being deceived by it.

Since, as behaviorally defined, deception is dependent on the perception of the receiver, it will continue to exist in advertisements regardless of the intent of the advertiser. For the FTC to use this procedure, it would be necessary, therefore, to establish certain standards of allowable deception. These standards might allow differing amounts of deception to occur in different product classes.

Advertising agencies could use a consumer-based research procedure to pre-screen questionable advertisements and to provide evidence at the time cases are being considered for litigation. For advertisers who routinely do copy testing to measure the effectiveness of their advertisements, such data could be gathered at a minimal cost. A bonus to the advertiser would be the elimination of vague or misdirected messages that interfer with effective advertising. The further elimination of deception would also promote a more favorable impression of advertising by the consumer.

If advertising can become more informative by the elimination of deception, the consumer would benefit by gaining a better basis for purchase decision-making. In addition, rather than relying on value

judgements and emotional suspicions, the consumer would have objective evidence on which to base his complaints (Armstrong and Russ, 1975).

II. STATEMENT OF THE PROBLEM

There is a need for a consumer research methodology which can be used as the basis for identifying deceptive advertising and for evaluating the effect of corrective advertising.

III. REASERCH OBJECTIVES

This research was designed to:

(1) empirically test an attitude change approach to detecting deception in advertising.

(2) measure the effectiveness of a corrective advertisement on eliminating the effects of previous deception.

The authority and actions of the Federal Trade Commission in regulating deceptive advertising and proposed methodologies for defining deception are presented in the following chapter. Attitude theory will be discussed, and two models of potential use for the FTC will be introduced. The chapter will conclude with a discussion of the use of attitude theory in assessing deceptive and corrective advertising.

CHAPTER II

REVIEW OF LITERATURE

I. THE FEDERAL TRADE COMMISSION AND DECEPTIVE ADVERTISING

Authority to Regulate Deceptive Advertising

In 1914, the Federal Trade Commission Act created the Federal Trade Commission. This Commission was formed not to deal with advertising regulation, but instead for the enforcement of antitrust laws (Pelgro, 1978). Using its authority to prevent "unfair methods of competition in commerce" (FTC act of 1914, ch. 311 § 5, 38 Stat. 719), the Commission immediately began to exercise jurisdiction over advertising. This action continued until 1931, when the Supreme Court, in FTC vs. Radam Co. (238 U. S. 643, 1931), severely restricted the Commission's authority in this area. In this case, a manufacturer of an "obesity cure" was ordered to stop advertising the product as "safe" and "effective" when the Commission found that the preparation could not be used safely except under medical direction and advice. The Supreme Court provided a landmark ruling that forbade the FTC to prohibit false and deceptive advertising unless it could show that there was a harmful effect upon the competitors of the advertiser, regardless of whether or not consumers were harmed by the advertising. Congress responded to this ruling by passing the Wheeler-Lea Act of 1938, which extended the Commission's authority to preventing "unfair or deceptive acts or practices in commerce" (Wheeler-Lea Act of 1938, 3, 15, U. S. C. § 45, a, 1, 1970).

Development and Use of Corrective Advertising

In writing the Wheeler-Lea Act, Congress chose to use the general words "deceptive" and "unfair" rather than to define deception by the enumeration of proscribed acts. Thus, the Commission was given the power to determine deception on a case-by-case basis. Although providing a workable framework for FTC control of deception, this decision prevented businessmen from being certain that specific acts were unlawful until ruled so by the Commission. To prevent due process concerns, Congress decided against the imposition of civil or criminal liabilities for violation of the act, in favor of the issuance of cease and desist orders.

Exclusive use of cease and desist orders to deter deception contained two fundamental inadequacies: (1) provision of delay profits, and (2) failure to eliminate persistent false impressions. Delay profits refers to profits gained from a deceptive advertising campaign during the period of sometimes several years between the initial FTC investigation and the issuance of a cease and desist order. By the time the order is finalized, the deceptive advertising campaign may have run its natural course and the guilty party has gained a profit based on deception and paid only attorney fees. Secondly, the traditional remedies do nothing to eliminate the false impression that persists after the deceptive advertisement has ceased. It is theorized that consumers could continue making purchase decisions based on impressions created by deceptive advertisements long after the deceptive advertisement has been withdrawn.

Corrective advertising is one method recently utilized by the FTC to eliminate delay profits and persistent deception. Most simply

stated, corrective advertising is "advertising designed to inform consumers that previous advertising by the company was deceptive" (Mann and Gurol, 1978, p. 79). The exact wording and length of exposure of this advertising is generally stipulated in a consent decree.

Corrective advertising was first formally proposed by SOUP (Students Opposing Unfair Practices), a group of George Washington law students who sought to intervene in a FTC action against the Campbell Soup Company (77 FTC 664, 1970). This case concerned the soup company's practice of putting marbles in soup shown in television commercials, giving the soup a deceptively rich appearance. Although the Commission declined to use corrective advertising in that case, it reserved the right to use the remedy in future cases. SOUP again sought the corrective advertising remedy in a second case, Firestone Tire and Rubber Company, with the same results (81 FTC 398, 426, 1972). The FTC has subsequently utilized corrective advertising in a number of cases as part of the consent order. The most recent was signed by STP on February 9, 1978, as part of a settlement of a civil penalty action for violation of a 1976 FTC cease and desist order.

The federal court first acknowledged the FTC's authority to order corrective advertising in the Listerine mouthwash case (Warner-Lambert Co. vs. FTC, 562 F. 2d 749, DC Cir. 1977, cert denied, 98 S. Ct. 1575, 1978). Since Listerine will be used in this study, a brief description of the case follows.

Use of Corrective Advertising in Warner-Lambert Case

Listerine had been represented as a mouthwash product beneficial in certain aspects for colds, cold symptoms, and sore throats ever

since its introduction to the market in 1879. On December 9, 1975, the Commission ordered Warner-Lambert to cease and desist from alleging that Listerine would cure or lessen the severity of colds or sore thorats. It was also stipulated that the next ten million dollars of Listerine advertising contain the disclosure that, "Contrary to prior advertising, Listerine will not help prevent colds or sore throats or lessen their severity" (Warner-Lambert Co. vs. FTC, 86 FTC 1398, 1513-15, 1975).

When Warner-Lambert sought review of this order, the court found the following evidence that supported the Commission's findings: (1) ingredients in Listerine are not present in sufficient quantities to have any therapeutic effect; (2) it is impossible for Listerine to reach the critical areas of the body in sufficient concentration during gargling; (3) even if significant quantities of the active ingredients were to reach the critical sites, they would not interfere with the activities of the virus because they could not penetrate the tissue cells; (4) the ability of Listerine to kill germs by the millions on contact is of no medical significance in the treatment of colds or sore throats, because colds are caused by viruses (Warner-Lambert Co. vs. FTC, 652 F. 2d at 753-54). Although the court omitted the confessional preamble of the corrective message ("Contrary to prior advertising,"), the court upheld the requirement that the corrective advertisement continue until a sum had been expended on Listerine advertising equal to the average annual advertising budget for the period of April 1962 to March 1972.

Use of Evidence to Determine Deception

The Federal Trade Commission and the courts have used various

information techniques and types of evidence in their litigation proceedings. These include: (1) internal evidence, such as the intuitive approach, dictionary definitions and expert testimony, and, occasionally, (2) external evidence, such as consumer testimony and the results of consumer surveys (Brandt and Preston, 1977).

Some of these sources of information have inherent problems. The use of the intuitive approach, in which advertisements are judged on the basis of the previous experience and expertise of FTC members rather than on any outside objective evidence, creates a potential bias. The use of dictionary definitions to determine the meaning of advertising copy does not take into consideration the actual meaning of the words to the FTC, the advertiser, or to the consumer. Expert testimony may be biased towards the advertiser, the consumer, or the FTC, depending on the source of the expertise.

Several authors have indicated that the second type of evidence, external evidence, provides a more accurate indication of the existence of deception (Gelhorn, 1969; La Rue, 1971; Gardner, 1975). This type of evidence may prove useful, especially when it is based on the behavioral effect on the consumer. Though a recent study (Brandt and Preston, 1977) indicates that the use of external evidence has increased greatly in the past twenty years, it continues to "supplement rather than to supplant the Commission's expertise" (Crown Central, Dkt. 8851, trr 20, 790, 1974).

II. DEFINING DECEPTION: A BEHAVIORAL RESEARCH APPROACH

In 1971, Commissioner Mary Gardiner Jones, in an address before the Second Annual Conference of the Association for Consumer Research,

spoke to the need for behavioral research in the area of consumer protection:

> Consumer protection lawyers are just beginning to become aware of the need for obtaining a more thorough understanding of the behavior of the consumers they are attempting to protect... There is no established framework for operationalizing this interdisciplinary process and much work, therefore, must be done first in familiarizing the lawyers with the potentalities and capabilities, and second, in developing appropriate methodologies to come to grips most effectively with problems which at this point he may not even recognize he has. (1971, p. 3)

During the past decade, many marketing researchers have explored the possibility of forming a consumer-based definition of deception and developing a research methodology for detecting deception in advertising. This work has borrowed heavily from the disciplines of communication and behavioral psychology.

Communication theory has proposed that the communication system in its entirety, rather than in isolated parts, must be considered in understanding the message (Weaver, 1949). Thus, to study only the message itself, without considering the receiver, leads to misunderstanding the communication.

Based on this communication theory, Gardner offered the thesis that deception takes place not solely by virtue of the advertisement, but also includes the way the advertising message is perceived by the receiver (Gardner, 1975; 1976). Thus, an advertisement could be literally true in and of itself, but deceptive because of the impact it has on the receiver (Gardner, 1976). For example, suppose the results of a research study indicated that consumers associate the color blue with cleanliness. An enterprising manufacturer might color a portion of the detergent crystals in each box blue and advertise a product containing "blue cleaning crystals." Even though no additional claims were

made for these crystals, the advertisement would be deceptive if consumers perceived the blue crystals as containing extra cleaning agents.

A consideration of the perception process adds to an understanding of this receiver-centered approach to studying deception./ Gardner (1976), reviewed this process as it applies to consumer perceptions of advertisements. The received stimuli are categorized according to learned relationships, although all stimuli received by the individual are not categorized into perception of an advertisement for two reasons: (1) perceptions depend on the advertiser's skillful use of various physical characteristics such as figure-ground, frequency of presentation, stimulus intensity, movement and change, and number of objects in the advertisement; (2) personal factors such as emotions, wants, and span of apprehension result in differing perceptions of the same advertisement by different individuals and at different points in time by the same individual. In addition to interference in the categoization process, another phenomenon which affects perception is predictive verdicality, a process which permits one to "go beyond" the information presented in the advertisement and predict what properties to anticipate or expect.

Considering the legal realities of regulation and the receiver-centered theory of deception, it is proposed that the most useful definition of deception would be one which would integrate a receiver-focused approach with the legal definition of deception. Gardner offered such a definition:

> If an advertisement (or advertising campaign) leaves the average consumer within some reasonable market segment with an impression(s) and/or belief(s) different from what would normally be expected if the average consumer within that market segment had reasonable knowledge and that (impression(s) and/or belief(s) is factually untrue or potentially misleading, then deception is said to exist. (1976, p. 7)

This definition has certain important characteristics: (1) it makes the economic assumption of adequate information for the average consumer; (2) it focuses on the receiver, rather than the act of deceiving; (3) it defines the deception within certain specific market segments; (4) it retains the legal aspect of "factually untrue or potentially misleading."

Consistent with this behavioral definition of deception, Gardner (1976) categorized two main types of deception: (1) the "unconscionable lie" and (2) the claim-fact discrepancy type. The "unconscionable lie" refers to an outright false statement. This type of deception is one which is relatively easy to determine by simply finding whether or not there is any reasonable evidence to support the claim.

The claim-fact discrepancy, the second main category of deception, occurs in cases in which qualification must be added in order for the receiver to properly categorize the information. This type of deception may occur when the receiver adds his own learned information to incomplete information presented in the advertisement, resulting in an incorrect impression. It is also present in those conditions in which an advertisement does not specify the circumstances under which the claim is correct. Likewise, pre-emptive advertising, in which a false uniqueness claim is made, would also be considered a type of claim-fact discrepancy. This second type of deception cannot be detected by simple comparison with scientific evidence. Another approach, a behavioral one, is needed to detect the claim-fact discrepancy.

To determine this type of deception, Gardner (1976) suggested a research approach based on the assumption that deception of this type invloves consumer attitudes. He suggested the use of a multi-attribute

model based on work by Fishbein (1967) to serve as a basis for studying deception. The Fishbein model will be discussed in the following section.

Sales strategies usually attempt to change existing beliefs about a product and brand, to introduce a new belief, or to make an existing belief more salient; therefore Gardner (1976) hypothesized that deception could occur if advertisements influence the probability of a particular belief being associated with an attitude toward a brand, or influence the evaluation of a particular belief associated with a brand.

Gardner suggested three possible techniques to be used as screening devices in indicating deception: (1) the Normative Belief Technique, (2) the Consumer Impression Technique, and (3) the Expectation Screening Procedure. The Normative Belief Technique is based on the assumption that product attributes can be classified into two categories: functional and nonfunctional. Functional attributes are objective ones such as wear, design, performance, and guarantees, while nonfunctional attributes are nonobjective attributes such as style and appearance. An advertisement could be judged deceptive for at least two reasons: (1) if consumers rated the probability of a functional attribute being associated with a product, when, in fact, the product did not contain that attribute, or contained it only in insignificant amounts, or (2) if functional product attributes received a higher evaluation than that of the product class norm. Using the Consumer Impression Technique, consumers would be shown advertisements, then asked to state what they felt the advertisements were telling them. The consumers' impressions of the advertisement content would be compared with the actual fact and claim

of the advertisement to determine if deception existed. The Expectation Screening Procedure compares what people expect to see for a given product class with what they perceive the advertisement to be saying.

III. THE FISHBEIN ATTITUDE MODEL

Fishbein (1975, p. 4) defined attitude as "the amount of affect for or against some object," or in other words, the individual's feelings of favorableness or unfavorableness towards the object in question." He views the formation of attitudes as part of the learning process in which beliefs are associated with various objects. As an object is associated with various positively or negatively perceived attributes, characteristics, or qualities, the individual acquires a positive or negative attitude toward that object. Thus, at any point in time, an attitude toward an object is a function of beliefs about that object, and the evaluative aspects of those beliefs (Fishbein, 1975).

An individual may hold many beliefs about an object. However, the number of beliefs that contribute to an attitude toward an object at any one time is limited. Research seems to indicate that humans can deal with only about five to nine pieces of information at a time, thus there are probably no more than five to nine beliefs that serve as primary determinants of attitude at any point in time (Fishbein, 1975). These are the beliefs that are most salient for that individual.

Fishbein's attitude model is represented as follows:

$$A_o = \sum_{1}^{n} B_i A_i$$

Where:

A_o = attitude toward an object

B_i = the strength of belief i about o

A_i = the evaluative aspect of B_i

n = the number of beliefs

Fishbein (1975) further theorized that an attitude toward an action, like an attitude toward an object, is a function of beliefs and evaluations of those beliefs. Thus,

$$Aact = \sum_{1}^{n} B_i A_i$$

Where:

Aact = attitude toward an act

B_i = beliefs about the consequences of engaging in that act

A_i = the evaluation of those consequences.

Recently, a great deal of marketing research literature has been devoted to operational and computational efforts to improve the predictive power of the Fishbein model and other multi-attribute attitude models (Green, 1964; Bass and Wilkie, 1973; Wilkie and Pessemier, 1973; Holbrook and Hulbert, 1975; Mazis, Ahtola, and Klippel, 1975; Ryan and Bonfield, 1975; Wright, 1975; and Holbrook, 1976, 1977). Reviewing much of this literature, Holbrook concludes:

> ...one is impressed less by the degree to which any particular formulation outperforms another than by the consistency with which many different versions yield good predictive results as long as some reasonable representation of beliefs is used to predict affect or choice. (1978, p. 545)

IV. THE FISHBEIN BEHAVIORAL INTENTION MODEL

Although evidence seems to support the predictive quality of the Fishbein attitude model, marketing research is really concerned with the prediction not of attitudes, but of consumer behavior. Fishbein

(1975) theorized that behavioral intentions are influenced not only by attitudes, but by social or normative considerations as well. Fishbein has represented this behavioral intention model as:

$$B \cong BI = Aact_{w_0} + [(NB)\ (MC)]_{w_1}$$

Where:

B = overt behavior

BI = behavioral intention

Aact = attitude toward an act

NB = normative belief

MC = motivation to comply with the normative belief

w_0 and w_1 = empirically determined weights

This extended model added two new components, a normative belief (NB) component and a motivation to comply (MC) component, to the Aact model to predict behavioral intentions. A relative weighting system has been added to components because it is theorized that intention to engage in certain types of behavior is more strongly influenced by social or normative considerations than intention to engage in other types of behavior (Fishbein, 1975). For example, social or normative considerations may have a greater part in influencing an individual to buy a particular brand of a status-related item such as jeans, than relatively status-free items such as milk. Indeed, Witter (1978), found that the use of normative components increased sensitivity of the Aact measure of attitude when evaluating three products used in her study: two brands of footwear and one brand of pantyhose. Ajzen and Fishbein (1973) reviewed research testing the validity of this model in predicting a wide variety of behaviors. The prediction of behavioral intentions for activities such as engaging in premarital sexual intercourse,

cheating on an exam, buying various products, and using contraceptives has supported the model.

VI. EMPIRICAL RESEARCH FINDINGS

Deceptive Advertising

Gurol (1978) identified two main approaches used by researchers to identify deception. The first approach consisted of asking subjects if advertisements, claims, or situations are deceptive. Although this method has been used by several researchers (Haefner, 1972; Haefner and Permut, 1974; King and Wise, 1974; Ford, Kuehl and Reksten, 1975), it has been criticized as a poor method for detecting deception. Commenting on this procedure, Armstrong and Russ indicated, "to detect deception, it is insufficient (and logically deficient) to ask exposed relevant consumers whether an advertisement is deceptive. It appears self-evident that a consumer who judges an advertisement to be deceptive is not himself deceived." (1975, p. 26)

Indeed, Haefner (1972) found that a sample of adults' and students' rating of the deceptiveness of certain television commercials did not agree with unofficial ratings by FTC lawyers. He found, however, a strong correlation between advertisements that were seen as deceptive and the same advertisements being described as annoying, offensive, and as insulting to the intelligence. The Haefner and Permut study (1974) used a similar approach, which yielded similar findings.

When asked to rank fourteen previously classified types of deception from "most" to "least" deceptive, subjects in the Ford, Kuehl, and Reskten study (1975) were quite consistent in their rankings. Ranking fourteen bogus print ads designed to correspond to the previously devised classification

scheme, however, provided inconsistent rankings. The authors concluded that, "deception is in the eyes of the beholder."

In a study similar to the Ford, Kuehl, Resktin Study (1975), respondents were asked to rank-order definitional statements and newspaper advertisements. King and Wise (1974), found that the subjects were consistent in their ranking of the statements, but inconsistent in actual advertisement ranking. After reviewing the above studies, Gurol concluded, "These results suggest that measuring deception according to consumers' assessment of deceptiveness is not the right approach . Instead, it seems that using consumers' brand attribute beliefs to detect advertising deception is basically the correct approach," (1977, p. 183).

Empirical research designed to measure deception which does make use of brand attribute beliefs has been completed by Armstrong, Kendall and Russ (1975), Armstrong, Gurol and Russ (1979), Kuehl and Dyer (1976, 1977) and Witter, (1978). Armstrong, Kendall, and Russ (1975), use a model based on consumers' perceptions and beliefs of salient claims. They showed four potentially deceptive television advertisements to church and PTA groups. The structured instrument they used contained ten claims for each ad, designed to determine perceived salient and believed claims. After determining the false claims, the following measures were calculated for each advertisement: (1) liklihood of an ad to deceive relevant consumers; (2) what false claims were perceived, believed, and salient, and (3) the characteristics of those deceived. The pilot study had a number of limitations, among them a small sample size and an after-only experimental design, which could not measure deceptions held prior to exposure to the potentially deceptive advertisement.

Armstrong, Gurol and Russ (1979) further tested the Armstrong-

Kendall-Russ model, using a much larger sample size and a pretest-posttest control group experimental design to eliminate carry-over effects. Actual Listerine mouthwash ads used in the experimental treatment were found to be deceptive.

Kuehl and Dyer (1976, 1977) used the original Fishbein attitude model to measure deception, using junior high school students as subjects and hypothetical print advertisements about two hypothetical products. They used a modified version of Gardner's normative belief technique to empirically test brand attribute measures on Gardner's claim-fact and claim-belief typology of deception. They found that, in all cases, the direction of findings indicated that the functional attribute was more favorably evaluated than the norm after exposure to the hypothetical deceptive advertisement.

Witter (1978) tested the use of the extended Fishbein behavioral intention model in detecting deception, using actual advertisements of mouthwash, pantyhose, blemish cream, and footwear. The results of the pretest-posttest control group experimental design provided support for the use of this model in detecting deception. In some cases, the use of the normative component of the extended model increased the sensitivity of the model in detecting deception.

Rotfield and Reid (1977, p. 129) noted that, for the most part, academic researchers have "tended to produce unrelated, unreplicated studies which are rarely designed for use in specific pending cases." This research provides further testing of Witter's (1978) proposed application of Fishbein's behavioral intention model in detecting deception. It also tests its use in measuring the amount of residual deception after exposure to a corrective advertisement.

Corrective Advertising

Armstrong, Gurol and Russ (1979) classified empirical research on corrective advertising into two groups, according to the dependent variables used. Dyer and Kuehl (1974), Hunt (1972), and Kassarjian, Carlson, and Rossin (1975), studied attitudes toward the brand. Dyer and Kuehl (1978), Kuehl and Dyer (1976, 1977), Mazis and Adkinson (1976), and Armstrong, Gurol and Russ (1979) studied brand beliefs on a multi-attribute basis.

Dyer and Kuehl used radio and print ads for soft drink and suntan lotion brands as stimuli. Students were used as subjects in this study of the effects of message strength, message source and number of exposures of corrective messages upon awareness, attitude, corporate image and recall. In print ads, a strong corrective statement in the form of an FTC news release resulted in lower intention to buy. Also, the FTC-source, high strength message resulted in a less trustworthy firm image, while company-source high strength messages brought a more trustworthy image. Neither of these results held true for the broadcast messages, however. Gurol (1977) criticized the message designs as "artificial" and "ambiguous."

Hunt (1972) studied the effects of three ad attacks (explicit, general, and none) and three inoculation ads (explicit, general, and none) on inhibiting corrective ad effects. Actual Chevron ads or slight variations were shown to college students and attitudes toward the brand was measured. The study found that a corrective ad does reduce favorableness of attitude toward a brand and that by varying the content of the corrective ad, varied amounts of reduction in favorableness of attitude can be obtained.

Kassarjian, Carlson and Rosin (1975) attempted to assess the impact of a corrective advertisement for an unfamiliar brand of motorcycle safety device on attitude toward the product and the retailer. College students viewed the ad in five pages of a New York newspaper under both natural and forced conditions. It was found that attitudes toward the product became more negative, but that the negative attitudes did not generalize toward the retailer.

The three studies reported here consistently found that corrective advertisements were effective in erradicating the effects of a deceptive message by changing attitudes in a negative direction. They did not examine subjects' prior brand usage and attitudes (Gurol, 1977) or try to advance knowledge by constructing and examining innovative behavioral science concepts and variables related to remedial messages (Kuehl and Dyer, 1977).

The Mazis and Adkinson (1976), Kuehl and Dyer (1976, 1977) and Dyer and Kuehl (1978) studies used the brand attribute beliefs component of the Fishbein attitude model. Mazis and Adkinson used four versions of Listerine messages inserted into an audio tape of a late-night TV interview show. They were (1) noncorrective copy with germ-killing appeal, (2) corrective copy with germ-killing appeal (FTC source), (3) corrective copy with germ-killing appeal (company source), and (4) noncorrective copy with non-germ-killing appeal. After listening to the program, the college student subjects were asked to evaluate: (1) the goodness or badness of specific attributes of several brands; (2) the probability of particular brands being associated with beliefs; and (3) overall brand attitudes. The study found that: (1) the corrective messages had an impact on evaluation of the belief about

Listerine's cold and sore throat prevention abilities, (2) the corrective messages caused less favorable perception of Listerine on the cold and sore throat prevention attribute, (3) perception of germ-killing properties were also negatively affected, and (4) there was no difference in the effectiveness of FTC or company source.

In the second stage of the Kuehl and Dyer (1976, 1977) experiment described earlier (which first determined deception), the researchers used the original Fishbein model in a modified version of the normative belief technique to study corrective advertising. After a two-week time interval following the deception experiment, the same respondents were asked to read a corrective advertisement and to indicate their brand belief ratings. Combinations of high or low strength and FTC or company source messages were used. The study found that the FTC source advertisements resulted in significantly lower brand belief levels than the company source messages.

Dyer and Kuehl (1978) used the same framework in a longitudinal experimental design to examine the delayed effects of Listerine corrective advertising. The study found: (1) the Listerine ad to be potentially deceptive; (2) that limited exposure to corrective advertisements was ineffective in bringing brand beliefs into equilibrium with "normative" levels; and (3) that corrective ads affect other attributes of the product category even though they are not addressed in a remedial message.

In the second stage of the Armstrong, Gurol and Russ (1979) experiment, the Armstrong-Kendall-Russ model was used to measure the effects of a two-sided objective information message in erradicating the residual effects of deception in consumers' minds. Self-designed "corrective ads" identified as either FTC-source or company-source were

shown to eliminate the deception caused by the actual Listerine ad. The study found: (1) the two-sided objective information messages to be highly effective in erradicating the residual effects of the deceptive advertisement, and (2) a persistent effectiveness of the corrective message after a six-week period.

CHAPTER III

METHODS AND PROCEDURES

This study further tests the use of the Fishbein behavioral intention model in determining deception, a procedure proposed by Witter (1978). Three of the original questionnaires formulated by Witter will be used in this study. An explanation of the previous evaluative criteria selection and questionnaire development will be provided for purposes of clarity.

I. THE PRODUCTS

Three products were selected for use in this study from among those previously investigated or currently under consideration by the FTC for possible litigation. These are: mouthwash, pantyhose, and footwear. Actual advertisements for those products were used in the initial phase of the study. Actual products and advertisements, rather than fictitious ones, were chosen because consumers make decisions based on information and experience. Sawyer (1977) urges the use of real products in corrective advertising research because only real products allow the measurement of corrective advertising effects on erradicating residual beliefs of previous exposure to advertisements of the product.

The specific brands used in this study were determined by focus group interviews with 31 freshmen University of Tennessee, Knoxville students. Those brands most frequently mentioned were:

Mouthwash	Footwear	Pantyhose
Scope	Scholl	Sheer Energy
Listerine	Famolare	Hanes--Ultra Sheer
Lavoris	Fanfares	L'eggs
Listermint	Earth Shoes	No Nonsense

II. THE EVALUATIVE CRITERIA

After the products were chosen, salient evaluative criteria were established for each product. Salient evaluative criteria are the criteria that consumers actually use to compare and evaluate products and brands. For example, though a customer might consider price to be an important factor in purchasing goods, if he knows that all brands of a certain product class he wishes to buy have the same price, price would not be a salient evaluative criteria for that product class. Focus groups, any FTC rulings on the product, and company claims made in the advertisements were used to establish salient evaluative criteria. The sources from which the evaluative criteria were derived are included in Table 1, (Witter, 1978, p. 29).

The focus groups consisted of six to eight participants who discussed the attributes they considered important when buying the product. These discussions were tape recorded and later tabulated for response frequencies. After discussing the attributes, the students were asked to rank the evaluative criteria and to evaluate how the various brands differed for each of the attributes. Each focus group was asked to select evaluative criteria for one product only. The structure of the focus group interviews is included in Appendix A.

III. THE QUESTIONNAIRE

After salient evaluative criteria were determined, a questionnaire

Table 1

Final Evaluative Criteria By Source

	FOCUS GROUPS	FTC	ADVERTISING CLAIMS
Mouthwash			
Taste	x		x
Smell			x
Price	x		
Odor Control	x		x
Germ Killing Power		x[1]	x
Cold Prevention		x[1]	x
Brand Name	x		x
Casual Shoes			
Originality	x		x
Feel (Natural vs. Unnatural)	x		x
Leg Exercise			x
Health Value for Feet		x	x
Price	x		x
Effect on Posture		x	x
Durability	x		
Pantyhose			
Texture	x		x
Stretch			x
Durability	x		
Cost	x		
Attractiveness to the Opposite Sex			x
Sizing	x		x
Feel During Wearing	x		x

[1]FTC vs. Warner-Lambert Company Docket 8891, June 1972

was developed. The questionnaire was pretested on 51 freshmen Textiles and Clothing students at the University of Tennessee, Knoxville and revised for clarity.

Appendix B contains the questionnaire used for mouthwash. Questionnaires for footwear and pantyhose were similar in format. Only the posttest and experimental groups received a questionnaire including page 6 of the posttest.

Questions seeking demographic data as well as information necessary to operationalize the Fishbein model components were included. Additional information was gathered (in parts II and VI of the questionnaire) for analysis beyond the scope of this study.

Components of the Fishbein model and how they were operationalized in the questionnaire are found in Table 2, (Witter, 1978, p. 30). Behavioral intentions were measured by subjects' responses to questions of whether or not they intended to buy a particular brand. Respondents indicated their intention on a scale from 0 (I will not buy this brand) to 6 (I will buy this brand), with 3 being the neutral response. Subjects were asked to respond to intentions to buy at the brand level, rather than at the product class level, since Dulany (1961) has found that the more specific the intention becomes, the higher the correlation with a specific behavior.

Affect was measured by the subjects' scaling the importance of the evaluative criteria. The respondent was asked to scale the importance of the various criteria from 0 (very unimportant) to 6 (very important). Since the importance of the evaluative criteria would be generalized across the product level, the response was solicited at that level.

Beliefs were measured by response to the likelihood that specific brands would contain each attribute. Responses at the brand level were

from 0 (extremely improbable) to 6 (extremely probable).

TABLE 2

FISHBEIN COMPONENT	QUESTIONNAIRE
BI (Behavioral Intention)	Part I (Questions 8-11)
Aact (Attitude) $Aact = \sum_{1}^{n} A_i B_i$	
A (Affect)	Part III (Questions 19-25)
B (Beliefs)	Part IV (Questions 26-53)
NB (Normative Beliefs)	Part V (Questions 54-57)
MC (Motivation to Comply)	Part VI (Question 58)

Normative Belief was measured by asking the subjects' estimates that others would recommend buying each brand. Responses ranged from 0 (extremely improbable) to 6 (extremely probable).

The Motivation to Comply component was measured by asking the respondents to rate the importance they placed on others' advice when selecting the product. Responses ranged from 0 (don't care at all) to 6 (care a great deal).

Occupation and education data were weighted and combined according to Hollingshead's Two Factor Index of Social Position (1965) to create a social position variable. This factor was used to identify socio-economic differences between experimental and control groups.

The questions were evaluated on a 0 to 6 scale, which was converted to a 1 to 7 scale for statistical analysis. The 0 to 6 scale was used in order to allow students to respond on computer scan sheets. Table 3 (Witter, 1978, p. 36) contains the directional rating of variables in the study.

TABLE 3

VARIABLE	RANGE	HIGH SCORE	LOW SCORE
Behavioral Intentions	1 to 7	High Importance	Low Importance
Affect	1 to 7	High Importance	Low Importance
Belief	1 to 7	High Importance	Low Importance
Normative Belief	1 to 7	High Importance	Low Importance
Motivation to Comply	1 to 7	High Importance	Low Importance
Hollingshead Social Position	1 to 7	Low Position	High Position

IV. THE SAMPLE

The sample consisted of public high school students from two high schools in Grand Rapids, Michigan and one high school in Holt, Michigan. Most of the students were home economics class members, although some of the data were gathered in a study hall and an advertising class. Three hundred sixty-four students participated in the pretest, with 249 students completing valid first posttest questionnaires. The 115 failures to complete the first posttest questionnaires were due to absenteeism, incorrect completion of the questionnaire, or refusal to complete the posttest questionnaire. One hundred fifteen students validly completed the second posttest questionnaire. The final sample size for each product group was:

mouthwash

posttest 1	n = 102
posttest 2	n = 54

footwear

posttest 1	n = 78
posttest 2	n = 33

pantyhose

posttest 1	n = 69
posttest 2	n = 28

Since advertisements for the three products to be tested are found in magazines designed for high school students, it is assumed that the sample is made up of potential users of the products selected. It is essential that the sample be part of the potential market segment, since, as previously noted, Gardner (1976) defined deception as occuring within specific market segments. It would not matter, for example, whether or not a pantyhose commercial was found to deceive men, since men do not form part of the market segment for pantyhose. For this reason, the pantyhose and footwear questionnaire were administered to female students only.

V. THE RESEARCH DESIGN

A two-stage non-equivalent control group experimental design was used in the study. The pretest-posttest component of the design allows for measurement of differences in attitude scores, while the control group provides increased internal validity. Groups constituted naturally assembled classrooms rather than randomly-assigned assemblages, since the use of classroom group provided the least interferences with high school schedules. Campbell and Stanley (1963) consider this design to be acceptable when random assignment of groups is not feasible.

An identical design was used in the experimental evaluation for

each of the three product classes. Figure 1 contains a diagram illustrating the research design.

FIGURE 1

TWO-STAGE NON-EQUIVALENT CONTROL GROUP DESIGN

O_1 O_2 O_2 O_3

O_1 X_1 O_2 X_2 O_3

O_1 = Pretest

O_2 = First Posttest

O_3 = Second Posttest

X_1 = Experimental Treatment Number 1 (original advertisement)

X_2 = Experimental Treatment Number 2 (corrective advertisement)

Members of the sample were assigned by classroom to one of two groups--experimental or control. The pretest questionnaire was administered to both groups. One week later, the experimental group was shown an advertisement referred to as Experimental Treatment Number 1 and the first posttest questionnaire was administered to both groups. Differences in the mean gain scores for the experimental and the control group were analyzed, using a t-test for differences.

One week after the first posttest, an advertisement modeled after those developed by the FTC for use as corrective advertisements (Experimental Treatment Number 2) was shown to the groups. The second posttest questionnaire was administered and differences in the mean gain scores were again analyzed, using a t-test for differences.

VI. THE ADVERTISING TREATMENT

The advertisements used in Experimental Treatment Number 1 consisted of actual advertisements for four different brand items of one product class. The advertisements were obtained from magazines designed to be sold to the sample group. One advertisement contained an allegedly deceptive statement. The allegedly deceptive statements, by product class, were:

Mouthwash: "Two-fisted. A real fighter. Kills germs by millions. So strong it keeps breath fresh for hours... and hours. Listerine antiseptic. Kills Germs by Millions on Contact. For Bad Breath, Colds and Resultant Sore Throats."

Footwear: "What you don't feel is the toe grip at work. It makes your toes "hang on." Which exercises your legs to help firm and tone them while you walk."

Pantyhose: "Gentlemen prefer Hanes."

Experimental Treatment Number 2 also consisted of four advertisements. Three of the advertisements were identical to the three "non-deceptive" ads in Experimental Treatment Number 1, while the allegedly deceptive advertisement was replaced by a "corrective advertisement." The Listerine corrective advertisement was taken from an advertising mock-up obtained from Warner-Lambert. The section containing the corrective message was reproduced. The other "corrective advertisements" were identical to the original advertisement except that the allegedly deceptive portion was omitted and a "corrective" portion inserted, modeled in format after the Listerine corrective advertisement. The "corrective" messages were:

Mouthwash: "Listerine will not help prevent colds or sore throats or lessen their severity."

Footwear: "Scholl Exercise Shoes will not firm or tone legs."

Pantyhose: There is no evidence which indicates that men prefer the Hanes brand of Pantyhose."

The advertising treatments are contained in Appendix C.

Each participant was provided with a black and white photostatic copy of the advertisement, while a color slide of the same advertisement was projected on a screen. They were allowed to refer freely to the advertisements as they completed the questionnaires. This eliminated retention of material as a variable in the study.

VII. HYPOTHESES AND STATISTICAL TREATMENT

Hypotheses 1 and 2 are related to the deceptive advertising issue, while hypotheses 3 and 4 are related to the erradication of deception by corrective advertising. Hypotheses are stated in the null form.

H1: There will be no change in attitude following exposure to Experimental Treatment Number 1.

This Hypothesis deals with the original Fishbein model, $Aact = \sum_{1}^{n} B_i A_i$. Mean gain scores comparing attitudes were calculated and a t-test for independent samples was used to compare the two groups. Mean gain scores were used because it is necessary to compare pretest and posttest scores on an individual basis rather than as a group.

H2: There will be no change in behavioral intentions following exposure to Experimental Treatment Number 1.

The second hypothesis deals with the extended Fishbein model (1967), which measures behavioral intentions, $B \cong BI = Aact_{w_0} + [(NB)(MC)]_{w_1}$.

Mean gain scores comparing behavioral intentions were calculated for both experimental and control groups, and a t-test for independent samples was used to compare the two groups.

H3: There will be no change in attitude following exposure to Experimental Treatment Number 2.

Mean gain scores comparing attitudes were calculated and a t-test for independent samples was used to compare the two groups.

H4: There will be no change in behavioral intentions following exposure to Experimental Treatment Number 2.

Mean gain scores comparing behavioral intentions were calculated for both experimental and control groups, and a t-test for independent samples was used to compare the two groups.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter summarizes the outcome of the data collection process and discusses the statistical analysis of the data. The first major section discusses the validity of the Fishbein models in predicting attitudes and behavioral intentions, as measured by the questionnaire. The second section describes the sample and compares the control and experimental groups with respect to certain selected demographic characteristics. Findings related to the hypotheses are presented in the final section.

I. ANALYSIS OF THE FISHBEIN MODELS

This study focuses on the use of Fishbein models as a method of predicting attitudes and behavioral intentions. Therefore, an analysis was done to determine those prediction capabilities. Multiple regression analysis was used to analyze both the original and the extended models and their ability to predict the respondents' stated intention to buy specific product brands. The results are shown in Tables 18 and 19, found in Apprndix E.

The original attitude model ($Aact = \sum_{1}^{n} B_i A_i$) was found to accurately predict behavioral intentions to buy 11 of the 12 product brands. The model was significant at the .0001 level in predicting intention to buy Scope, Listerine, Lavoris and Listermint brands of mouthwash and Scholl, Fanfares and Earth Shoes brands of footwear.

The model was significant at the .001 level for Sheer Energy pantyhose; at the .01 level for Famalare brand of footwear and Hanes Ultra Sheer pantyhose; and at the .05 level for No Nonsense pantyhose. The model for L'eggs brand of pantyhose was not found to be a significant predictor of behavioral intentions.

The extended Fishbein model was also found to predict behavioral intention to buy 11 of the 12 products. Behavioral intention to buy Scope, Listerine, Lavoris, and Listermint mouthwash, and Scholl, Fanfares, and Earth Shoes footwear were predicted at the .0001 level of significance. The model was significant in predicting behavioral intentions to buy Famloare footwear and Sheer Energy pantyhose at the .001 level; Hanes Ultra Sheer at the .01 level, and No Nonsense at the .05 level. Again, for only one product brand, L'eggs pantyhose, was the model not found to be a significant predictor of behavioral intention.

II. THE SAMPLE

Data describing the race, sex, age, parent's occupation, and parent's education were gathered for both control and experimental groups. Another demographic variable, socio-economic status, was determined by the use of Hollingshead's Two Factor Index of Social Position (1965). The index uses parents' occupation and education as classification factors, with each being ranked from 1 to 7. The 1 represents the highest classification, while the 7 represents the lowest. The two factors are weighted and combined in the following manner:

SES LEVEL = Occupation x 7 + Education x 4

Final social position scores ranged from a possible 11 to a possible 77. Low scores indicated upper social position, while higher scores

indicated lower position.

The control and experimental groups were compared with respect to certain selected variables: parent's occupation, parent's education, socioeconomic status level, purchasing frequency, and behavioral intentions. Purchasing frequency was measured by a pretest response to, "How often do you generally purchase (product class)?" Respondents were asked to circle a response ranging from "several times a month" to "never." Behavioral intentions were measured by a pretest response to the question, "Would you estimate how likely it would be that you would purchase the following brands of (product class)?" Responses were made on a scale of 0 (I will not buy this brand) to 6 (I will buy this brand), with a neutral response of 3. Demographic characteristics of the control and experimental groups will be discussed by product groups.

Mouthwash Group

Fifty-four control subjects and forty-nine experimental subjects completed the first posttest questionnaire. Demographic characteristics of the two groups are summarized in Table 4. Ninety-six percent of the control group were males, while males made up only 67 percent of the experimental group. The high proportion of males completing the mouthwash questionnaires was due to data collection conditions. Since the other two products used required female consumers as respondents, the male class members were often asked to complete mouthwash questionnaires. The majority of both control and experimental respondents were 17 years old. All of the respondents were 18 years of age or younger. The control group contained a lower

Table 4

Mouthwash Group
Summary of Demographic Information
for Control and Experimental Groups

Variable	Control N	Control %	Experimental N	Experimental %
Race				
Caucasian	29	54	33	67
Black	19	35	6	12
Other	5	9	8	16
No Response	1	2	2	4
Sex				
Male	52	96	33	67
Female	1	2	15	31
No Response	1	2	1	2
Age				
Under 15	3	6	0	0
15	8	15	5	10
16	6	11	1	2
17	32	59	33	67
18	5	9	9	18
19	0	0	0	0
Over 19	0	0	0	0
No Response	0	0	1	2
SES Level				
11-17	0	0	1	2
18-27	4	7	3	6
28-43	10	19	17	35
44-60	20	37	20	41
61-77	19	35	8	16
No Response	1	2	0	0
	N = 54		N = 49	

proportion of subjects in the higher social position than did the experimental group. Only 26 percent of the control subjects were in the three higher social positions, while 43 percent of the experimental subjects were classified into those groups.

Experimental and control groups were compared with respect to level of parent's occupation, parent's education, social position, purchasing frequency, and behavioral intentions by means of a t-test for differences. The results are presented in Table 5. Three variables, parent's occupation, socio-economic status, and intention to purchase two brands of mouthwash were found to be significant at the .05 level. For both the occupational and the social position variables, the experimental group yielded lower means, indicating a higher social position and a higher occupational level. The means for the behavioral intention variable also differed significantly for two brands of mouthwash: Lavoris and Listermint. In both cases, before exposure to the advertising treatments, the experimental group estimated that they were less likely to buy the brands than did the control group. Both the control and experimental groups indicated that they purchase mouthwash, on the average, "several times" to "once" a year. The mean response of both groups indicated that the average educational attainment of the household head was high school graduate or some college, business or vocational training.

Footwear Group

Forty-five control subjects and thirty-five experimental subjects completed the first posttest questionnaire. Demographic characteristics of the footwear group are summarized in Table 6. All respondents

Table 5

Mouthwash Group
Comparison of Control and Experimental Groups
for Selected Demographic Variables
N = 102

Variable	N	Mean	SD	DF	t
Parent's Occupation					
Control	53	5.2642	1.571	100	2.42*
Experimental	49	4.5102	1.570		
Parent's Education					
Control	53	3.8868	1.368	100	1.36
Experimental	49	3.4898	1.583		
SES Level					
Control	53	4.0189	.930	100	2.12*
Experimental	49	3.6327	.906		
Purchasing Frequency					
Control	53	3.6415	1.922	100	.53
Experimental	49	3.4490	1.757		
Behavioral Intentions					
Scope-Control	53	4.5849	2.107	100	1.44
Scope-Experimental	49	3.9796	2.136		
Listerine-Control	53	4.2642	2.237	100	1.67
Listerine-Experimental	49	3.5306	2.199		
Lavoris-Control	53	3.4906	1.783	100	2.23*
Lavoris-Experimental	49	2.7143	1.720		
Listermint-Control	53	4.7547	1.860	100	2.79*
Listermint-Experimental	49	3.6531	2.127		

* $p < .05$

were female. Only 38 percent of the control group were Caucasian, while Caucasians made up 77 percent of the experimental group. A greater percentage of the control group were black (56 percent vs. 14 percent of the experimental group). Nine percent of the experimental group responded to the "other" racial category, while none of the control group made that response. The majority of both control and experimental groups were 17 years old or younger, but 45 percent of the control group and only 20 percent of the experimental group were 15 or younger. The majority of both groups came from the two lowest social position categories.

Results of t-tests used to compare experimental and control groups with respect to levels of parents' occupation, parents' education, social position, purchasing frequency, and behavioral intention are contained in Table 7. The purchasing frequency variable was found to be significant at the .001 level. This indicates that members of the control group purchase casual shoes, on the average, more frequently than do members of the experimental group. The mean response indicates a purchase of "several times a year" to "monthly" for the control group, while only "once a year" to "several times a year" is indicated for the experimental group. Behavioral intentions to purchase Fanfare brand of footwear was also significant. On the pretest questionnaire, the control group indicated a greater behavioral intention to buy the Fanfare brand than did the experimental group. In both groups, the average level of educational attainment for the household head was high school graduate or some college, vocational or business school training.

Table 6

Footwear Group
Summary of Demographic Information
for Control and Experimental Groups

Variable	Control N	Control %	Experimental N	Experimental %
Race				
Caucasian	17	38	27	77
Black	25	56	5	14
Other	0	0	3	9
No Response	3	7	0	0
Sex				
Male	0	0	0	0
Female	42	93	35	100
No Response	3	7	0	0
Age				
Under 15	3	7	0	0
15	17	38	7	20
16	13	29	6	17
17	8	18	18	51
18	3	7	2	6
19	0	0	2	6
Over 19	0	0	0	0
No Response	1	2	0	0
SES Level				
11-17 Higher	1	2	1	3
18-27	4	9	2	6
28-43	5	11	3	9
44-60	14	31	18	51
61-77	21	47	10	29
No Response	0	0	1	3
	N = 45		N = 35	

Table 7

Footwear Group
Comparison of Control and Experimental Groups
for Selected Demographic Variables
N = 79

Variable	N	Mean	SD	DF	t
Parent's Occupation					
Control	45	5.5333	1.854	77	1.04
Experimental	34	5.1176	1.610		
Parent's Education					
Control	45	3.4889	1.362	77	-1.39
Experimental	34	4.1176	1.343		
SES Level					
Control	45	4.1111	1.071	77	0.48
Experimental	34	4.0000	.953		
Purchasing Frequency					
Control	45	2.8889	1.049	77	-3.95**
Experimental	34	3.8235	1.029		
Behavioral Intentions					
Scholl-Control	45	4.2444	2.278	77	0.58
Scholl-Experimental	34	3.9412	2.322		
Famolare-Control	45	3.5778	1.815	77	0.95
Famolare-Experimental	34	3.1765	1.914		
Fanfare-Control	45	4.3778	1.969	77	2.24*
Fanfare-Experimental	34	3.4412	1.655		
Earth Shoes-Control	45	5.1333	2.040	77	1.07
Earth Shoes-Experimental	34	4.6176	2.202		

* $p < .05$

** $p < .01$

Pantyhose Group

Thirty-eight control subjects and thirty-one experimental subjects completed the first posttest. Demographic characteristics are summarized in Table 8. In both the control and experimental groups, about 50 percent of the respondents were Caucasian. Thirty-six percent of each group were black, with the remaining respondents of other racial heritage. All respondents were female. In both groups, the majority of the respondents were in the two lowest socio-economic groups. Twenty-seven percent of the control subjects were 15 years old or younger, while the experimental group contained no subjects under 16 years of age. In both groups, however, the majority of subjects were 16 or 17 years old.

Results of t-tests used to compare experimental and control groups with respect to levels of parents' occupation, parents' education, social position, purchasing frequency, and behavioral intention are contained in Table 9. Only the purchasing frequency variable was found to be significant at the .05 level. The mean responses (3.1579 for the control group, 2.3226 for the experimental), would indicate that members of the control group, on the average, purchase pantyhose only "several times a year," while the experimental group purchases the product "monthly." The 3.9737 mean for the control group and 3.9355 mean for the experimental would indicate that the highest educational attainment for the head of the household was, on the average, graduation from high school.

Summary of Demographic Information

Control and experimental groups were described with respect to

Table 8

Pantyhose Group
Summary of Demographic Information
for Control and Experimental Groups

Variable	Control N	Control %	Experimental N	Experimental %
Race				
Caucasian	19	50	16	52
Black	14	36	11	36
Other	4	11	4	13
No Response	1	3	0	0
Sex				
Male	0	0	0	0
Female	37	97	31	100
No Response	1	3	0	0
Age				
Under 15	1	3	0	0
15	9	24	0	0
16	13	34	18	58
17	14	37	13	42
18	0	0	0	0
19	1	3	0	0
Over 19	0	0	0	0
SES Level				
11-17	0	0	0	0
18-27	1	3	1	3
28-43	10	26	6	19
44-60	13	34	11	36
61-77	14	37	13	43
	N = 38		N = 31	

Table 9

Pantyhose Group
Comparison of Control and Experimental
for Selected Demographic Variables and Behavioral Intentions

Variable	N	Mean	SD	DF	t
Parent's Occupation					
Control	38	5.3947	1.443	67	0.02
Experimental	31	5.3871	1.647		
Parent's Education					
Control	38	3.9737	1.619	67	-0.10
Experimental	31	3.9355	1.482		
SES Level					
Control	38	4.0526	.868	67	-0.52
Experimental	31	4.1613	.860		
Purchasing Frequency					
Control	38	3.1579	1.551	67	2.46*
Experimental	31	2.3226	1.194		
Behavioral Intentions					
Sheer Energy-Control	38	4.2895	2.039	67	-0.21
Sheer Energy-Experimental	31	4.3871	1.745		
Hanes-Control	38	3.6053	1.868	67	0.29
Hanes-Experimental	31	3.4839	1.503		
L'eggs-Control	38	4.0789	2.173	67	-1.65
L'eggs-Experimental	31	4.9032	1.921		
No Nonsense-Control	38	4.9474	2.323	67	1.19
No Nonsense-Experimental	31	4.2903	2.209		

* $p < .05$

race, sex, age, and social position. T-tests were used to compare the groups with respect to parent's occupation, parent's education, social position, product group purchase frequency, and behavioral intention to buy specific brands within the product group. The groups were not always comparable. The mouthwash groups differed in distribution by social position, parent's occupation, and behavioral intention. The footwear groups differed in purchasing frequency and behavioral intention distribution. The pantyhose group differed in purchasing frequency distribution.

III. TESTING THE HYPOTHESES

Stage I: Detecting Deception

H1: There will be no change in attitude following exposure to Experimental Treatment Number 1.

This hypothesis is designed to determine if attitude change resulted after exposure to the potentially deceptive advertisement. Pretest and posttest scores were computed according to the original Fishbein model, $(Aact = \sum_{1}^{n} A_i B_i)$, for subjects in the control and experimental groups. Attitude scores were computed for each subject and mean gain scores were calculated for each group. The independent samples t-test was used to compare the groups.

Tables 10-12 summarize attitude change. No significant difference was found between the control and experimental groups. Null hypothesis 1 therefore cannot be rejected.

H2: There will be no change in behavioral intention following exposure to Experimental Treatment Number 1.

This hypothesis deals with change in behavioral intention which

Table 10

Stage 1: Posttest 1 - Pretest
Attitude Change and Behavioral Intention Change
Gain Scores for Mouthwash Brands
N = 102

Variables	N	Mean	SD	DF	t
Aact Attitude Gain Score					
Scope-Control	53	- 4.7358	69.912	100	-0.08
Scope-Experimental	49	- 3.6735	70.256		
Listerine - Control	53	- 2.7545	70.212	100	-1.17
Listerine-Experimental	49	12.4694	59.760		
Lavoris-Control	53	.3585	65.359	100	-0.40
Lavoris-Experimental	49	5.7143	68.246		
Listermint-Control	53	- 7.7170	59.189	100	0.47
Listermint - Experimental	49	-14.1429	78.988		
Fishbein Extended Model Gain Score					
Scope-Control	53	- 4.4717	68.764	100	-0.15
Scope-Experimental	49	- 2.2449	80.105		
Listerine-Control	53	- 1.0189	67.331	100	-1.03
Listerine-Experimental	49	12.7757	67.210		
Lavoris-Control	53	2.0755	64.003	100	-0.26
Lavoris-Experimental	49	5.6327	74.261		
Listermint-Control	53	- 6.1509	58.681	82.27[1]	0.53
Listermint- Experimental	49	-14.1837	88.702		

[1]Since it cannot be assumed that the 2 groups had the same variance, an F test of sample variances was performed. F was less than or equal to .05, so the degrees of freedom were adjusted and a t based on the separate variance estimate was used.

Table 11

Stage 1: Posttest 1 - Pretest
Attitude Change and Behavioral Intention Change
Gain Scores for Footwear Brands
N = 78

Variables	N	Mean	SD	DF	t
Aact Attitude Gain Score					
Scholl-Control	44	1.0909	60.651	73.06[1]	- .16
Scholl-Experimental	34	2.8529	37.823		
Famolare-Control	44	3.2273	62.127	76	- .71
Famolare-Experimental	34	12.8824	56.110		
Fanfares-Control	44	9.4318	58.205	76	- .71
Fanfares-Experimental	34	18.2059	48.504		
Earth Shoes-Control	44	-10.3182	61.491	76	- .48
Earth Shoes-Experimental	34	- 3.8529	54.626		
Fishbein Extended Model Scores					
Scholl-Control	44	- 1.5000	63.055	76	- .03
Scholl-Experimental	34	- 1.1471	44.076		
Famolare-Control	44	4.9091	65.060	76	- .50
Famolare-Experimental	34	12.0588	60.353		
Fanfares-Control	44	7.8182	59.052	76	- .54
Fanfares-Experimental	34	14.7059	51.956		
Earth Shoes-Control	44	-11.9545	64.677	76	- .29
Earth Shoes-Experimental	34	- 7.8824	58.676		

[1]Since it cannot be assumed that the 2 groups had the same variance, an F test of sample variances was performed. F was less than or equal to .05, so the degrees of freedom were adjusted and t based on the separate variance estimate was used.

Table 12

Stage 1: Posttest - Pretest
Attitude Change and Behavioral Intention Change
Gain Scores for Pantyhose Brands
N = 69

Variables	N	Mean	SD	DF	t
Aact Attitude Gain Score					
Sheer Energy-Control	38	- 6.0000	78.163	67	.39
Sheer Energy-Experimental	31	-13.2581	77.017		
Hanes-Control	38	- 4.5789	71.602	67	- .19
Hanes-Experimental	31	- 1.1935	76.659		
L'eggs-Control	38	-21.0263	82.567	67	- .86
L'eggs-Experimental	31	- 4.0645	79.542		
No Nonsense-Control	38	-21.3158	83.824	67	-1.11
No Nonsense-Experimental	31	1.9355	90.618		
Fishbein Extended Model Gain Scores					
Sheer Energy-Control	38	- 2.5000	83.720	67	.43
Sheer Energy-Experimental	31	-11.1935	85.030		
Hanes-Control	38	- .8947	74.844	67	- .00
Hanes-Experimental	31	- .8065	84.884		
L'eggs-Control	38	-19.8421	86.026	67	- .86
L'eggs-Experimental	31	- 2.0000	85.778		
No Nonsense-Control	38	-17.8158	90.442	67	- .85
No Nonsense-Experimental	31	1.5806	98.872		

results from exposure to a potentially deceptive advertisement as measured by the Fishbein extended model, $B \cong BI = Aact_{w_0} + [(NB)(MC)]_{w_1}$. Behavioral intention scores were computed for each subject and mean gain scores were calculated for each group. The independent samples t-test was used to compare the groups.

Changes in behavioral intentions are summarized in Tables 10-12. No significant difference was found in behavioral intention change between the control and experimental group. Null hypothesis 2 therefore cannot be rejected.

Stage II: Measuring the Effectiveness of Corrective Efforts

The second stage of the experiment dealt with the issue of corrective advertising.

H3: There will be no change in attitude following exposure to Experimental Treatment Number 2.

This hypothesis is designed to determine if attitude change resulted after exposure to the corrective advertisement. Pretest and posttest scores were computed according to the original Fishbein model for subjects in the control and experimental groups. Attitude scores were computed for each subject and mean gain scores were calculated for each group. The independent samples t-test was used to compare the groups.

Tables 13-15 summarize attitude change. There was no significant difference between control and experimental groups, therefore null hypothesis 3 cannot be rejected.

H4: There will be no change in behavioral intention following exposure to Experimental Treatment Number 2.

This hypothesis deals with change in behavioral intention which results from exposure to the corrective advertisement, as measured by the Fishbein extended model, $B \cong BI = Aact_{w_0} + [(NB)(MC)]_{w_1}$. Behavioral intention scores were computed for each subject and mean gain scores were calculated for each group. The independent samples t-test was used to compare the groups.

Tables 13-15 summarize change in behavioral intention. No significant difference was found in behavioral intention change between the control and experimental group. The null hypothesis therefore cannot be rejected.

IV. NORMATIVE BELIEF TECHNIQUE

The data were further analyzed using the conceptual framework of Gardner's (1976) normative belief technique and Wilkie's (1973) suggestion of measurement at the brand belief level. For each product category, two beliefs were selected, one being the potentially deceptive belief under study. Another belief closely related to the potentially deceptive belief was selected to examine whether deceptive or corrective statements about one attribute may affect beliefs about other attributes. Mean brand belief scores on the pretest, first posttest, and second posttest were computed for each brand for control and experimental groups.

Mean scores for the specific brand advertising the potentially deceptive claim were compared with a normative belief score consisting of an average mean score of the other 3 brands studied. Results are presented in Table 16.

Figure 2 illustrates the shifts in cold prevention belief scores that occurred during the experiment's three phases. In the first stage

Table 13

Stage 2: Posttest 2 - Pretest
Attitude Change and Behavioral Intention Change
Gain Scores for Mouthwash Brands
N = 54

Variables	N	Mean	SD	DF	t
Aact Attitude Gain Score					
Scope-Control	21	-12.9048	53.652	51	.23
Scope-Experimental	32	-16.7500	63.930		
Listerine-Control	21	3.8095	52.793	51	.74
Listerine-Experimental	32	-10.1875	75.532		
Lavoris-Control	21	2.4286	51.215	51	- .08
Lavoris-Experimental	32	3.8125	64.670		
Listermint-Control	21	-15.6190	45.983	51	.40
Listermint-Experimental	32	-23.0000	76.665		
Fishbein Extended Model Gain Score					
Scope-Control	21	-10.8095	60.355	51	- .44
Scope-Experimental	32	- 4.1563	49.175		
Listerine-Control	21	7.9524	64.490	51	1.69
Listerine-Experimental	32	-17.9375	47.200		
Lavoris-Control	21	9.2381	66.023	51	.73
Lavoris-Experimental	32	- 2.0938	47.435		
Listermint-Control	21	- 5.9048	50.605	51	- .45
Listermint-Experimental	32	- .5000	36.097		

Table 14

Stage 2: Posttest 2 - Pretest
Attitude Change and Behavioral Intention Change
Gain Scores for Footwear Brands
N = 33

Variables	N	Mean	SD	DF	t
Aact Attitude Gain Scores					
Scholl-Control	10	11.3000	83.145	31	.44
Scholl-Experimental	23	.7826	51.949		
Famolare-Control	10	38.1000	77.202	31	.76
Famolare-Experimental	23	16.4783	74.785		
Fanfare-Control	10	55.4000	72.864	31	1.19
Fanfare-Experimental	23	28.4348	53.229		
Earth Shoes-Control	10	- 4.9000	93.860	10.97[1]	.24
Earth Shoes-Experimental	23	-12.3043	46.528		
Fishbein Extended Model Gain Scores					
Scholl-Control	10	7.1000	41.278	31	.31
Scholl-Experimental	23	2.0879	42.785		
Famolare-Control	10	25.0000	39.282	31	1.37
Famolare-Experimental	23	3.7391	41.609		
Fanfare-Control	10	24.2000	69.140	31	.46
Fanfare-Experimental	23	14.7824	47.299		
Earth Shoes-Control	10	-15.2000	82.436	31	- .69
Earth Shoes-Experimental	23	- 1.9565	29.230		

[1]Since it cannot be assumed that the 2 groups had the same variance, an F test of sample variance was performed. F was less than or equal to .05, so the degrees of freedom were adjusted and t based on the separate variance estimate was used.

Table 15

State 2: Posttest 2 - Pretest
Attitude Change and Behavioral Intention Change
Gain Scores for Pantyhose Brands
N = 28

Variables	N	Mean	SD	DF	t
Aact Attitude Gain Scores					
Sheer Energy-Control	19	- 3.5263	66.204	26	1.10
Sheer Energy-Experimental	9	-29.5556	34.413		
Hanes-Control	19	13.2105	68.464	26	1.29
Hanes-Experimental	9	-19.5556	47.242		
L'eggs-Control	19	-10.7895	71.303	26	- .10
L'eggs-Experimental	9	- 8.3333	38.613		
No Nonsense-Control	19	-18.2105	70.025	26	.07
No Nonsense-Experimental	9	-20.1111	49.936		
Fishbein Extended Model Gain Scores					
Sheer Energy-Control	19	8.4211	57.529	26	- .22
Sheer Energy-Experimental	9	13.1111	43.386		
Hanes-Control	19	12.6842	52.071	26	- .06
Hanes-Experimental	9	14.1111	69.033		
L'eggs-Control	19	15.7895	49.484	26	.08
L'eggs-Experimental	9	14.2222	51.533		
No Nonsense-Control	19	12.8947	57.683	26	- .09
No Nonsense-Experimental	9	14.8889	53.069		

Table 16

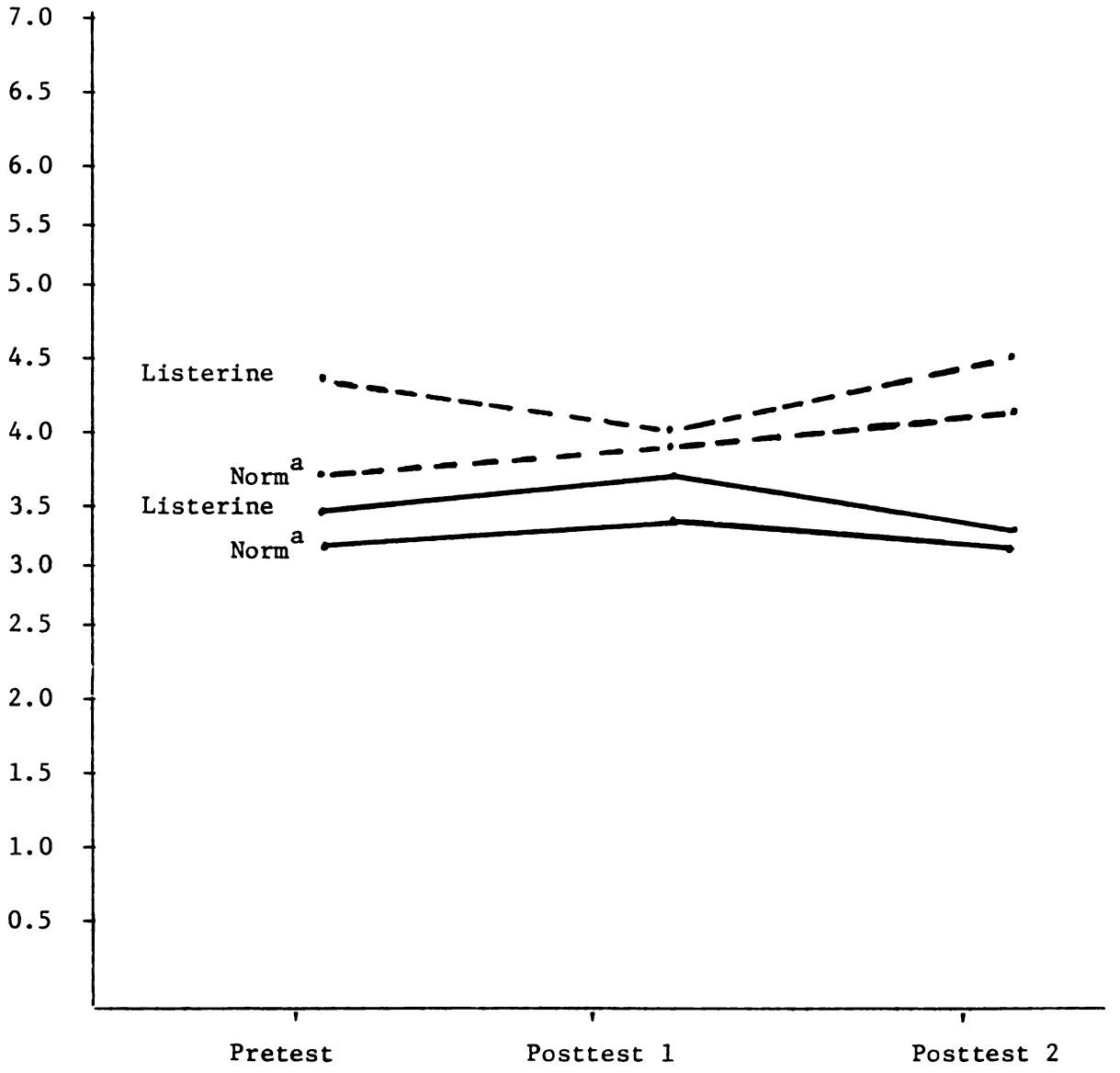
Mean Belief Scores for Selected Attributes

Belief	Pretest		Posttest 1		Posttest 2	
Mouthwash	Listerine	Others	Listerine	Others	Listerine	Others
Kills Germs						
Control	5.113	4.755	5.130	4.759	5.0476	4.889
Experimental	4.653	4.442	4.653	4.265	4.1250	4.166
Prevents Colds						
Control	4.434	3.742	4.056	3.983	4.619	4.222
Experimental	3.429	3.184	3.735	3.395	3.375	3.260
Footwear	Scholl	Others	Scholl	Others	Scholl	Others
Leg Exercise						
Control	5.000	4.741	5.068	4.674	6.100	5.033
Experimental	5.118	4.294	5.343	4.505	5.087	4.406
Health Value for feet						
Control	5.156	4.741	5.500	4.750	6.300	5.033
Experimental	4.824	4.225	5.000	4.800	4.870	4.924
Pantyhose	Hanes	Others	Hanes	Others	Hanes	Others
Texture						
Control	4.105	4.728	4.447	4.473	4.579	4.351
Experimental	4.065	4.642	3.387	4.484	4.667	4.778
Sex Appeal						
Control	4.211	4.430	4.395	4.281	4.895	4.807
Experimental	4.968	4.903	4.645	4.656	5.111	4.407

Figure 2

Normative Belief Technique

Belief that Mouthwash Prevents Colds



[a]Norm means represent an average of beliefs in the other three brands

_____ Experimental ---------- Control

of the study, the mean brand belief of the group viewing the Listerine experimental treatment increased slightly, as did the norm. In both experimental and control cases, the belief about cold prevention power was higher for Listerine than for the other brands of mouthwash. Thus, using Gardner's terminology, the Listerine ad would be considered potentially deceptive. In the second stage, the mean brand belief scores dropped closer to the normative belief score, indicating that the experimental group now perceived Listerine as about as likely to prevent colds as the other brands of mouthwash studied.

The belief that Listerine kills germs may be related closely by some to the cold prevention claim. The shift in germ-killing beliefs is illustrated in Figure 3. The brand belief for the Listerine control group remained higher than the normative belief in all phases of the experiment, while the experimental group score increased during the first stage of the experiment and dropped to about the same as the normative belief during the second stage. This pattern follows closely the pattern of the cold prevention belief.

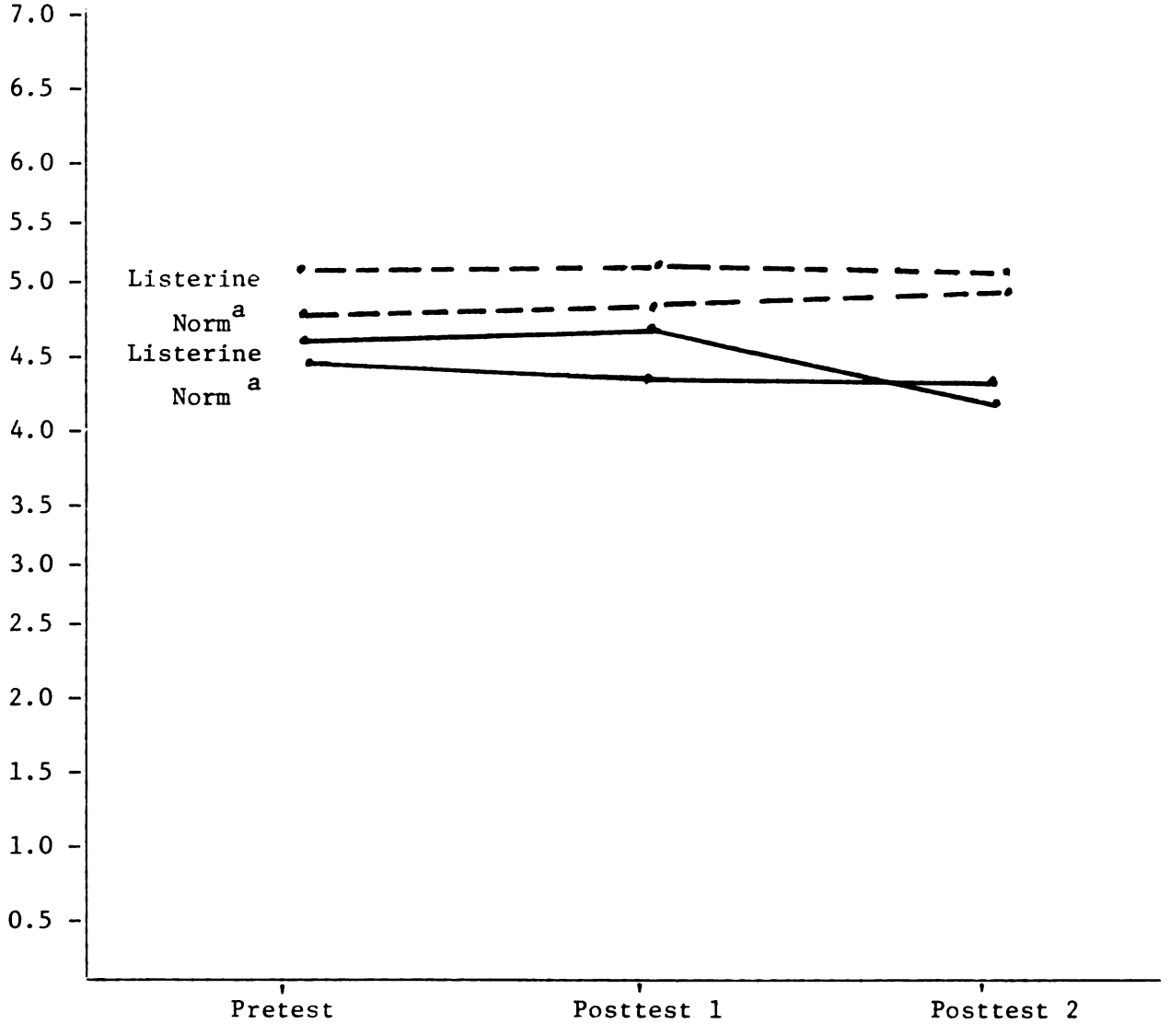
The shifts in leg exercise belief scores are illustrated in Figure 4. In all cases, the belief that Scholl exercise sandals exercise the legs was greater than the normative belief, although the belief score for the group which had previously seen the potentially deceptive treatment decreased slightly in the second stage of the experiment. Gardner would term the Scholl advertisement potentially deceptive.

The belief that brands have health value for the feet is illustrated in Figure 5. The belief for Scholl brand of footwear was higher than the normative belief in the first phase of the study. This could indicate potential deception. The belief of the Scholl experimental

Figure 3

Normative Belief Technique

Belief That Mouthwash Kills Germs



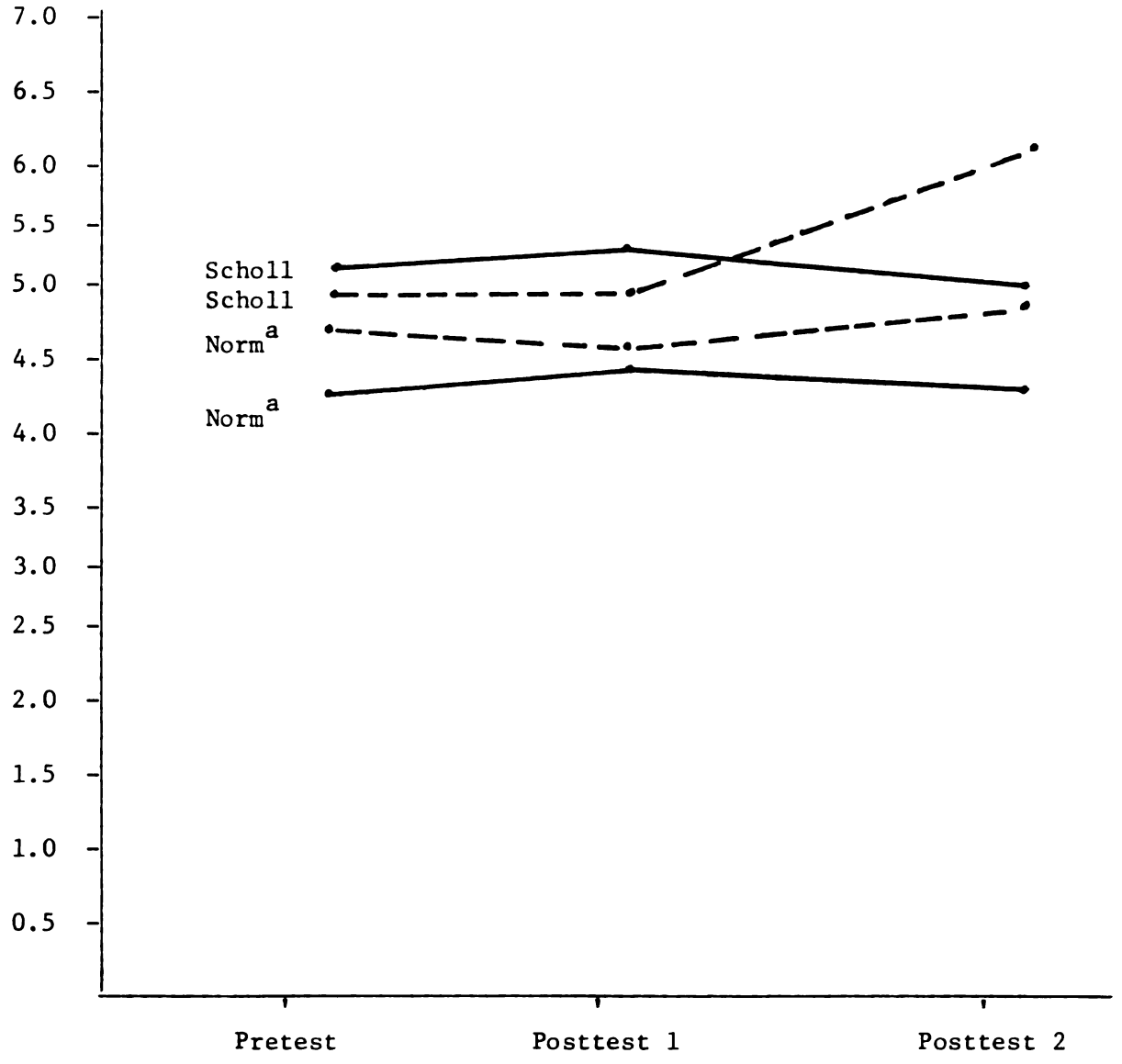
[a]Norm means represent an average of beliefs in the other three brands

_____ Experimental ---------- Control

Figure 4

Normative Belief Technique

Belief that Footwear Gives Leg Exercise



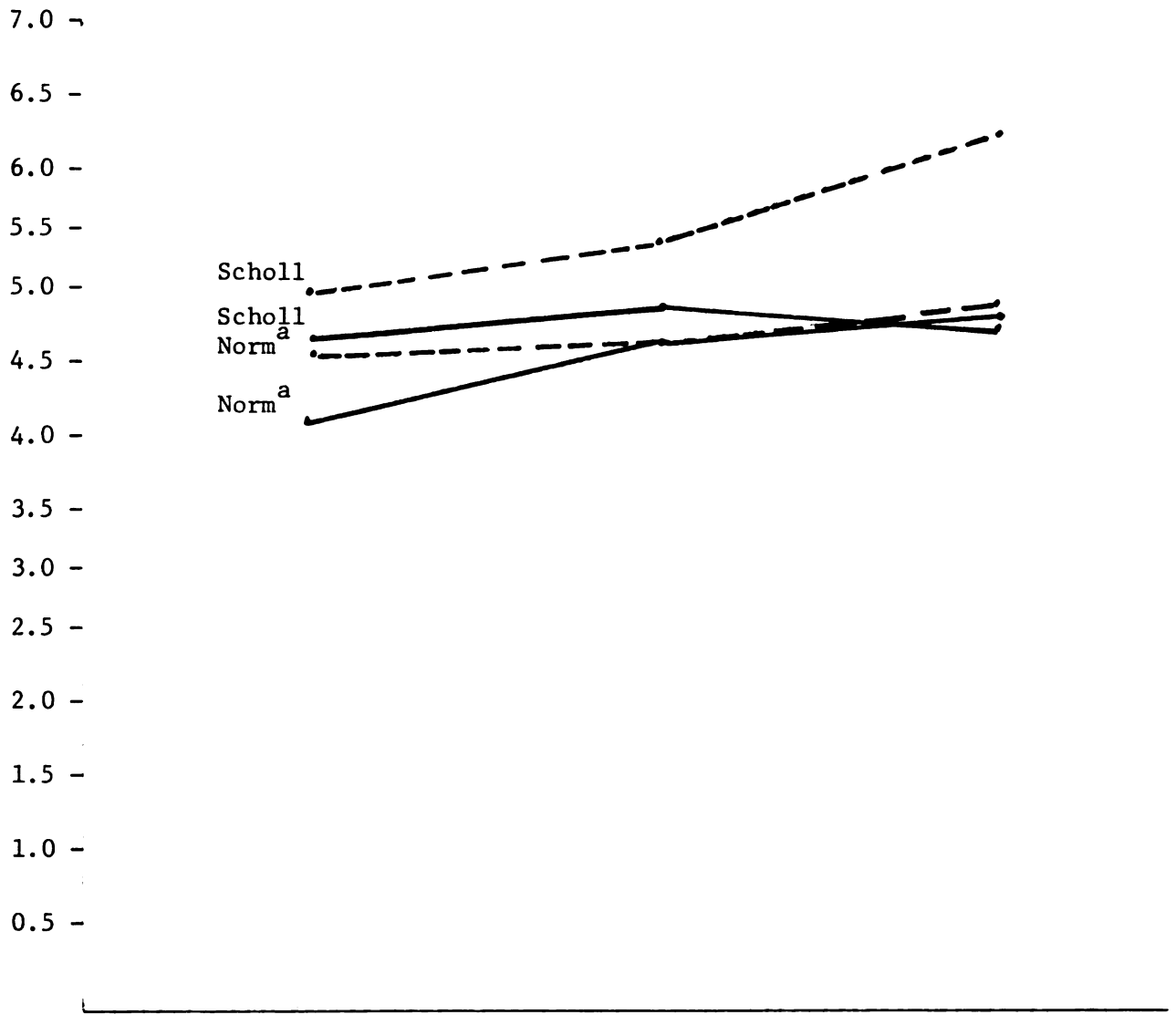
[a]Norm means represent an average of beliefs in the other three brands

_____ Experimental ---------- Control

Figure 5

Normative Belief Technique

Belief That Footwear Has Health Value For Feet



[a]Norm means represent an average of beliefs in the other three brands

_____ Experimental _____ Control

group decreased in the second phase, to a mean slightly below that of the norm, indicating a "correcting" effect, even though this particular belief had not been mentioned in the corrective treatment.

Figure 6 illustrates the shifts in sex appeal belief scores that occurred. The Hanes experimental group brand belief scores were only slightly higher than the normative belief at the time of the first posttest. An even greater difference existed between the Hanes experimental group scores and the normative group scores after Experimental Treatment Number 2.

The shifts in texture belief scores are illustrated in Figure 7. The Hanes scores for the experimental group were considerably lower than the normative belief in the first stage of the study, but increased to about the same as the normative belief in the second stage.

V. THE AFFECT COMPONENT OF THE FISHBEIN MODEL

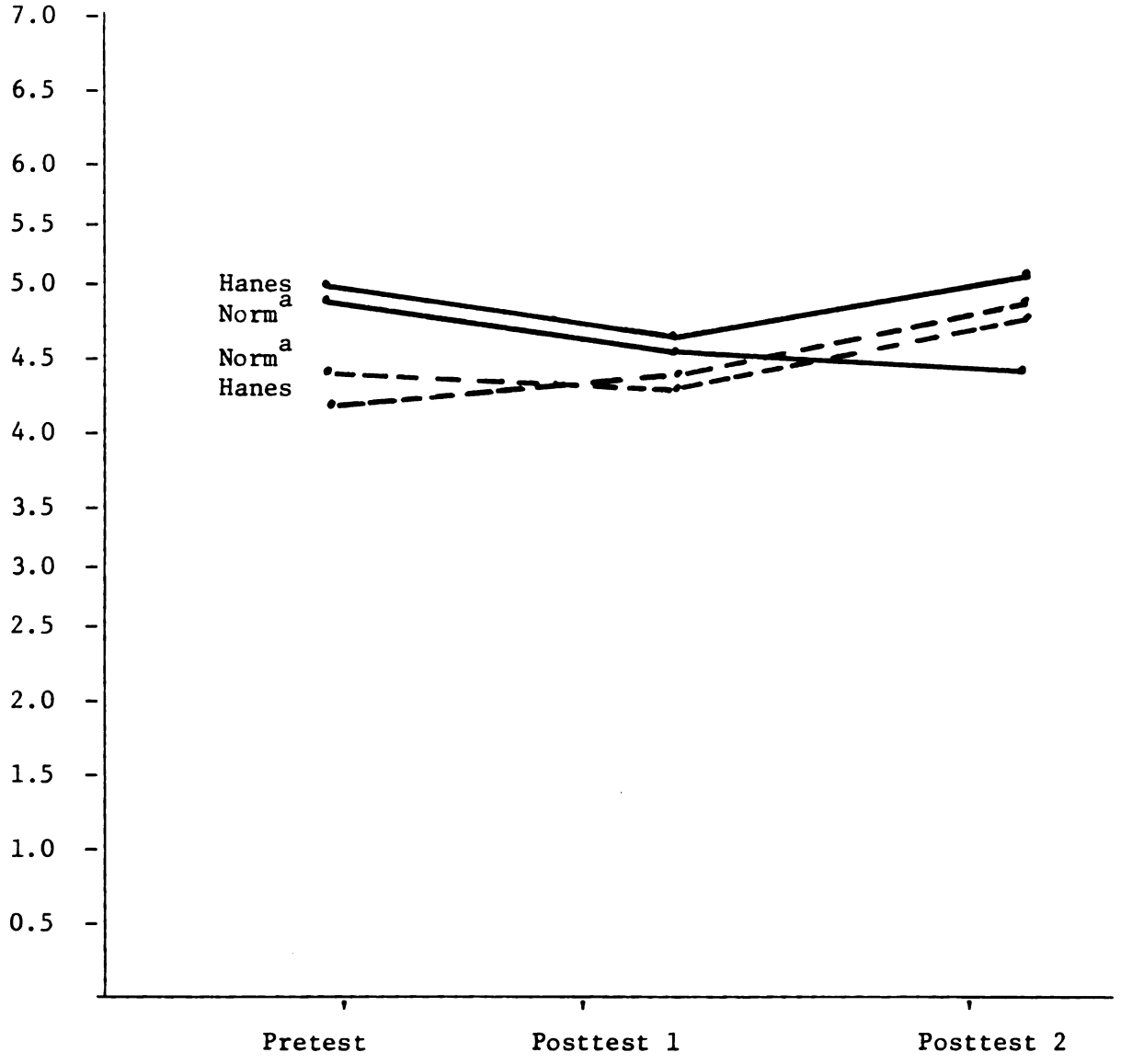
The Affect component of the Fishbein model was also analyzed. Affect was measured by asking the respondents to estimate the importance of various attributes when making a purchasing decision. A 1 response indicated a very low importance, while a 7 response indicated the attribute was considered very important in the purchase decision. A response of 4 would indicate a neutral evaluation of importance. The response was solicited at the product class level rather than at the brand level. Mean affect scores were computed for the same attributes studied using the normative belief approach. Table 17 contains mean affect scores for control and experimental groups during the three stages of the study.

The experimental group perceived the germ-killing capability of mouthwash as less important after viewing the allegedly deceptive and

Figure 6

Normative Belief Technique

Belief that Pantyhose has Sex Appeal



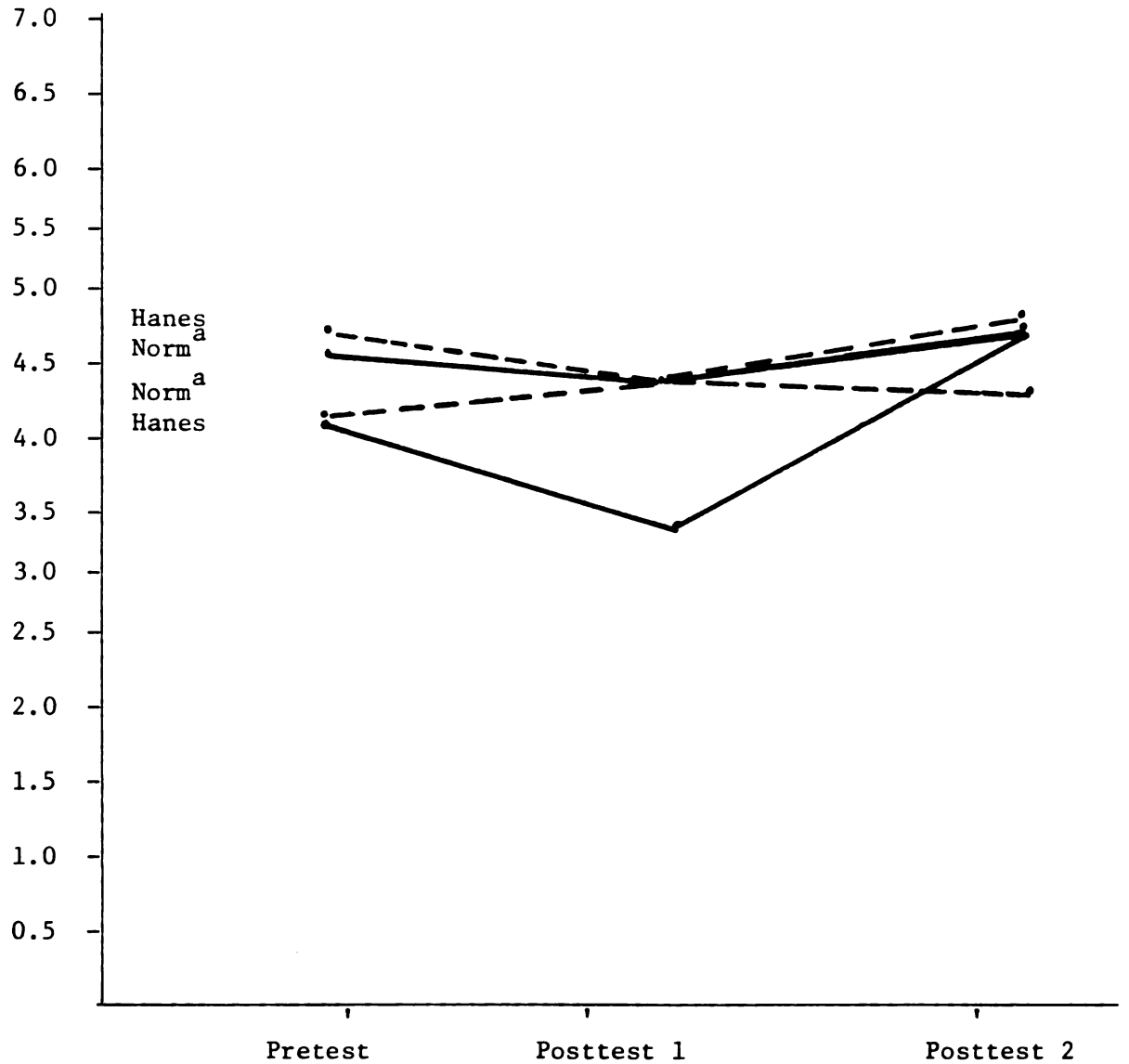
[a]Norm means represent an average of beliefs in the other three brands

_____ Experimental ---------- Control

Figure 7

Normative Belief Technique

Belief that Pantyhose has Texture One Likes



[a]Norm means represent an average of beliefs in the other three brands

_____ Experimental ---------- Control

Table 17

Mean Affect Scores for Selected Attributes

Affect Importance of ...	Pretest	Posttest 1	Posttest 2
Mouthwash			
Germ-Killing Power			
Control	5.717	5.259	4.905
Experimental	5.551	5.286	5.219
Cold Prevention Power			
Control	4.642	4.426	5.048
Experimental	4.245	4.531	3.844
Footwear			
Leg Exercise			
Control	5.244	5.409	5.400
Experimental	4.677	4.714	5.478
Health Value for Feet			
Control	5.644	5.659	5.600
Experimental	4.970	5.000	5.478
Pantyhose			
Texture			
Control	5.211	4.763	5.421
Experimental	5.065	4.774	5.556
Sex Appeal			
Control	5.105	4.895	5.368
Experimental	4.936	4.710	5.000

the "corrective" ads than in their original pretest evaluation. In all cases, the scores were above the neutral response. The same group evaluated the cold prevention power as more important after the allegedly deceptive treatment, but the evaluation was below the neutral response after viewing the "corrective" treatment.

For the footwear category, the importance of leg exercise received an increasingly higher rating by the experimental group after both experimental treatments. The importance of health value for the feel also increased after each experimental treatment.

VI. DISCUSSION

Multiple regression was used to analyze the effectiveness of the Fishbein models in predicting attitudes and behavioral intentions, as measured by the questionnaire. The original Fishbein attitude model was found to be a significant predictor of attitudes toward 11 of the 12 product brands tested. These results agree with Witter (1978), who found the model to be significant in predicting attitudes toward all 16 of the products tested. The Fishbein extended model was found to be a significant predictor of behavioral intentions to purchase 11 of the 12 product brands. These results also agree with Witter's study which found the model to be a significant predictor of behavioral intentions to purchase all products studied.

Attitude change and change in behavioral intentions were measured by mean gain scores. Control and experimental groups were compared by the use of t-tests. In no case was attitude or behavioral intention found to change after exposure to either of the advertising treatments. These results disagree with the results of Witter (1978), who found significant

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UNIVERSTIY MICROFILMS INTERNATIONAL

differences in attitude as measured by the original Fishbein attitude model for two of the four brands of footwear and three of the four brands of pantyhose. Witter also found significant differences in behavioral intention as measured by the Fishbein extended model for two brands of footwear and one brand of pantyhose. The Witter study did not, however, find the Fishbein models to measure any change in attitude or behavioral intention after exposure to the Listerine advertisement. Mazis and Adkinson (1976), also did not find the original Fishbein attitude model to measure any attitude change after exposure to the Listerine advertisement.

The results of this study do not necessarily indicate that deception was not present in the advertisements studied, but instead suggest that the Fishbein models do not measure deception, as defined by Gardner and others. These results are consistent with Wilkie's (1973) suggestion that attitudes and behavioral intentions are unsatisfactory levels of response at which to measure deception. He states that these measures are "too general to be attributed to exposures to specific messages." (p. 198) However, it should be acknowledged that the FTC has the right to prohibit "false or deceptive acts or practices," regardless of whether they actually change consumers' purchasing habits. (Wheeler-Lea Act of 1938)

Wilkie (1973) suggests that measurement of advertising should occur at the brand belief level. In order to further investigate the deceptive advertising issue, specific brand beliefs were investigated, using Gardner's normative belief technique. Two beliefs from each of the three product classes were selected for further investigation. Mean scores of the brand under investigation were compared with an average of

the mean brand belief scores of the other three brands. This technique identified potential deception in beliefs that Listerine mouthwash "prevents colds" and "kills germs." These results agree with findings of Witter (1978), who also identified deception in these two beliefs by use of the normative belief technique. In order to confirm deception, scientific evidence that Listerine does not, in fact, prevent colds or sore throats, would need to be provided. As was stated earlier, evidence was presented in the Warner-Lambert Case which denied the cold prevention capability of Listerine. In the second stage of the experiment, in which all subjects saw the corrective advertisement disclaimer for cold-prevention capabilities, a "corrective" effect was noted for both the cold prevention belief and the germ-killing belief. The beliefs that Listerine prevents colds and kills germs more closely approximated the beliefs for the other brands studied in the control and experimental groups for germ-killing belief and in the experimental group for the cold prevention belief. Three other studies (Mazis and Adkinson, 1976; Kuehl and Dyer, 1976; Dyer and Kuehl, 1978), have noted this "reverse halo effect" in which a corrective statement for the cold prevention belief also affected the germ-killing belief. This may be due to a strong association in the minds of consumers between germ-killing power and cold prevention. It may also illustrate the inability of a corrective advertisement to "surgically" remove one deceptive belief without negatively affecting other beliefs about the brand.

The belief that Scholl exercise sandals provide leg exercise was found to be much higher than the normative belief for both the control and experimental groups during the first stage of the study. Using Gardner's normative belief technique, this would indicate potential

deception. In order to prove deception, scientific evidence would need to be provided which disproved any leg exercise benefit of the sandals. The belief level dropped only slightly for the experimental groups after administration of the corrective statement on erradicating this belief. This may indicate a strongly-held belief by the respondents from past exposure to the advertisements. The substantial difference between belief for Scholl and the normative belief on the pretest would lend further evidence to this explanation.

The mean brand belief that Scholl has health value for feet was greater than the normative belief for both control and experimental groups in the first stage of the study. This would indicate potential deception. Scholl would need to substantiate this claim. The mean brand belief of the Scholl experimental group fell slightly below the normative belief during the second stage of the study. As in the Listerine germ-killing belief, this would indicate a "reverse halo" effect, since the belief of health value for feet was not addressed in the "corrective" portion of Experimental Treatment Number 2.

The belief that Hanes pantyhose has sex appeal was only slightly greater than the normative belief for both control and experimental groups in the first stage of the study. In fact, both the normative belief and the Hanes belief actually dropped from the pretest scores. No potential deception would be indicated. While the normative belief for the group who had not seen the original experimental treatment declined after viewing the "corrective" advertisement, the Hanes and normative beliefs for the control group actually increased. This would seem to indicate that the "There is no scientific evidence which indicates that men prefer the Hanes brand of pantyhose" disclaimer

actually increased belief in the sex appeal of Hanes as well as other brands of pantyhose. This was the first time a disclaimer for this "non-functional" attribute has been used in an empirical study. It may indicate that consumers do not trust "scientific evidence to be an accurate measure of a non-functional attribute such as sex appeal, but that the disclaimer actually draws attention to the attribute and may even increase belief in the attribute. More evidence would need to be gathered before any firm conclusions could be drawn.

While the control groups yielded approximately the same mean brand belief in texture during the first stage of the experiment, the Hanes belief level was actually substantially lower than the normative belief level for the experimental group. Thus, potential deception was indicated. The Hanes belief substantially increased after Experimental Treatment Number 2. Since pantyhose texture was not directly mentioned in the disclaimer, it may be that this change in belief has no relationship to the experimental treatment. It may also give further evidence to a "reverse-belief" effect suggested for the sex appeal belief.

Mean affect scores were also studied, noting the change in the subjects' perceptions of importance of selected attributes during the three phases of the study. In general, only slight shifts in affect were observed. This would indicate that importance of beliefs are not greatly affected by change in beliefs.

In summary, the results of this study lend evidence to the ability of the Fishbein models to measure attitudes and behavioral intentions. The results also support Wilkie's (1973) theory that deception can best be detected at the brand belief level. No attitude change or

behavioral intention change was detected after either Experimental Treatment Number 1 or Experimental Treatment Number 2. Gardner's (1976) Normative Belief Technique showed promise as a useful approach to detecting deception and measuring the effects of efforts to erradicate residual deception.

CHAPTER V

SUMMARY, LIMITATIONS AND RECOMMENDATIONS

I. SUMMARY

The objectives of this study were: (1) to empirically test an attitude change approach to detecting deception in advertising, and (2) to measure the effectiveness of corrective advertisements on eliminating the effects of previous deception. The Fishbein attitude model and the extended Fisbein behavioral intention models were used to measure consumer attitude and behavioral intention change. The study used a two-stage non-equivalent control group experimental design. The first stage dealt with the deceptive advertising issue. The second stage dealt with the corrective advertising issue. A pretest and two posttests used a pretested questionnaire which operationalized the Fishbein models.

The questionnaire was administered by classroom to high school students in three Michigan public schools. Two-hundred forty-nine students made up the total sample.

The sample experimental and control groups were compared by the use of t-tests for selected demographic characteristics. The groups were not always comparable. The mouthwash groups differed in distribution by social position, parent's occupation, and behavioral intention. The footwear groups differed in purchasing frequency and behavioral intention distribution. The pantyhose group differed in purchasing frequency distribution. It is likely these differences were present because the groups were composed by classroom rather than by true random assignment.

Twelve brands in three product classes were investigated. Actual

advertisements for Listerine, Scope, Listermint and Lavoris mouthwash, Scholl, Fanfare, Famolare, and Earth Shoes footwear, and Hanes, L'eggs, No Nonsense, and Sheer Energy pantyhose were used. Three potentially deceptive statements were contained in the first experimental treatment and three "corrective" statements in the experimental treatment of the final stage.

Multiple regression was used to analyze the effectiveness of the Fishbein models in measuring attitudes and behavioral intentions, as measured by the questionnaire. The original Fishbein attitude model was found to be a significant predictor of attitudes toward 11 of the 12 product brands tested. The Fishbein extended model was found to be a significant predictor of behavioral intentions to purchase 11 of the 12 product brands.

Attitude change and change in behavioral intentions were measured by mean gain scores. Control and experimental groups were compared by the use of t-tests. In no case was attitude or behavioral intention found to change after exposure to either advertising treatments. It was concluded that the results of this study do not necessarily indicate that deception was not present in the advertisements studied, but instead suggest that the Fishbein models do not measure deception, as defined by Gardner (1976) and others.

In order to further investigate the deceptive advertising issue, specific brand beliefs were investigated, using Gardner's (1976) Normative Belief Technique. Two beliefs from each of the three product classes were selected for further investigation. Mean scores of the brand under investigation were compared with an average of the mean brand belief scores of the other three brands. This technique identified

deception in the beliefs that Listerine mouthwash "prevents colds" and "kills germs," the beliefs that Scholl exercise sandals provide leg exercise and have health value for feet. A "corrective" effect was noted after administration of the corrective experimental treatment for the beliefs that Listerine kills germs and prevents colds and the belief that Scholl exercise sandals have health value for feet.

Mean affect scores were also studied, noting the change in the subjects' perceptions of importance of selected attributes during the three phases of the study. In general, only slight shifts in affect were observed. This would indicate that importance of evaluation criteria are not greatly affected by change in beliefs.

II. LIMITATIONS AND RECOMMENDATIONS FOR FURTHER STUDY

The study was limited by the use of a focus group and a pretest sample with characteristics different from the study sample group. The former groups consisted of college freshmen majoring in clothing and textiles at University of Tennessee, Knoxville, while the sample consisted of Michigan high school students. The evaluative criteria of the two groups may differ greatly, especially since the consumer knowledge of the clothing and textile majors about the two clothing product groups used in this study may be much more extensive than that of the high school students. For example, the researcher noted that some high school students in the sample complained that they "never wear" pantyhose or use mouthwash and were unfamiliar with some of the attributes on the questionnaire. This may point to a need to develop evaluative criteria with a very specific group in mind.

The design of this study could have been improved by the use of

random assignment of the sample. Comparison of the control and experimental groups detected differences in distribution by social position, parents' occupation, purchasing frequency and behavioral intention. Comparison of pretest belief means for attributes studied also indicated substantial differences in experimental and control groups. A true random assignment design would have minimized these differences and yielded more accurate results.

Uneven group size, another major limitation of this study, was caused partially by the use of fixed classroom groups, absenteeism and subjects' refusal to complete the questionnaires. It was informally noted that refusal to complete the questionnaires was more evident on the second posttest; answering essentially the same quesitons three weeks in a row was tedious to some students. It may be that use of some inducement, such as payment for completion of the questionnaires, would have eliminated this problem.

This study assumes that the respondents actually read the advertisements and that changes in attitude were caused by the advertisements. In reality, there was no way to guarantee that the students actually read the ads they were given. Many students paid only brief attention to the ads before completing the questionnaires. This issue must be considered in future measurements of deception.

The experimental design, while allowing for control of many variables, may have certain inherent limitations. Conditions used for viewing the advertisements were not realistic. Single exposure to an advertisement may not have an effect on deeply ingrained attitudes. Allowing the subjects to read through magazines containing typical articles as well as the ads may provide more natural viewing conditions.

The study was limited in the number of products studied. Further

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APPENDIX A

STRUCTURE OF FOCUS GROUP

1. What characteristics do you look for when you buy _____?
   (the product class)

2. How would you rate these characteristics in their order of
   importance to you as a consumer?

3. What brands of _____(product class) are you familiar
   with as a consumer?

4. Look again at the characteristics you've listed as important.
   Are any of these characteristics the same for different brands?
   Do you think that _____ (evaluative criteria) is
   different for various brands?
   (Continue with each listed evaluative criteria.)

APPENDIX B

MOUTHWASH---PRETEST

Name or Social Security Number _____ Male _____ Female _____

Thank you for taking part in this study. Your responses to the questions will be strictly confidential.

(1 - 4) _____ (Do not fill in this blank, it is for coding purposes only.)

5. What is the occupation of the head of the household in which you live? (Please be very specific.)

---

6. How far did the head of the household in which you live go in school? (Circle your response.)

1. Graduate school
2. College degree
3. Some college (or business or vocational school
4. Graduated from high school
5. 10-11 years
6. 7-9 years
7. Less than 7 years

7. How often do you generally purchase mouthwash? (Circle your response.)

1. Several times a month
2. Monthly
3. Several times a year
4. Once a year
5. Less frequently than once a year
6. Never

PART I---I am interested in your reaction to four brands of mouthwash. Would you estimate how likely it would be that you would purchase the following brands of mouthwash? For example, if you are positive that you will buy the brand, circle a 6. If you are positive that you will not buy that brand, circle a 0. Circle any of the numbers 0 to 6 to indicate your feelings about the brand.

	I WILL NOT BUY THIS BRAND			NEUTRAL			I WILL BUY THIS BRAND
8. Scope	0	1	2	3	4	5	6
9. Listerine	0	1	2	3	4	5	6
10. Lavoris	0	1	2	3	4	5	6
11. Listermint	0	1	2	3	4	5	6

PART II---Each of the following questions relates to a pair of terms which are opposite in meaning. If you were to tell someone exactly what types of qualities you wanted in a mouthwash you might use some of the following terms to describe your choice. For example in question #12 if you like a mouthwash which tastes neither antiseptic nor sweet, but right in-between you would circle a number 3. If you like your mouthwash to taste very antiseptic circle a 0. Please circle the number closest to your preference.

12. Antiseptic Taste	0	1	2	3	4	5	6	Sweet Taste
13. Sweet Smell	0	1	2	3	4	5	6	Medicine Smell
14. High Price	0	1	2	3	4	5	6	Low Price
15. Does Not Cover Odors	0	1	2	3	4	5	6	Covers Odors
16. Does Not Kill Germs	0	1	2	3	4	5	6	Kills Germs
17. Does Not Prevent Colds	0	1	2	3	4	5	6	Prevents Colds
18. No Particular Brand Name	0	1	2	3	4	5	6	Particular Brand Name

PART III---When purchasing mouthwash some of these characteristics might be very important to you and some might not be very important. Please indicate how important each of these characteristics is to you when

selecting mouthwash. For example if you think that taste is very unimportant you will circle 0. If you feel that taste is neither very unimportant nor very important you will circle 3.

	VERY UNIMPORTANT						VERY IMPORTANT
19. Taste	0	1	2	3	4	5	6
20. Smell	0	1	2	3	4	5	6
21. Price	0	1	2	3	4	5	6
22. Odor Control	0	1	2	3	4	5	6
23. Germ Killing Power	0	1	2	3	4	5	6
24. Cold Prevention	0	1	2	3	4	5	6
25. Brand Name	0	1	2	3	4	5	6

PART IV---Different brands may provide the types of characteristics which you are looking for in mouthwash. Would you evaluate how probable it would be that Scope, Listerine, Lavoris and Listermint would give you the type of characteristics for which you are looking. For example under the Taste category you might respond like this:

EXAMPLE:

	EXTREMELY IMPROBABLE						EXTREMELY PROBABLE
Scope	0	1	2	3	4	5	6
Listerine	0	1	2	3	4	5	6
Lavoris	0	1	2	3	4	5	6
Listermint	0	1	2	3	4	5	6

if you feel that Scope and Listerine generally provide the type of Taste which you like, that your feelings about Lavoris are neutral and that Listermint does not have the type of Taste which you like. (Please circle your responses for the questions below.)

How likely is it that each of these brands would have the kind of Taste you like?

	EXTREMELY IMPROBABLE						EXTREMELY PROBABLE
26. Scope	0	1	2	3	4	5	6
27. Listerine	0	1	2	3	4	5	6
28. Lavoris	0	1	2	3	4	5	6
29. Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would have the kind of Smell you like?

30. Scope	0	1	2	3	4	5	6
31. Listerine	0	1	2	3	4	5	6
32. Lavoris	0	1	2	3	4	5	6
33. Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would have the kind of Price you like?

34. Scope	0	1	2	3	4	5	6
35. Listerine	0	1	2	3	4	5	6
36. Lavoris	0	1	2	3	4	5	6
37. Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would have the kind of Odor Control you like?

38. Scope	0	1	2	3	4	5	6
39. Listerine	0	1	2	3	4	5	6
40. Lavoris	0	1	2	3	4	5	6
41. Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would have the kind of Germ Killing Power you like?

42. Scope	0	1	2	3	4	5	6
43. Listerine	0	1	2	3	4	5	6
44. Lavoris	0	1	2	3	4	5	6
45. Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would have the kind of Cold Prevention Power you like?

		EXTREMELY IMPROBABLE						EXTREMELY PROBABLE
46.	Scope	0	1	2	3	4	5	6
47.	Listerine	0	1	2	3	4	5	6
48.	Lavoris	0	1	2	3	4	5	6
49.	Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would be the Type of Brand Name you like?

50.	Scope	0	1	2	3	4	5	6
51.	Listerine	0	1	2	3	4	5	6
52.	Lavoris	0	1	2	3	4	5	6
53.	Listermint	0	1	2	3	4	5	6

PART V---When making a purchase decision, other people might give you advice. How likely do you think it is that other people who are important to you such as friends, parents, doctors etc. would recommend that you buy these brands of mouthwash?

		EXTREMELY IMPROBABLE						EXTREMELY PROBABLE
54.	Scope	0	1	2	3	4	5	6
55.	Listerine	0	1	2	3	4	5	6
56.	Lavoris	0	1	2	3	4	5	6
57.	Listermint	0	1	2	3	4	5	6

PART VI---In general, do you care if your choice of mouthwash is similar to what other people who are important to you would recommend? For example, if you think that it is unimportant to take the advice of your friends, parents, doctors, etc. you would circle 0. If you think it is important to take the advice of these people, then you would circle a 6.

		DON'T CARE AT ALL						CARE A GREAT DEAL
58.		0	1	2	3	4	5	6

VII---You have been asked questions about four brands of mouthwash, but when you make a purchase decision you probably include an evaluation of the company which makes the mouthwash. How would you evaluate the companies which make these four brands of mouthwash?

	EXTREMELY NEGATIVE			NEUTRAL			EXTREMELY POSITIVE
59. Scope	0	1	2	3	4	5	5
60. Listerine	0	1	2	3	4	5	6
61. Lavoris	0	1	2	3	4	5	6
62. Listermint	0	1	2	3	4	5	6

MOUTHWASH--POST TEST

Name or Social Security Number _____

(1-4) _____ (Do not fill in this blank, it is for coding purposes only.)

Please record the following answers on your computer sheet.

5. What is your age?

   1. Under 15
   2. 15
   3. 16
   4. 17
   5. 18
   6. 19
   7. Over 19

6. What is your sex?

   1. Male
   2. Female

7. What is your race?

   1. Caucasian
   2. Black
   3. Other

PART I-- I am interested in your reaction to four brands of mouthwash. Would you estimate how likely it would be that you would purchase the following brands of mouthwash? For example, if you are positive that you will buy the brand, circle a 6. If you are positive that you will not buy the brand, circle a 0. Circle any of the numbers 0 to 6 to indicate your feelings about the brand.

	I WILL NOT BUY THIS BRAND			NEUTRAL			I WILL BUY THIS BRAND
8. Scope	0	1	2	3	4	5	6
9. Listerine	0	1	2	3	4	5	6
10. Lavoris	0	1	2	3	4	5	6
11. Listermint	0	1	2	3	4	5	6

MOUTHWASH p. 2.

PART II--Each of the following questions relates to a pair of terms which are opposite in meaning. If you were to tell someone exactly what types of qualities you wanted in a mouthwash you might use some of the following terms to describe your choice. For example in question #2 if you like mouthwash which tastes neither antiseptic nor sweet, but right in-between you would circle a number 3. If you like your mouthwash to taste very antiseptic circle a 0. please circle the number closest to your preference.

12.	Antiseptic taste	0	1	2	3	4	5	6	Sweet taste
13.	Sweet smell	0	1	2	3	4	5	6	Medicine smell
14.	High price	0	1	2	3	4	5	6	Low price
15.	Does not cover odors	0	1	2	3	4	5	6	Covers odors
16.	Does not kill germs	0	1	2	3	4	5	6	Kills germs
17.	Does not prevent colds	0	1	2	3	4	5	6	Prevents colds
18.	No particular brand name	0	1	2	3	4	5	6	Particular brand name

PART III--When purchasing mouthwash some of these characteristics might be very important to you and some might not be very important. Please indicate how important each of these characteristics is to you when selecting mouthwash. For example if you think that taste is very unimportant you will circle 0. If you feel that taste is neither very unimportant nor very important you will circle 3.

		VERY UNIMPORTANT						VERY IMPORTANT
19.	Taste	0	1	2	3	4	5	6
20.	Smell	0	1	2	3	4	5	6
21.	Price	0	1	2	3	4	5	6
22.	Odor control	0	1	2	3	4	5	6
23.	Germ killing power	0	1	2	3	4	5	6
24.	Cold prevention	0	1	2	3	4	5	6
25.	Brand name	0	1	2	3	4	5	6

MOUTHWASH p. 3.

PART IV-- Different brands may provide the types of characteristics which you are looking for in mouthwash. Would you evaluate how probable it would be that Scope, Listerine, Lavoris and Listermint would give you the type of characteristics for which you are looking. For example under the TASTE category you might respond like this:

EXAMPLE:

	EXTREMELY IMPROBABLE						EXTREMELY PROBABLE
Scope	0	1	2	3	4	(5)	6
Listerine	0	1	2	3	4	(5)	6
Lavoris	0	1	2	(3)	4	5	6
Listermint	(0)	1	2	3	4	5	6

if you feel that Scope and Listerine generally provide the type of TASTE which you like, that your feelings about Lavoris are neutral and that Listermint does not have the type of TASTE which you like. (Please circle your responses for the questions below.)

How likely is it that each of these brands would have the kind of TASTE you like?

26. Scope	0	1	2	3	4	5	6
27. Listerine	0	1	2	3	4	5	6
28. Lavoris	0	1	2	3	4	5	6
29. Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would have the kind of SMELL you like?

30. Scope	0	1	2	3	4	5	6
31. Listerine	0	1	2	3	4	5	6
32. Lavoris	0	1	2	3	4	5	6
33. Listermint	0	1	2	3	4	5	6

How likely is it that each of these brands would have the kind of PRICE you like?

34. Scope	0	1	2	3	4	5	6
35. Listerine	0	1	2	3	4	5	6
36. Lavoris	0	1	2	3	4	5	6
37. Listermint	0	1	2	3	4	5	6

	EXTREMELY IMPROBABLE						EXTREMELY PROBABLE
How likely is it that each of these brands would have the kind of ODOR CONTROL you like?							
38. Scope	0	1	2	3	4	5	6
39. Listerine	0	1	2	3	4	5	6
40. Lavoris	0	1	2	3	4	5	6
41. Listermint	0	1	2	3	4	5	6
How likely is it that each of these brands would have the kind of GERM KILLING POWER you like?							
42. Scope	0	1	2	3	4	5	6
43. Listerine	0	1	2	3	4	5	6
44. Lavoris	0	1	2	3	4	5	6
45. Listermint	0	1	2	3	4	5	6
How likely is it that each of these brands would have the kind of COLD PREVENTION POWER you like?							
46. Scope	0	1	2	3	4	5	6
47. Listerine	0	1	2	3	4	5	6
48. Lavoris	0	1	2	3	4	5	6
49. Listermint	0	1	2	3	4	5	6
How likely is it that each of these brands would be the TYPE OF BRAND NAME you like?							
50. Scope	0	1	2	3	4	5	6
51. Listerine	0	1	2	3	4	5	6
52. Lavoris	0	1	2	3	4	5	6
53. Listermint	0	1	2	3	4	5	6

PART V--When making a purchase decision, other people might give you advice. How likely do you think it is that other people who are important to you such as friends, parents, doctors, etc., would recommend that you buy these brands of mouthwash?

		EXTREMELY IMPROBABLE						EXTREMELY PROBABLE
54.	Scope	0	1	2	3	4	5	6
55.	Listerine	0	1	2	3	4	5	6
56.	Lavoris	0	1	2	3	4	5	6
57.	Listermint	0	1	2	3	4	5	6

PART IV--In general, do you care if your choice of mouthwash is similar to what other people who are important to you would recommend? For example, if you think that it is unimportant to take the advice of your friends, parents, doctors, etc., you would circle 0. If you think it is important to take the advice of these people, then you would circle 9.

		DON'T CARE AT ALL						CARE A GREAT DEAL
58.		0	1	2	3	4	5	6

PART VII--You have been asked questions about four brands of mouthwash, but when you make a purchase decision you probably include an evaluation of the company which makes the mouthwash. How would you evaluate the companies which make these four brands of mouthwash?

		EXTREMELY NEGATIVE			NEUTRAL			EXTREMELY POSITIVE
59.	Scope	0	1	2	3	4	5	6
60.	Listerine	0	1	2	3	4	5	6
61.	Lavoris	0	1	2	3	4	5	6
62.	Listermint	0	1	2	3	4	5	6

PART VIII--After reading the advertisements attached to this questionnaire, do you agree or disagree with the following statements?

	STRONGLY DISAGREE			NEUTRAL			STRONGLY AGREE
63. Scope leaves breath as clean as antiseptics.	0	1	2	3	4	5	6
64. You can tell Scope kills germs by smelling it.	0	1	2	3	4	5	6
65. Listerine can play a major role in preventing colds.	0	1	2	3	4	5	6
66. Listerine kills germs for hours.	0	1	2	3	4	5	6
67. Dentists believe that it is important to use Lavoris.	0	1	2	3	4	5	6
68. Gargling with Lavoris is beneficial in preventing cavities.	0	1	2	3	4	5	6
69. Listermint should be used everyday for good oral hygiene.	0	1	2	3	4	5	6
70. Listermint works even better than Scope.	0	1	2	3	4	5	6

APPENDIX C

DECEPTIVE ADVERTISING: A CONSUMER RESEARCH APPROACH

CONSENT FORM

1. Advertisements have been criticized as being highly misleading. This project is concerned with how students use advertising information. The Federal Trade Commission regulates advertising practices, but little or no input from consumers is included in their decisions. This study proposes to assess advertisements for misleading claims based on how the consumer comprehends and believes the advertisement. As part of the study, the students will be informed about the claims the producers have made which were found by the Federal Trade Commission to be misleading.

2. Very little risk is involved with participation in this study. Some students may change their beliefs about the product because of the advertisements, but every attempt will be made to leave the student with an informed view of the actual product attributes. The advertisements which will be used are taken from magazines frequently read by the students and do not carry any immoral or subliminal messages.

3. Any questions regarding procedures involved or results obtained will be answered by the Project Director. If you would like additional information about the study before agreeing to participate, please feel free to call Dr. Brenda Witter, Department of Human Environment and Design, College of Human Ecology, Michigan State University (355-3378).

4. Any participant is free to withdraw consent and to discontinue participation in the project at any time. No coercive practices will be used to guarantee participation. The study will require approximately 20 minutes and will be conducted during one of the regular class periods of the school day.

Student Signature _____

Date _____

Parent or Legal Representative Signature _____

Date _____

APPENDIX D

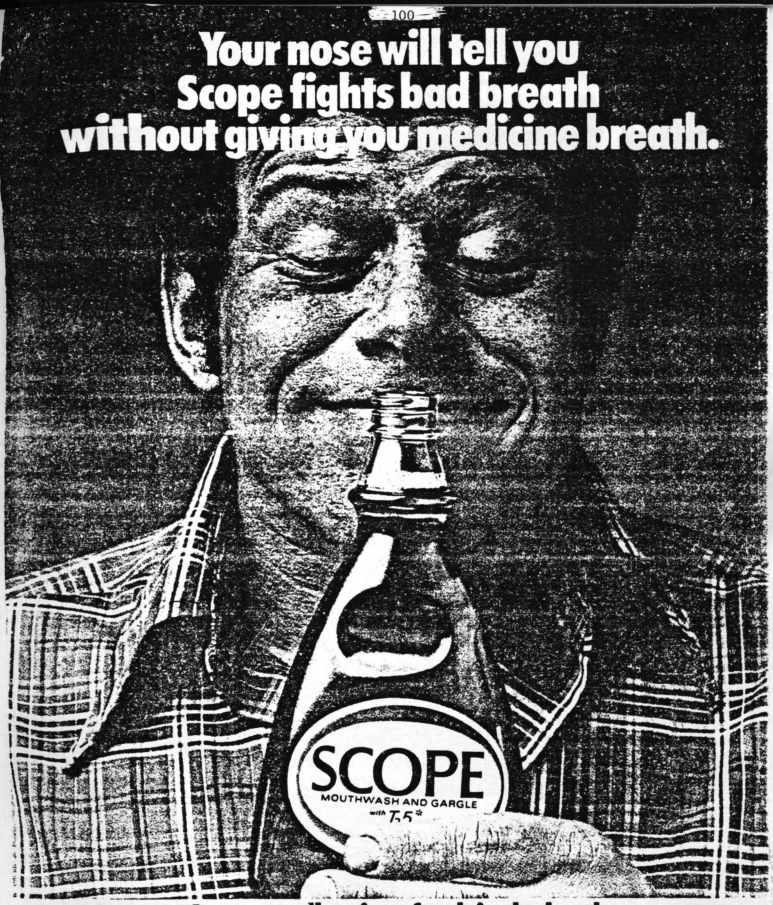

Listerine will not help prevent colds
or sore throats or lessen their severity
USTERINE

"My mother always said, 'if you want to marry a dentist, you better use Lavoris.'"

She figured dentists give Lavoris® to their patients... dentists give it to themselves. So instead of using some mild minty stuff...or something that smells like a bottle of medicine...I used Lavoris. And you know what? Mother was right. Take it from a dentist's wife: for really clean, really fresh mouth and breath...

...more dentists (including my husband) use refreshing Lavoris than any other mouthwash.

Your nose will tell you Scope fights bad breath without giving you medicine breath.



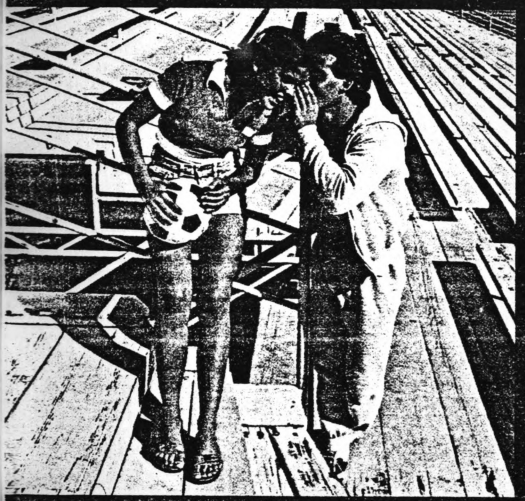
Scope smells minty fresh in the bottle, so it smells minty fresh on your breath.

Antiseptic mouthwash may smell like medicine. So as it fights bad breath, it leaves your breath smelling like medicine.

Scope® smells minty fresh. So as it fights bad breath, it leaves your breath smelling minty fresh.

Smell your mouthwash. And then smell Scope. Since Scope gets breath clean like antiseptics, your own nose will tell you it makes sense to use Scope.

Lookin' Foxy. Feelin' Fantastic.



Kick on a pair of Scholl Exercise Sandals.

The look's right. In light or new dark-toned, natural wood. Both in so many strap colors, you can wear them with everything.

And the feelin's fine. Pure comfort all day long from the soft, foam-padded strap. And cool, carved European beechwood soles.

What you don't feel is the toe grip at work. It makes your toes "hang on." Which exercises your legs to help firm and tone them while you walk.

So, c'mon Foxy, feel fantastic. With Scholl Exercise Sandals.

Also in Blue, White and Chocolate.

Starting at the bottom

This is Joe Famolare's patented sole with four waves. It's not for the sake of making waves. It's for the sake of making feet, legs and backs as comfortable as possible.

Why four? Well, let's start with the first wave. It absorbs initial shock to the heel and ankle.

The second wave absorbs shock to the arch.

The third rolls you forward.

And the fourth pushes you off.

The patented 4-wave sole is at the bottom of every Get There® shoe. It's resilient so you won't be tired after a hard day's walk. And because there's nothing cheap about it, you'll get far more mileage for your money with the Get There, than with those copycats you've probably seen around.

How will you know a copy? Just make sure the Famolare bicycle trademark is on the bottom.

By the way, the Get There is also made for rocking. Back and forth while standing. Feel the stretch in your legs and back. Feels good.

There are forty different styles where this one came from. All in soft Italian leather, to put you on top.

has put Famolare on top.

FAMOLARE
4 West 58th Street, N.Y., N.Y. 10019
Holbeinstrasse 38, Zurich, Switzerland

Please be patient. We're making our shoes as fast as we can.

Who ever heard of standing in line for a pair of shoes?

We're amazed. Really amazed. At first people called our EARTH* brand negative heel shoes strange and ugly. And now they're standing in line to get them.

And while the ends of the lines are waiting to get into our stores, the beginnings of the lines are buying up all of our shoes.

Of course we always knew Earth* shoes were a great invention. And we knew people would love them. But we had no idea the word would spread so fast.

It all started with Anne Kalso.

It started in Denmark 17 years ago, when Anne Kalso had the idea for the negative heel shoe. A shoe with the heel lower than the toe.

The concept was that these shoes would allow you to walk naturally. Like when you walk barefoot in sand and your heel sinks down lower than your toes. Anne was convinced that this is the natural way the body is designed to walk. And that this shoe would work in harmony with your entire body.

So she worked for 10 years refining every delicate adjustment. Until finally they were perfected.

The shoe that works with your body.

And the result was the Earth shoe. The shoe that's not just for your feet.

Not only is the heel lower than the toe, but the entire sole is molded in a very special way. This allows you to walk in a gentle rolling motion. And to walk easily and comfortably on the hard, jarring cement of our cities.

Even the arch of the Earth shoe is different, and the toes are wide to keep your toes from being cramped or squashed.

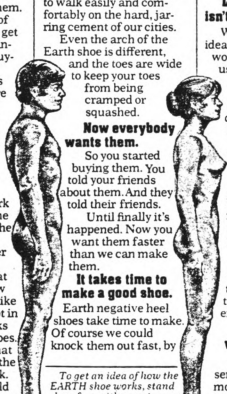
Now everybody wants them.

So you started buying them. You told your friends about them. And they told their friends.

Until finally it's happened. Now you want them faster than we can make them.

It takes time to make a good shoe.

Earth negative heel shoes take time to make. Of course we could knock them out fast, by leaving out a lot of important features. Or by not paying attention to quality. But then it wouldn't be the Earth brand shoe.



To get an idea of how the EARTH shoe works, stand barefoot with your toes up on a book. Feel what begins to happen.

Lowering the heel isn't enough.

We knew we had a good idea. And we knew others would try to imitate us by making negative heel shoes too.

But just because a shoe looks like ours doesn't mean it works like ours.

The 10 years that went into perfecting the Earth shoe are very important. We have many, many features built into our shoes to make them work. And that is why they are patented.

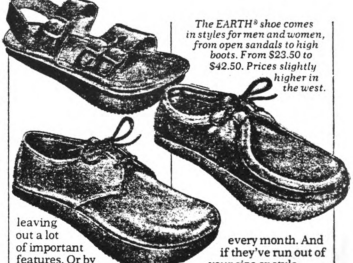
So to be sure you're getting the Earth negative heel shoe, look on the sole for our Earth trademark, and U.S. patent number 3305947.

They're worth waiting for.

Please be patient. We're sending out more and more shoes to our stores every month. And if they've run out of your size or style, they'll have it soon.

And when you do try them, you'll see, perhaps for the first time in your life, what it's like to walk more gracefully, naturally and comfortably.

And, believe us, that's worth waiting for.



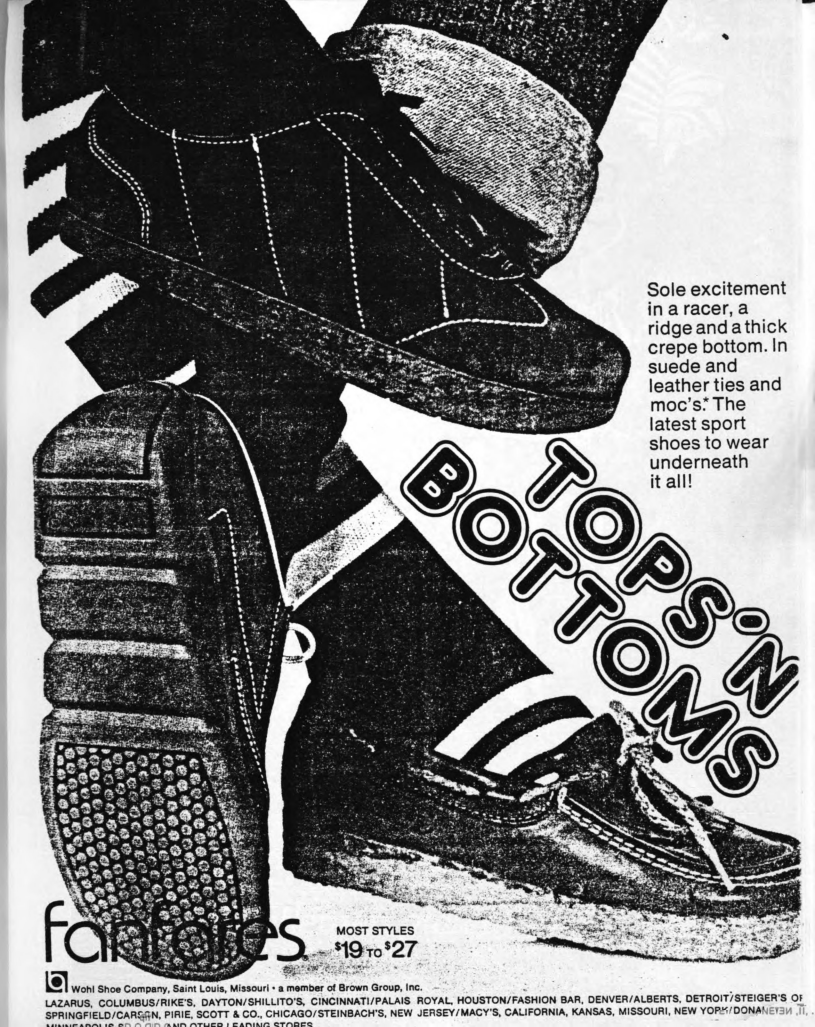
The EARTH® shoe comes in styles for men and women, from open sandals to high boots. From $23.50 to $42.50. Prices slightly higher in the west.

KALSO earth shoe

EARTH is the registered trademark of Kalso Systemet, Inc. for its negative heel shoes and other products.

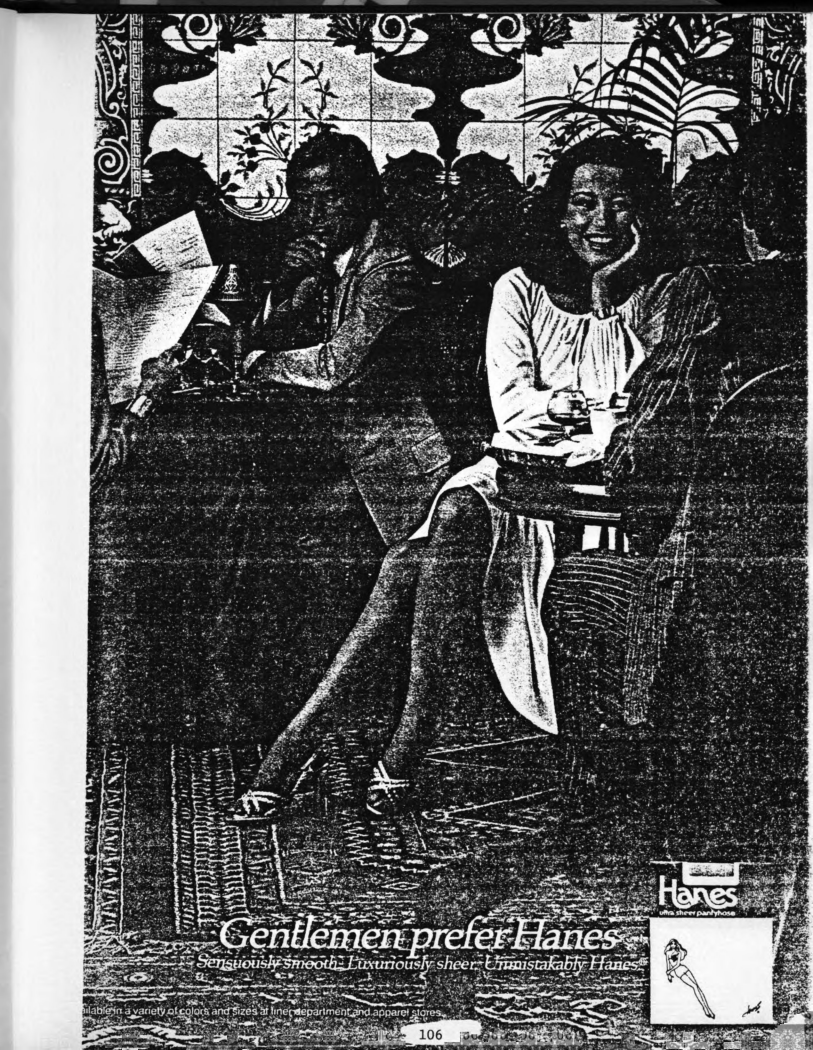
Anne Kalso.
Inventor of the EARTH® negative heel shoe.

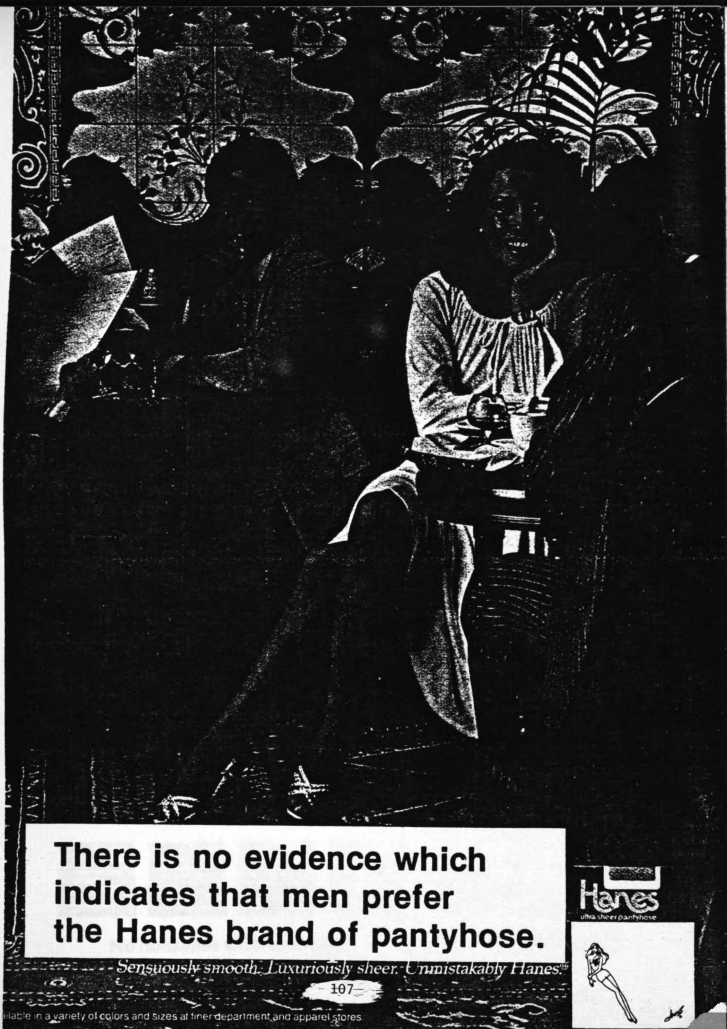
Our shoes are sold at stores that sell only the EARTH® shoe. For a list of these stores please see the facing page.



Wohl Shoe Company, Saint Louis, Missouri • a member of Brown Group, Inc.

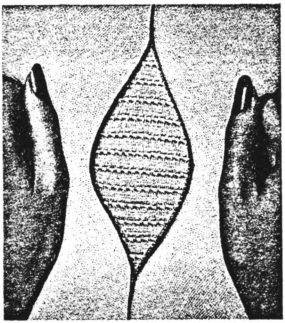
LAZARUS, COLUMBUS/RIKE'S, DAYTON/SHILLITO'S, CINCINNATI/PALAIS ROYAL, HOUSTON/FASHION BAR, DENVER/ALBERTS, DETROIT/STEIGER'S OF SPRINGFIELD/CARSON, PIRIE, SCOTT & CO., CHICAGO/STEINBACH'S, NEW JERSEY/MACY'S, CALIFORNIA, KANSAS, MISSOURI, NEW YORK/DONAHEY'S, ...


Hanes
ultra sheer pantyhose
Gentlemen prefer Hanes
Sensuously smooth. Luxuriously sheer. Unmistakably Hanes.
ilable in a variety of colors and sizes at finer department and apparel stores.


There is no evidence which indicates that men prefer the Hanes brand of pantyhose.
Hanes
ultra sheer pantyhose
Sensuously smooth. Luxuriously sheer. Unmistakably Hanes.
107
ilable in a variety of colors and sizes at finer department and apparel stores

Some No nonsense® news.

Introducing the cotton-lined ventilated crotch panel.



The best fashion news today is one of the oldest fabrics in the world. Cotton. Because it's natural. Because it's soft. Because it's cool on your skin.

That's why the ventilated crotch panel in every pair of panty hose No nonsense® makes is now lined with cotton. Because it's natural, soft and cool. You still get No nonsense fit, with new No nonsense comfort.

You'll look just as good And you'll feel even better.

No nonsense fit and No nonsense comfort. That's No nonsense fashion. © 1977 No Nonsense Fashions Inc.

No nonsense fit. No nonsense comfort. No nonsense fashion.

KR

Another fine product of Kayser Roth

What makes L'eggs® pantyhose special? Memory Yarn.™ Memory Yarn hugs your ankles. Memory Yarn holds your knees. Memory Yarn stretches out and springs back to fit thin legs, plump legs, tall legs, all legs. Beautifully. Without bagging or sagging.

Remember to buy L'eggs® pantyhose with Memory Yarn at the L'eggs Boutique, in Average or Queensize.

Also available in Canada.


Have your legs ever felt so tired, walking seemed like climbing?
Then give them a little help. Give them
Sheer Energy, the pantyhose with all-day massage.
Slip them on, and you'll feel their massage right away. It's wild!
Now, flex your leg and feel Sheer Energy's springy yarn massage even more.
And there's something even wilder! The more you move, the more they massage.
So you feel stimulated and refreshed all day long.
Your legs do a lot for you. Do something for them.
Give 'em Sheer Energy.
(They're at the Leggs Boutique.)
Give your legs an all-day massage.
Leggs.
SHEER ENERGY®
Now available in Canada.

APPENDIX E

Table 18

Multiple Regression Analysis of Fishbein Attitude Model

$$Aact = \sum_{1}^{n} B_i A_i$$

	DF	SS	M^2	R^2	F
Mouthwash					
Scope					
Aact	1	116.497	116.497	0.254	34.000****
Error	100	342.679	3.427		
Listerine					
Aact	1	78.808	78.808	0.156	18.439****
Error	100	427.398	4.274		
Lavoris	1				
Aact	1	75.238	75.238	.233	30.418****
Error	100	247.350	2.474		
Listermint	1				
Aact	1	127.681	127.681	.298	42.541****
Error	100	300.133	3.001		
Footwear					
Scholl					
Aact	1	74.540	74.540	0.183	17.214****
Error	77	333.435	4.330		
Famolare					
Aact	1	33.043	33.043	0.123	10.781**
Error	77	235.995	3.065		
Fanfare					
Aact	1	75.923	75.923	0.273	38.937****
Error	77	202.027	2.624		
Earth Shoes					
Aact	1	100.065	100.065	.287	31.029****
Error	77	248.314	3.225		
Pantyhose					
Sheer Energy					
Aact	1	36.346	36.346	.148	11.652***
Error	67	208.987	3.119		
Hanes					
Aact	1	21.529	21.529	.109	8.217**
Error	67	175.544	2.620		
L'eggs					
Aact	1	2.823	2.823	.010	.643
Error	67	294.250	4.392		

-CONTINUED-

Table 18 - Continued

	DF	SS	M^2	R^2	F
No Nonsense					
Aact	1	29.538	29.538	.084	6.106*
Error	67	324.114	4.838		

* p <.05
** p <.01
*** p <.001
**** p <.0001

Table 19

Multiple Regression Analysis of
Fishbein Behavioral Intention Model

$$BI \cong [Aact]w_0 + [(NB)(MC)]w_1$$

	DF	SS	M^2	R^2	F
Mouthwash					
Scope					
BI	1	126.362	126.362	0.275	37.968****
Error	100	332.815	3.328		
Listerine					
BI	1	80.247	80.247	0.159	18.839****
Error	100	425.959	4.260		
Lavoris					
BI	1	74.867	74.867	0.232	30.222****
Error	100	247.721	2.477		
Listermint					
BI	1	138.787	138.787	0.324	48.019****
Error	100	289.027	2.890		
Footwear					
Scholl					
BI	1	84.415	84.415	0.207	20.089****
Error	77	323.560	4.202		
Famolare					
BI	1	36.197	36.197	0.135	11.970***
Error	77	232.841	3.024		
Fanfares					
BI	1	77.806	77.806	0.280	29.934****
Error	77	200.144	2.599		
Earth Shoes					
BI	1	113.639	113.639	0.326	37.276****
Error	77	234.741	3.049		
Pantyhose					
Sheer Energy					
BI	1	38.027	38.027	0.155	12.290***
Error	67	207.306	3.094		
Hanes					
BI	1	20.560	20.560	0.104	7.804**
Error	67	176.513	2.635		
L'eggs					
BI	1	3.131	3.131	0.011	0.714
Error	67	293.941	4.387		

-CONTINUED-

Table 19 - Continued

	DF	SS	M^2	R^2	F
No Nonsense					
BI	1	27.523	27.523	0.078	5.654*
Error	67	326.129	4.868		

* p <.05
** p <.01
*** p <.001
**** p <.0001