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**ABSTRACT**

Despite a lack of evidence that subliminal messages experimentally embedded in advertisements produce predictable effects, many people believe they know what "subliminal advertising" is and believe that it is used and that it works. A study investigated this belief. Subjects, 206 Fostoria, Ohio residents, were given two questionnaires that inquired about response to a test ad, response to an advertised product (Grand Marnier Liqueur), and belief about advertising's power in general. The questionnaires were identical except that Treatment 1 was titled "Subliminal Advertising Survey" and Treatment 2 was titled "Advertising Survey," with corresponding differences in introductory explanatory paragraphs. Respondents for Treatment 1 indicated less willingness to purchase the advertised brand than those for Treatment 2. Results suggest that consumers who are thinking about the possibility of "subliminal" messages in an ad may exhibit a lower intention to purchase the product advertised, which implies that the advertising industry may want to investigate this issue, and, possibly, be more vocal about the claimed nonuse of subliminal techniques in ads. (One figure and one table of data are included, and 20 references are appended.) (MS)

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RESPONSES TO "SUBLIMINAL ADVERTISING"  
VERSUS  
"ADVERTISING" IN THE TITLE AND EXPLANATION OF AD-RESPONSE SURVEY

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ABSTRACT

Despite a lack of evidence that subliminal messages experimentally embedded in advertisements produce predictable effects, many people believe they know what "subliminal advertising" is and believe that it is used and that it works. Two questionnaires were developed that asked questions about response to test ad, response to advertised product (Grand Marnier Liqueur), and belief about advertising's power in general, as well as respondent demographic variables. The questionnaires were identical except that Treatment 1 was titled "Subliminal Advertising Survey" and Treatment 2 was titled "Advertising Survey," with corresponding differences in introductory explanatory paragraphs. A systematic random sample of 206 Fostoria, Ohio residents did not reveal significant results, but did approach significance on one dependent variable: Respondents for Treatment 1 indicated less willingness to purchase the advertised brand than Treatment 2 respondents. This result suggests that the advertising industry may want to investigate this issue, and, possibly, be more vocal about the claimed nonuse of subliminal techniques in ads.

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INTRODUCTION

One of the best-known stories from the popular culture of the advertising industry is the one about James Vickary's attempt, in 1957, to influence theatre concession sales by flashing two messages--"Eat popcorn" and "Drink Coke"--at movie audiences so fast that no audience member was aware of seeing the message. Vickary's original results were considered proprietary, and although his results have never been replicated, his "subliminal" messages used in an advertising context generated a controversy that has continued for thirty years.

The concepts of subliminal perception and influence (i.e. exposing subjects to stimuli too weak to be perceived supraliminally, or above the threshold of awareness, and searching for effects of those stimuli) has attracted scholarly and lay researchers for over a hundred years (4,16). Recent scholarly efforts on this subject have sought to measure effects on attitude and/or behavioral change (2,3,12,19, and others) and even for consumer behavior effects and implications (6,8,14,18).

Although academic research efforts have suggested that subliminal stimuli are not effective in changing attitudes or behavior, especially outside laboratory settings (14,17), popular writers such as Vance Packard (15) and Wilson Bryan Key (9,10,11) have argued that marketing firms and advertising

agencies, using in-depth psychological and motivation research, probe unconscious desires and manipulate an unsuspecting public into buying products. Publicity surrounding the alleged techniques has been enormous, and led eventually to proposed legislation at the Federal level to ban subliminal messages. In 1959, only two years after the debut of Vance Packard's book The Hidden Persuaders, Haber (7) measured public opinion "about subliminal advertising when so little factual information is available," and discovered that 41% of San Francisco-area residents had heard of subliminal advertising at that time. Zanut, Pincus, and Lamp (20), in an effort "to update and expand current knowledge about the public's awareness of the phenomenon," conducted a telephone survey of 209 subjects in the Washington, DC area in 1983. Zanut et al. found that 81% of their interviewees had heard of subliminal advertising, and of those, 80% believed that the technique is being used by marketers to sell products and 68% believed subliminal advertising "to be successful in selling products." Over half (51%) believed advertisers use the technique "often" or "always," and two-thirds believed subliminal advertising to be "unacceptable, unethical, and harmful."

#### FOCUS OF THE STUDY

Although the Zanut study did not claim generalization to the U.S. population at large, the results do indicate that awareness of so-called "subliminal advertising" is pervasive, belief that it is used runs high, and reactions to the phenomenon are negative.

The purpose of the present study is to determine whether or not belief that an advertiser is using "subliminal" messages will affect response to an ad and/or its advertised product. Will the consumer be more likely to focus

on obscure details of the advertisement? Furthermore, will the consumer's attitude toward the product itself be affected?

To examine these questions, a simple two-treatment experiment was used. Data was collected by interviewer-administered survey questionnaires. The key hypothesis ( $H_1$ ) is that subjects who are asked to respond to an ad, which the interviewer and the questionnaire imply contains a subliminal message, will respond differently than respondents who are simply asked to complete an "Advertising" survey. Specifically, we expected less likelihood of remembering details from the ad, a higher willingness-to-buy, and a less negative evaluation of advertising's manipulative abilities from those answering an "Advertising" questionnaire rather than a "Subliminal Advertising" questionnaire.

#### METHODOLOGY

The subjects for the survey were selected through a systematic sample (1) of Fostoria, Ohio, a small town approximately 40 miles southwest of Toledo. Using the City Directory, we began at the randomly selected thirteenth residence and pulled every twenty-fourth address. If the count ended on a business, the next residence was used and the count continued from there. Each apartment or trailer of any complex was counted as an individual residence. The homes, apartments, and trailers marked were the targets for the survey. If no one was living at the residence, if the residents were not willing to complete the survey, or if reasonable attempts to contact the residents were unsuccessful, we moved to the next home to the left on the street or hallway. "Subliminal Advertising" surveys and "Advertising" surveys (Treatments 1 and 2) were distributed alternately according to the order in the City Directory.

Subjects were asked to participate in either a "Subliminal Advertising" survey (Treatment 1) or an "Advertising" survey (Treatment 2). Once they agreed they were given a chance to examine an ad for Grand Marnier Liqueur (Figure 1), and then handed a questionnaire to fill out. All subjects were given the same ad. Furthermore, all subjects were given the same questionnaire with very slight variations: Treatment 1 subjects were given a questionnaire titled "Subliminal Advertising Survey" and Treatment 2 subjects' questionnaires were titled "Advertising Survey." Accordingly, the introductory/directional paragraph varied for Treatments 1 and 2. Otherwise, all variables--questions, layout, general appearance, color and quality of paper, and the pair of interviewers who knocked at each door--remained identical for Treatment 1 and Treatment 2 groups. Thus we feel reasonably sure that non-treatment variables were controlled.

The questions asked on the survey measured demographic variables as well as attitudes about and reactions to the advertisement, the product, and the advertising field in general. Demographics measured for each respondent included sex, age, race, education, and occupation. Respondents were also asked whether or not they do the shopping for the household, and whether or not they ever use (drink) alcoholic beverages. Familiarity and experience with the Grand Marnier brand were also examined.

The survey questions designed to measure response to the ad and the survey title were based on an advertisement for Grand Marnier Liqueur that was shown to each of the subjects. The advertisement was pulled from the November 1986 issue of Ms. magazine. The creators of the ad (TBWA Advertising, New York) have verified both verbally and in writing that there are, in fact, no subliminal messages in the ad.

Completed surveys produced an N of 108 for Treatment 1 ("Subliminal Advertising" Surveys) and an N of 98 for Treatment 2 ("Advertising" Surveys). Surveys were edited and open-ended questions coded separately by each author (one as interviewer and one a non-interviewer) to check for intercoder reliability before entering data for statistical analysis using SAS software.

## RESULTS AND DISCUSSION

Before attempting to examine results of the experiment, we sought to ascertain that the two subsample groups (Treatment 1 and Treatment 2) were each demographically equivalent to each other and to the population of Fostoria, where the sample was drawn, in order to validate test results. Use of chi-square tests and Fisher's Exact tests revealed no statistical difference between groups for sex, age, race, and educational level at the .10 level of significance. Furthermore, the groups were not shown to be statistically different at the .10 level for respondent tendency to shop for the household, respondent propensity to drink alcoholic beverages, previous familiarity and experience with Grand Marnier Liqueur, and whether or not respondent could remember having ever seen the test ad. We concluded that the two subsamples, which had received Treatment 1 and Treatment 2, respectively, were statistically equivalent.

One variable--occupation--produced questionable results; 18% of respondents did not answer the question and twice as many subjects in Group 2 marked "Professional or Managerial" as in Group 1 although more Group 1 than Group 2 respondents marked "craftsman or foreman." In the interest of accuracy, the occupation variable data were not used in any additional analyses.

Although no attempt is made to claim generalizability of test results to the U.S. population, an analysis of demographic breakdown of respondents showed



strong correlations with the demographic breakdowns of Fostoria, Ohio (occupation excluded) in U.S. Census Data, thus confirming the validity of the sampling technique.

Between-group responses to reaction questions are found in Table 1. At the .05 level of significance, none of the original hypotheses were supported. However, results approached significance for one dependent variable: Subjects answering the "Subliminal Advertising" survey indicated that they were "less likely to purchase Grand Marnier" after seeing the test ad than subjects answering the "Advertising" survey.

The fact that little between-group difference was found in the present survey may be, at least in part, because the subjects did not read the introduction to the survey carefully, because they did not understand the term "subliminal," or because they have no strong feelings about subliminal advertising. If subjects did have a negative attitude about subliminal advertising and the people that use it, that attitude should have come through in the responses to the "Subliminal Advertising" surveys. Perceptions of the source of the message are seen as leading to an attitude toward the source, which in turn governs cognitive and affective reactions to the content of the message (13).

It should be mentioned that no attempt was made to measure prior understanding or awareness of the "subliminal advertising" issue. Every attempt was made to control all variables, so that the only differences between treatments would be the use of the word "subliminal" to precede "advertising" in Treatment 1 oral introduction, title, and opening paragraph. To measure prior knowledge only on Treatment 1 subjects would have confounded control of the treatments, and introduction of the term "subliminal" into Treatment 2 would have conflicted with the "Subliminal"/non"Subliminal" measurement objective. However,

future studies, while still controlling for general appearance, etc., should measure for awareness and understanding of the "subliminal advertising" phenomenon by Treatment 1 subjects, and use dependent variable data only from those Treatment 1 subjects who know what subliminal advertising is. The present study was, possibly, weakened because some Treatment 1 subjects--those who did not understand "subliminal"--probably responded as Treatment 2 subjects would.

Future research efforts should probably also utilize a non-controversial, mass-appeal product. The fact that the advertisement was for an alcoholic product seemed to influence many of the subjects. If they did not drink alcohol, the subjects were confused about how to respond to the advertisement. Many other people had the impression that liqueur was too expensive for them to drink and stated simply that they "just drink beer." A recent study by Franke and Wilcox (5) found that 99% of the variability in distilled spirits consumption can be accounted for by advertising, personal income, trend, and seasonality; their study further shows that although advertising is responsible for some consumption and attitudes about an alcoholic-beverage product, it is not the only factor.

#### CONCLUSION

The present study was conducted to begin an examination of whether widespread public belief that "subliminal advertising" exists affects an individual's attitude toward ads, products, or advertising in general. Although the results are inconclusive, the data do suggest that consumers who are thinking about the possibility of "subliminal" messages in an ad may exhibit a lower intention to purchase the product advertised, and thus suggests that the advertising industry may want to be more vocal in educating the public about the claimed nonuse of subliminal techniques.

FIGURE 1  
TEST AD FOR GRAND MARNIER LIQUEUR

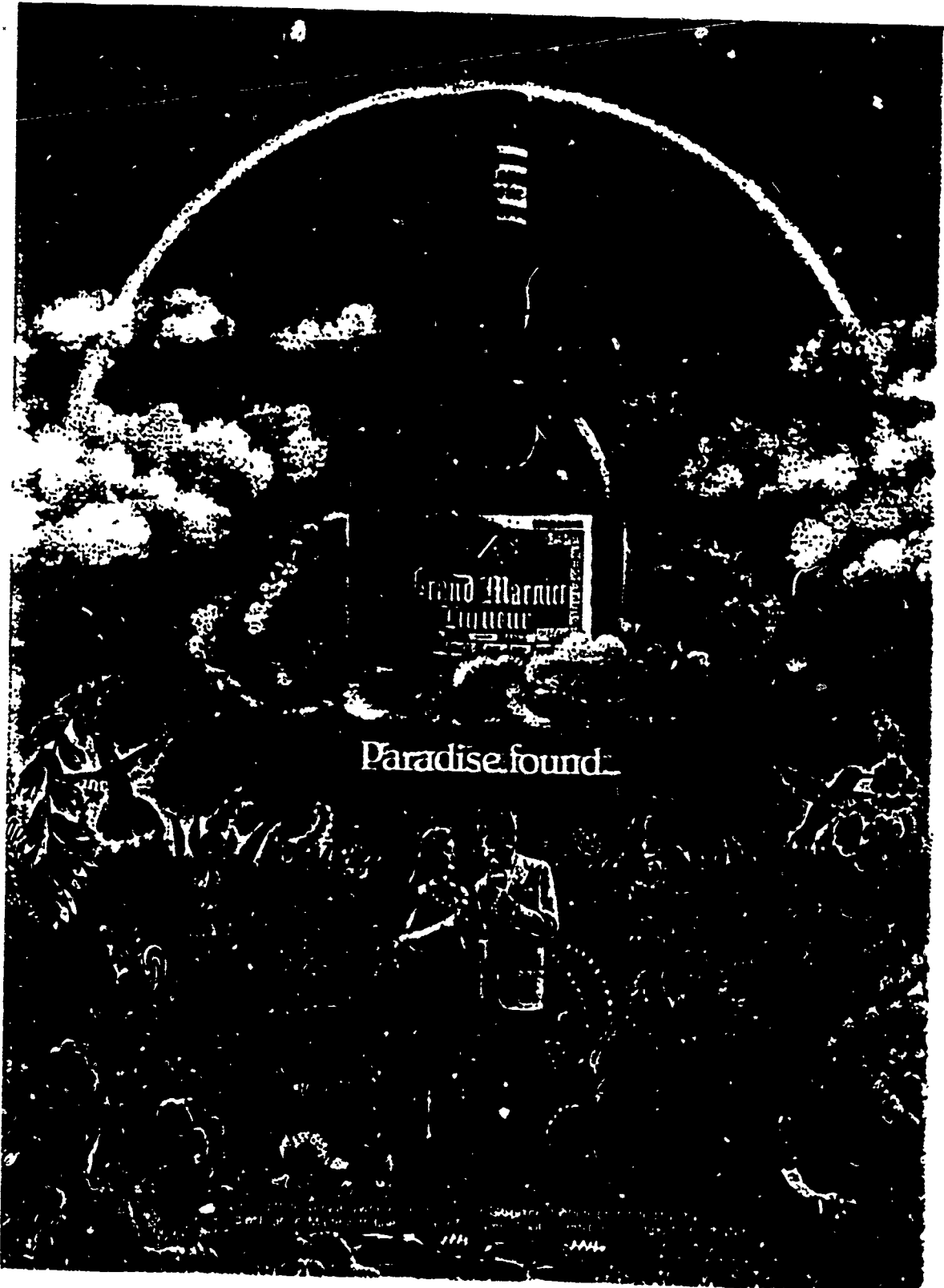


TABLE 1

Fisher's Exact Tests\* of Reactions  
To Ad, Product, and Advertising in General

	Treatment 1 ("Sub Adv")		Treatment 2 ("Adv")	
Detail most remembered about ad	<u>Responded</u> N = 82 83.7%	<u>No Response</u> N = 16 16.3%	<u>Responded</u> N = 97 89.8%	<u>No Response</u> N = 11 10.2%
	prob. = .136			
Does ad affect attitude toward Grand Marnier?	<u>Yes</u> N = 19 20.2%	<u>No</u> N = 75 79.8%	<u>Yes</u> N = 23 22.8%	<u>No</u> N = 78 77.2%
	prob. = .398			
After seeing ad, would be likely to purchase Grand Marnier	<u>Yes</u> N = 19 9.74%	<u>No</u> N = 75 38.46%	<u>Yes</u> N = 30 15.38%	<u>No</u> N = 71 36.41%
	prob. = .086			
Believe advertising in general increases desire to buy particular products	<u>Yes</u> N = 77 80.21%	<u>No</u> N = 19 19.79%	<u>Yes</u> N = 73 72.28%	<u>No</u> N = 28 27.72%
	prob. = .127			

\*1-Tail Tests

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