

The Effect Of Print Advertising's Use Of Sexual Themes On Brand Recall And Purchase Intention: A Product Specific Investigation Of Male Responses

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Abstract

Two convenience samples comprised of 230 male respondents participated in a study to measure the effects of sexual stimuli in print advertising on brand recall and intention to purchase. Using jeans and liquor products, the study suggests that the use of sexual stimuli in print advertisements does influence viewers' brand recall and purchase intentions. However, the study was not able to conclusively argue that specific levels of sexual intensity were more effective across the two product categories.

Introduction

Numerous studies have demonstrated the attentive level of sexual stimuli in print media (LaTour et al., 1990; Gould, 1987; Kilbourne et al., 1985; Reidenbach and McCleary, 1983; Reid and Soley, 1983; Judd and Alexander, 1983; Richmond and Hartman, 1982; Belch et al., 1981; Wilson and Moore, 1966; Kinsey et al., 1953; Kinsey et al. 1948; Rudolph, 1947). Although there is no evidence of a causal relationship between attention (as measured by Starch readership, electrodermal responses, or pupillary responses) and higher order stages of information processing, research has established that attention is a necessary condition for learning, attitudinal and behavioral effects (Ramond, 1976; Sheth, 1974; Ray, 1973; Starch, 1966).

Research has evolved from role portrayals to the use of explicit sexual content in advertising (Soley and Kurzbard, 1986). However, previous studies cast some doubt on the efficacy of sexually oriented advertising. A frequently cited study conducted by Steadman (1969) on the effectiveness of explicit sexual messages found that asexual print advertisements produced a greater rate of brand recall. At least three other studies corroborate Steadman's findings (Judd and Alexander, 1983; Richmond and Hartman, 1982; Weller et al., 1979; Alexander and Judd, 1978; LaChance and Lubitz, 1977).

Additional studies have measured how the presence or absence of sexual stimuli affects cognitive (i.e. recognition and recall) and conative (e.g. product evaluation, copy evaluation and behavioral intention) responses (Severn et al., 1990; Caballero and Pride, 1984; Reidenbach and McCleary, 1983; Belch et al., 1981; Baker, 1961). For example, in a study of cognitive responses to sex in advertising, Belch et al. (1981) found that nudity was likely to be perceived as more offensive than other advertisements. This may be more of a gender-related phenomenon. Research has revealed that females harbor more negative attitudes than males toward the use of sexual stimuli (Belch et al., 1981; Peterson and Kerin, 1977; Wise et al., 1974). However, other studies have contradicted such findings indicating a more favorable predisposition for advertisements portraying physically attractive models of the opposite sex (Kahle and Homer, 1985; Reid and Soley, 1983; Peterson and Kerin, 1977; Baker and Churchill, 1977; Kanungo and Pang, 1973).

Conative problems have also been noted. In one study, Reidenbach and McCleary (1983) stated that sexual appeals may be relatively more unbelievable if perceived as too offensive. Kanungo and Pang (1973) found inconsistent patterns, both positive and negative, in

product quality ratings. Severn et al., (1990) concluded that the use of sexually explicit appeals can result in more favorable attitudes which may result in greater purchase intentions. Finally, it has been suggested in some cases that the viewer's emotional response to the sexually appealing stimuli may be so strong that the attentive reaction is directed more to the stimuli than the product message (Edell and Staelin, 1986; Judd and Alexander, 1983). Overall, the empirical evidence suggests that sexual content in print advertising is less effective than non-sexual content (Soley and Kurzbard, 1986).

The implications from the aforementioned studies suggest the necessity of matching physically attractive models and the extent of sexual stimuli with the type of product being advertised. Provided the product and the sexual stimuli of the advertisements are congruent, favorable behavioral intention ratings have been found to be higher (Baker and Churchill, 1977).

The purposes of this study are to measure whether the extent of sexual stimuli presented in print media is a significant factor in the viewer's ability to recall brand names and their intentions to purchase. The literature is inconclusive on this issue, especially with respect to conative measures of behavioral intentions.

Preliminary Study

Several pre-tests were administered to establish the levels of sexual intensity. Four-color print advertisements (Judd and Alexander, 1983; Richmond and Hartman, 1982; LaChance and Lubitz, 1977; Stauffer and Frost, 1976; Unwin, 1973; Morrison and Sherman, 1972) of female and male models were collected from thirty-four (34) field-tested, print media vehicles (Wilson and Moore, 1977). The advertisements were positioned on two-by-two, 35mm slides for uniformity of presentation (Judd and Alexander, 1983; Sciglimpaglia et al., 1979; Alexander and Judd, 1978; LaChance and Lubitz, 1977). A total of 187 advertisements representing ninety-four (94) brand names from thirty-five (35) product categories, were displayed to 138 undergraduate students from an eastern university. Each slide was displayed ten seconds (Standing et al., 1970). Subjects were instructed to rate each advertisement's level of sexual stimuli on a four-point scale whereas 1 = asexual, 2 = low, 3 = moderate and 4 = high. Statistical measures indicated significant differences between the four levels of sexual intensity ($P \leq .05$; $P \leq .0001$). A second pre-test was conducted to affirm the measurement consistency of the rating scale. A sample of 164 undergraduate male students was selected from a second eastern university. Replicating the same methodological procedure used in the initial pre-test, the

results once again indicated significant differences between the scale ratings ($P \leq .05$; $P \leq .0001$).

A final pre-test comprised of 238 undergraduate male students was subsequently administered at a third eastern university. The number of advertisements were reduced to twenty-four (24) slides promoting jeans and liquor. The two product categories were selected because they had the highest level of pre-test concurrence among subject ratings and they have been consistently associated with the use of sexually-coded stimuli in advertising (Ruth et al., 1989; Schmitt et al., 1988; Reid and Soley, 1983; Goffman, 1976; Levy, 1959; Martineau, 1957). Brand names, copy, logos, etc., were professionally deleted for control purposes (Cook and Campbell, 1976). Twelve, consonant-vowel-consonant, three letter names (Prytulak, 1971; Smith, 1970; Montague et al., 1966) were generated by computer randomization. The three letter names were individually assigned the same point size and were uniformly positioned on each print advertisement. For comparative purposes, the same three letter names were randomly assigned to each product category. Post-test analyses of variance on four of the assigned names found no significant differences in either the brand recall ($P \leq .01$) or intention to purchase ($P \leq .0001$) responses for the two product categories, indicating an absence of assignment bias.

The use of twelve (12) advertisements for each product category is based on the convenient divisibility of the four levels of sexual intensity and the absence of specificity in the literature that quantifies the extent of sexual stimuli an individual is exposed to in print media.

Winer's (1971) ranking test for differences was used:

$$Q_j^2 = \frac{4\sum(n_{ij} - (n/I)^2)}{n}$$

where Q_j^2 is an approximate distribution of the X^2 statistic (3df). The test statistic is:

$$A_j^2 = \sum Q_j^2$$

where A_j^2 is the approximate distribution of the X^2 statistic (9df). The statistical measure was repeated for each product category. Significant differences between the four levels of sexual intensity were found to exist ($P \leq .05$; $P \leq .0001$).

Hypotheses

Based on implications of the previous review, the following hypotheses were drawn:

H₁: There is no significant difference between the levels of sexual intensity in print advertising and the male viewer's ability to recall jean brand names.

H₂: There is no significant difference between the levels of sexual intensity in print advertising and the male viewer's intention to purchase jean brand names.

H₃: There is no significant difference between the levels of sexual intensity in print advertising and the male viewer's ability to recall liquor brand names.

H₄: There is no significant difference between the levels of sexual intensity in print advertising and the male viewer's intention to purchase liquor brand names.

The first and third hypotheses test the cognitive effect of recall. In accordance with the findings of Steadman (1969), Baker (1961) and others, the subjects should not demonstrate higher brand recall responses as the levels of sexual intensity are varied.

The second and fourth hypotheses test the conative effect of behavioral intention. Contrary to the findings of Baker and Churchill (1977) and others, the study should not find an association between the respondent's purchase intention and level of sexual stimuli.

The corresponding alternative hypotheses would state that the viewer's brand recall and intention to purchase would be significantly influenced by the varied levels of sexual intensity. Support for the alternative hypotheses would be evidenced by significant mean differences in each treatment comparison for both recall and purchase intention.

Methodology

The sample consisted of 230 undergraduate male students at an Eastern university that was not a part of the preliminary studies. The sample was divided into two test groups randomly assigned to the jeans (n=116) and liquor (n=114) product categories. The pre-tests provided the statistics for estimating the sample size. The approximate sample size, using 12 advertisements, was calculated to be $n \geq 64$ for both categories ($P \leq .05$).

A laboratory setting was established with color slide projections of the actual advertisements (exclusive of brand names, logo and copy for control purposes) on a screen clearly visible to the viewing audience. The same random computer coded advertisements used in the third pre-test were individually displayed for ten seconds. Pre-testing indicated that 10 seconds provided adequate time

for viewing and processing the stimuli contained in all of the advertisements. The stimuli consisted of three separate illustrations for each of the four levels of sexual intensity promoting the jeans ($C_1 = 12$) and liquor ($C_2 = 12$) product categories. A computer-generated randomization process was employed to present the advertisements in varied sequences to eliminate order bias.

After viewing the advertisements, the respondents were administered a three-part questionnaire. In Part I of the questionnaire, respondents were asked what brand names they could recall. The questions were developed from the free recall experiences of pretest subjects and expert opinion. Part II of the questionnaire requested the respondents to rate the probabilities of their purchase intentions based on a five-point Likert type scale (Juster, 1966). In both measurements, several rehearsal preventing questions preceded the formal tests as an additional measure of control (Norman, 1976). The dummy questions were included to simulate the memory lapses experienced by the typical field viewer between the moment when she or he is called upon to recall brand names and the time she or he was last exposed to the stimuli. An intervening lag of thirty (30) seconds was imposed between the viewers exposure to the advertisements and the testing of their cognitive and conative responses.

The final section of the questionnaire consisted of several questions regarding the classification of respondents. Scales were developed to measure the respondents' age, education, marital status, income, religion, size of household and employment status. Since analysis failed to provide significant classification associations with brand recall or intention to purchase, these variables will not be discussed further.

Analytical Procedures

Conventional 1x4 analyses of variance (ANOVA's) with brand recall and purchase intentions as dependent variables were used to analyze the data. The treatment variables were the levels of sexual intensity. Four separate ANOVA's were completed. Pearson Product Moment correlations were also administered.

Further analysis was performed on brand recall and intention to purchase to measure the mean differences between the individual effects of the sexual stimuli on each of the product categories. This was done to determine if either recall or purchase intention as reported by the respondents were individually affected by the differences in the treatment variables.

Table 1
Brand Recall of Jeans ANOVA Results

Levels of Sexual Intensity	Mean	% Of Respondents Recall of Brands				
Asexual	.658	21.9%				
Low	.350	11.7%				
Moderate	.795	26.5%				
High	.393	13.1%				
	DF	SS	MS	F	SIG	STD.DEV
Model	3	47.7628	15.9209	37.92	.0001	.6480
Error Corrected Model	1400	587.8641	.4199			
	1403	635.6090				

Results

Tables 1 and 2 present the ANOVA results for the brand recall of the two product categories and their respective means for the levels of sexual intensity. Mean scores were calculated on the basis of the number of individual brands recalled for each treatment variable; whereas a value of three (3) indicates the recall of every advertisement for a specific treatment and zero (0) is interpreted as no recall. The data indicate a statistically significant difference between the respondent's ability to recall brand names and

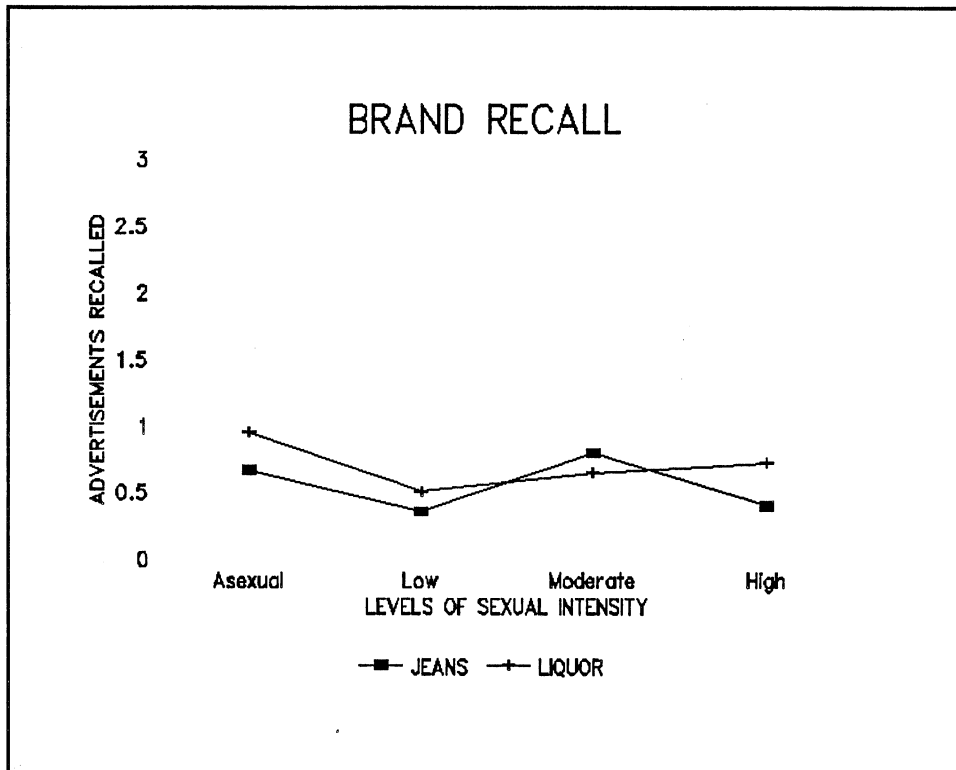
the levels of sexual intensity for both product categories ($P \leq .0001$). The significance of the independent variables indicates the cognitive main effects of sexual stimuli are consistent across the product categories.

The mean recall averages for the brand names for each product category are illustrated in figure 1. Respondents did recall relatively more brand names for liquor advertisements in all treatment categories except for moderate levels of sexual intensity where jeans had a higher mean recall.

Table 2
Brand Recall of Liquor ANOVA Results

Levels of Sexual Intensity	Mean	% Of Respondents Recall of Brands				
Asexual	.952	31.7%				
Low	.504	16.8%				
Moderate	.638	21.7%				
High	.714	23.8%				
	DF	SS	MS	F	SIG	STD.DEV.
Model	3	33.3357	11.1119	21.47	.0001	.7194
Error	1256	650.0571	.5175			
Corrected Model	1259	638.3928				

Figure 1
Mean Scores for The Recall Of Jeans
and Liquor Brands By Level Of Sexual Intensity



Tests for mean differences did provide a clearer indication of the individual effects between the levels of sexual intensity and the respondent's ability to recall brand names. In the case of jeans, Table 3 indicates that there is a significant difference between all of the mean pairs except between means 2(low) and 4(high levels of sexual intensity). Table 4 indicates similar results for the recall of liquor advertisements except when respondents compared liquor brands at moderate and high levels of sexual intensity.

The findings on the effects of sexual stimuli on brand recall were not in the general hypothesized direction. That is, in five of the six tests for mean comparisons, the results indicated significant differences between the levels of sexual intensity and the effects on a respondent's ability to recall brand names. However, because the t-test results did reveal one inconsistency between the mean pairs for recall and sexual levels, hypotheses 1 and 3 are accepted.

Tables 5 and 6 present intention to purchase ANOVA results for the two product categories and their respective means for the four levels of sexual intensity. Mean scores

were calculated on the basis of the number of each brand's purchase probability, whereas: 1 = certain, practically certain ($\geq 90\%$ probability), 2 = probable (70% probability), 3 = fairly good possibility (50% probability), 4 = some possibility (30% probability), and 5 = no chance, almost no chance ($\leq 10\%$ probability).

In the case of liquor, nine surveys were excluded due to incompleteness. The results indicate that there are statistically significant differences between the mean scores for both products ($P \leq .0001$). The significance of the independent variable indicates the conative main effects were consistent across the product categories for the combined levels of sexual intensity. Correlation analyses confirm, in the case of liquor, that purchase intentions are significantly related to the use of sexual stimuli ($P \leq .01$).

Figure 2 illustrates the mean scores for the intention to purchase each product category. For both categories, it appears that some sexually-oriented stimuli is better than none (asexual) for eliciting favorable intention responses. However, tests for mean differences are not conclusive enough to argue this point. Several inconsistencies between the levels of sexual intensity and the effect on intention to purchase do exist. For example, the t-test results for jeans (Table 7) indicate five of the six tests for mean comparisons support rejection of Hypothesis 2. However, one test did indicate that the respondents could not significantly discern perceptual differences between asexual and low levels of sexual intensity and their purchase intentions.

The mean differences are more pronounced for liquor advertisements. Table 8 indicates that the respondents were able to assess their purchase intentions. However, the findings did not show a consistently strong relationship with sexual intensity. For example, the table does not indicate a significant difference between low and high, as well as, with moderate and high levels of sexual intensity. The remaining four tests for mean comparisons between

Table 3
Test For Mean Differences In Brand Recall Of Jeans

<u>Levels of Sexual Intensity</u>		<u>Mean</u>	<u>% Of Respondents' Recall Of Brands</u>
Asexual	1	.658	21.9%
Low	2	.350	11.7%
Moderate	3	.795	26.5%
High	4	.393	13.1%
	<u>n</u>	<u>T value</u>	<u>Significance</u>
$\mu_1=\mu_2$	351	6.755	.0001
$\mu_1=\mu_3$	351	-2.491	.01
$\mu_1=\mu_4$	351	5.708	.0001
$\mu_2=\mu_3$	351	-8.666	.0001
$\mu_2=\mu_4$	351	1.015	N.S.
$\mu_3=\mu_4$	351	-7.716	.0001

intention to purchase and levels of sexual intensity were significantly different ($P \leq .05$ to $P \leq .0001$). Because of the inconsistencies between the respondent's purchase intentions for both product categories and specific levels of sexual intensity, hypotheses 2 and 4 are accepted.

Discussion

The study tested the effects of sexual stimuli in print advertising on brand recall and intention to purchase. The study suggests that variances in sexual stimuli are not always effective in eliciting desired or corresponding variations in cognitive and conative responses. Though the results of the two studies were not completely consistent, they suggest that the use of sexual stimuli in print advertisements does elicit favorable responses. For example, the findings indicate that the use of asexual rather than higher levels of sexual stimuli may be generally more effective in affecting brand recall for liquor products. It is plausible that higher levels of sexual stimuli may divert the viewer's attention from the brand name to the advertisement's sexual content. This would suggest that a marketer should test the appropriateness of sex appeals for a given product before deciding on the extent of sexual intensity. In this regard, the findings would support the conclusion of earlier studies (e.g. Tinkham and Reid, 1988; Judd and Alexander,

1983; Richmond and Hartman, 1982; Steadman, 1969).

In the case for eliciting more favorable recall of jean brands, it may be appropriate to advertise at a moderate level of sexual intensity. Jean advertisements have become more explicit in recent years and the contemporary audience may have become more tolerant (i.e. conditioned) to sexually suggestive themes than previous audiences. As a result, advertising at lower levels of sexual intensity may fail to attract attention; whereas higher intensity levels may distract from the advertisement's purpose (Alexander and Judd, 1978). The fact that the tests for mean comparisons indicated no significant differences between low and high levels of sexual intensity and its effect on brand recall may support this contention.

The ANOVA results further suggest that sexual stimuli beyond the asexual level elicit higher levels of intention to purchase. One cannot conclude that an a-priori relationship exists between brand recall and purchase intentions; only that intention to purchase is higher when a brand is promoted at the appropriate level of sexual intensity. This finding may corroborate Severn's et al. (1990) study.

Table 4
Test For Mean Differences In Brand Recall Of Liquor¹

<u>Levels of Sexual Intensity</u>		<u>Mean</u>	<u>% Of Respondents' Intention To Purchase</u>
Asexual	1	.952	31.7%
Low	2	.504	16.8%
Moderate	3	.638	21.7%
High	4	.714	23.8%
	<u>n</u>	<u>T Value</u>	<u>Significance</u>
$\mu_1=\mu_2$	342	7.714	.0001
$\mu_1=\mu_3$	342	5.231	.0001
$\mu_1=\mu_4$	342	3.943	.0001
$\mu_2=\mu_3$	342	-2.465	.01
$\mu_2=\mu_4$	342	3.849	.0001
$\mu_3=\mu_4$	342	1.346	N.S.

¹ n = 114 useable surveys

Table 5
Intention To Purchase Jeans ANOVA Results

Levels of <u>Sexual Intensity</u>	<u>% Of Respondents'</u> <u>Intention To Purchase</u>	
	<u>Mean</u>	
Asexual	2.8746	28.74%
Low	3.0000	30.00%
Moderate	4.1054	41.05%
High	3.4558	34.56%

	<u>DF</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>SIG</u>	<u>STD.DEV.</u>
Model	3	81.6068	27.2023	21.55	.0001	1.1235
Error Corrected Model	1400	1767.1624	1.2622			
	1403	1848.7692				

Suggestions For Future Research

The results demonstrate the need for additional testing in an attempt to resolve the study's limitations. The present study has several limitations. First, the student subjects may or may not represent the general population. Despite the fact that the general attitudes of students towards advertising differ [little] from the population at large (Zanot, 1984; Barnes, 1982), the convenience sample may have biased the results because of selection error. That is, the subjects interested in participating in a

research study on advertising appeals may be different from non-participants in their attitudes about sexual themes.

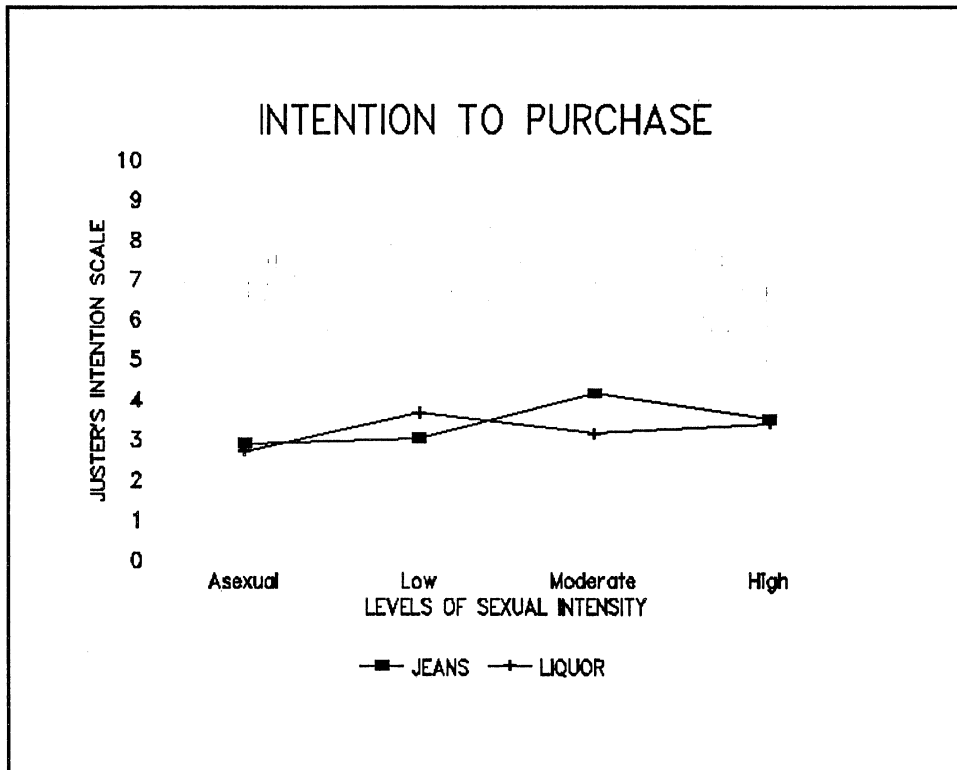
A second limitation is the gender composition of the study group. The exclusion of females as a moderating factor may have biased the male subject's responses to advertisement portrayals of physically attractive models of the same or opposite sex. Provided concurrence on the levels of sexual intensity within and between the genders can be reached, inclusion of females and males would

Table 6
Intention To Purchase Liquor ANOVA Results

Levels of <u>Sexual Intensity</u>	<u>% Of Respondents'</u> <u>Intention To Purchase</u>	
	<u>Mean</u>	
Asexual	2.6825	26.82%
Low	3.6412	36.64%
Moderate	3.1079	31.11%
High	3.3492	33.35%

	<u>DF</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>SIG</u>	<u>STD.DEV.</u>
Model	3	38.8341	12.9447	9.09	.0001	1.1932
Error Corrected Model	1256	1788.1587	1.4237			
	1259	1826.9928				

Figure 2
Mean Scores For Intention To Purchase
Jeans And Liquor By Levels Of Sexual Intensity



permit gender comparisons and introduce to the study an additional measure of control.

A third limitation is the absence of any direct measure of the respondents reactions on an affective level. A respondent's liking of an advertisement may be conditioned by the type of product being advertised and the extent of the sexual stimuli involved. Thus, while specific responses are elicited, the fact that these responses could result in unfavorable evaluations may be generalized to the product itself. An additional measurement on the subject's prior use or purchase of either product may reveal a causal effect on intention to purchase. Furthermore, an attentive measure may indicate that certain stimuli are so overwhelming that the respondent attends more to it than the product's brand name. These factors may bias select cognitive and conative responses.

A fourth limitation is the study did not model the manner in which most print advertisements compete for a viewer's attention. The study advertisements were superimposed on 35mm slides rather than in field magazines containing copy and advertising printed on the same and/or adjoining pages. In print media with

competing stimuli on the same or an adjoining page, different viewer responses may be evidenced. However, the respondent in viewing the study's print stimuli may not have been distracted from the advertisement's persuasive appeal.

Finally, although not a limitation, a concern does exist as to whether or not the results are generalizable to other product categories. Further research may shed light on the effects of sexual themes relative to additional product categories, as well as specific brands. ☐

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Table 7
Test For Mean Differences In Intention To Purchase Jeans

Levels of Sexual Intensity		Mean	% Of Respondents' Intention To Purchase
Asexual	1	2.8726	28.75%
Low	2	3.0000	30.00%
Moderate	3	4.1054	41.10%
High	4	3.4558	34.46%
	<u>n</u>	<u>T Value</u>	<u>Significance</u>
$\mu_1=\mu_2$	351	.809	N.S.
$\mu_1=\mu_3$	351	7.265	.0001
$\mu_1=\mu_4$	351	3.452	.001
$\mu_2=\mu_3$	351	6.469	.0001
$\mu_2=\mu_4$	351	-2.684	.01
$\mu_3=\mu_4$	351	3.546	.001

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Table 8
Test For Mean Differences In Intention To Purchase Liquor¹

Levels of Sexual Intensity		Mean	% Of Respondents' Intention To Purchase
Asexual	1	2.6825	26.82%
Low	2	3.6412	36.64%
Moderate	3	3.1079	31.11%
High	4	3.3492	33.35%
		<u>n</u>	<u>T Value</u>
$\mu_1=\mu_2$		315	5.035
$\mu_1=\mu_3$		315	2.322
$\mu_1=\mu_4$		315	3.631
$\mu_2=\mu_3$		315	-2.714
$\mu_2=\mu_4$		315	1.484
$\mu_3=\mu_4$		315	-1.271
			<u>Significance</u>
			.0001
			.05
			.001
			.01
			N.S.
			N.S.

¹ n = 105 useable surveys

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