

GENDER DIFFERENCES IN AD IRRITATION: IMPLICATIONS FOR MARKET SEGMENTATION

SUBHRA CHAKRABARTY, Mississippi State University

RAMA YELKUR, University of Wisconsin-Eau Claire

GENE BROWN, University of Missouri-Kansas City

Gender differences in information processing have been studied extensively in the marketing literature. However, few studies have examined the implications of these differences on perceived ad irritation. The current study attempts to fill this void by investigating whether the effects of ad irritation on brand attitudes are different for men and women. Results provide mixed support for the notion that men and women perceive different levels of ad irritation and this in turn affects their brand attitudes. The implications for gender segmentation are discussed.

INTRODUCTION

Studies on the gender differences in information processing have a rich tradition in marketing literature (Meyers-Levy 1988; Meyers-Levy and Maheswaran 1991; Meyers-Levy and Sternthal 1991; Prakash 1992; Moutinho and Goode 1995; Dubé and Morgan 1996; Wolin 2003). Marketers often use gender as a segmentation variable since gender is easily identifiable, and gender segments are accessible and often profitable. As selective processors, males are believed to rely on subsets of highly available cues. In contrast, females are believed to be comprehensive processors and they attempt to engage in "effortful, comprehensive, itemized analysis of all available information" (Darley and Smith 1995, p. 43). Thus, advertisers may cater to gender differences by providing men with simple messages, which highlight the central feature of a product or service. In contrast, advertisements designed for women may include detailed descriptions of the features of a product or service. Gender differences have been documented in the interpretation of alcohol-related messages (Andsager, Austin and Pinkleton 2002), and in perceived importance of message appeals for vehicle

purchasing (Widgery and McGaugh 1993). According to Behling (1997, p. 14), "early in the automobile's advertising history, a difference is established between the attributes and features men should seek in a car and those that women should seek." Advertisers have catered to gender differences in non-verbal gender displays of kinesthetic image schemas, such as, relative size, psychological withdrawal, ritualized subordination, function ranking, touch/manipulation, and movement (Umiker-Sebeok 1996).

Although males and females differ in information processing, empirical evidence regarding gender differences in perceived ad irritation is inconclusive. Greyser (1973) asserted that a combination of sex, marital, and family status might explain reactions to advertisements for particular products. Bauer and Greyser (1968) reported that men found commercials more annoying than did women. However, Barnes and Dotson (1990) found that although men and women agreed on which advertisements were most offensive, women found a number of products significantly more offensive than did men. Aaker and Bruzzone (1985) found no difference in ad irritation scores between males and females, and Stone, Besser and Lewis (2000) reported that the recall of disliked advertisements was the same regardless of gender. Consequently, gender differences in ad irritation needs further study.

Irritation in Advertising

Irritation in advertising has stimulated empirical research for decades. Greyser (1973, p. 7) summarized the relationship between liking and effectiveness of advertisements by stating the following:

Two alternative hypotheses exist: (1) that the more pleasant the ad, the more effective it is; and (2) that very pleasant and very unpleasant ads are more effective than those in between.

The first hypothesis, also called the "superiority of the pleasant" hypothesis (Silk and Vavra 1974) postulates that a liked advertisement will encourage more cognitive processing since viewers will pay more attention to it. The positive feelings induced by the advertisement will be generalized to the brand via some conditioning process such as "affect transfer" (Shimp 1981; Mitchell and Olson 1981; Aaker and Bruzzone 1985; Walker and Dubitsky 1994). Empirical support exists for liking of an advertisement as an indicator of advertisement effectiveness (Haley and Baldinger 1991). A meta-analysis of the consequences of attitude toward the ad (A_{ad}) indicated that ad attitudes affect brand attitudes directly, as well as indirectly via brand cognitions (Brown and Stayman 1992).

The second hypothesis, also known as the "law of extremes" hypothesis (Silk and Vavra 1974) proposes a J-shaped relationship between liking an advertisement and its effectiveness. Thus, "irritating advertisements can be more effective than neutral ones, although less so than well-liked advertisements" (Aaker and Bruzzone 1985, p. 48). Ad irritation might increase attention without transferring the negative affect to the brand, increase brand familiarity but dissociate the advertisement from the brand over time (sleeper effect), or distract the viewer thereby suppressing counterarguments and enhancing persuasion (Moore and Hutchinson 1983; Ray and Batra 1983; Aaker and Bruzzone 1985). Fritz (1979) found support for the "law of extremes" hypothesis and claimed that "there is a definite non-linear trend between claim-recall and the level of irritation in television advertising" (p. 12). Aaker

and Bruzzone (1985) found some support for the J-model but avoided making any firm conclusions regarding the overall effectiveness of irritating commercials. After nearly three decades of research, "the jury is still out on whether liked or disliked advertisements are more memorable" (Stone, Besser and Lewis 2000, p. 8).

Several scholars have studied irritation as a dimension of ad evaluation (Aaker and Stayman 1990; Biel and Bridgwater 1990; James and Kover 1992; Walker and Dubitsky 1994; De Pelsmacker and Van den Bergh 1998; Smit and Neijens 2000). Based on a study of 524 prime-time television commercials, Aaker and Bruzzone (1981) noted that "a small number of commercials are found irritating by a substantial amount of people" (p. 19). Aaker and Bruzzone (1985) concluded that certain factors increase ad irritation such as the advertised product itself (e.g., Preparation H); advertisements that portray a contrived, phony, or unbelievable situation; advertisements that threaten an important social relationship (such as mother-daughter); and advertisements that demonstrate a physical discomfort (such as Pepto-Bismol does). Ad-induced irritation explained significant variation in brand attitudes even for commercials that were expected to induce warmth and amusement (Stayman and Aaker 1988). Thus, irritation in advertising can result from the nature of the product advertised and the execution of the commercial (Barnes and Dotson 1990), and irritation caused by a commercial can transfer to a subsequent unrelated commercial and alter brand attitudes (Fennis and Bakker 2001). Given that the executions of advertising strategies are controllable, can the level of irritation be used to segment the viewers? If so, do we need to account for gender differences in information processing?

METHODOLOGY

Sample

The subjects were 125 students enrolled in the various undergraduate programs of a business school in the southern United States. The students were shown five noncomparative television

advertisements. The advertisements were for Tylenol PM, Kellogg's All Bran, Red Roof Inn, Range Rover, and Schweppé's Ginger Ale. Since these were ads for existing brands, pre-existing brand attitudes (A_b) might impact subjects' A_{ad} (Messmer 1979; Edell and Burke 1987; Stayman and Aaker 1988). Thus, subjects indicated their A_b before being shown any ads. They also responded to a 3-item measure of their attitudes towards advertising in general (see Appendix for a description of the items). After viewing the advertisements the respondents filled out a questionnaire which measured how many times they have seen this ad before (never, once or twice, more than twice, or many times), perceived ad irritation, attitudes towards the brands, positive and negative feelings induced by the ads, attitudes towards the advertisers of these ads, and how credible they thought these advertisements were. Past research has demonstrated the role of these variables as antecedents to A_{ad} (Lutz 1985; MacKenzie and Lutz 1989).

Description of the Treatments

The advertisements used in this study were non-comparative ads. They were carefully chosen so as to cause varying degrees of irritation to the viewers. The Tylenol PM ad showed a middle-aged woman unable to sleep at night due to severe headache. Past literature has posited that advertisements for pain relievers are likely to cause irritation (Aaker and Bruzzone 1985).

The Kellogg's All Bran ad had several interesting features. The advertisement started with the word "laxative" and went on to claim that since Kellogg's All Bran has enough fiber, it is a natural choice for drug-free regularity. Previous literature has shown that advertisements for laxative products cause irritation (Aaker and Bruzzone 1985). The Kellogg's All Bran ad is not a laxative ad per se. But the product was positioned as an alternative to laxatives and a way to achieve regularity without drugs.

The Schweppé's Ginger Ale ad showed a taster tasting the soft drink and recommending adjectives to describe the ginger taste. A spokesperson was listening to the adjectives to choose the one that is

best suited to describe the taste of the soft drink. The taster, while describing the taste of the soft drink, said "very nice indeed" to a man who brought a piece of paper to him. Unaware of this, the spokesperson thought that "very nice indeed" was a descriptor of the taste of Schweppé's Ginger Ale, and decided to choose that adjective. This advertisement was humorous, and therefore, it was unlikely to cause any irritation to the viewers.

In the Red Roof Inn advertisement, a man who traveled frequently was asked whether he had ever paid \$70 for a motel room for one night. When he said "yes," he was asked to hand over his wallet and the wallet was thrown away indicating that he is throwing away his money if he is not staying in Red Roof Inn. Although this advertisement was humorous, there was an element of irritation in it. Past research has shown that commercials that show a person being put down with respect to appearance, knowledge, or sophistication are irritating (Aaker and Bruzzone 1985).

Finally, the Range Rover advertisement showed a dirty Range Rover car being cleaned up by a spray of water. This gradually revealed the actual shape and color of the car. At the end of the ad, the statement "everything you heard about the Range Rover is true" appeared on the screen. The end was abrupt, and no words were spoken throughout the ad. Viewers may feel confused and irritated since the advertisement doesn't promote the product per se.

Measurement of Constructs

Past research has produced various scales to measure consumers' reactions to advertisements. Wells (1964) developed a reaction profile to print ads, which had three dimensions, namely, attractiveness, meaningfulness, and vitality. Irritation towards an advertisement was part of the attractiveness dimension. Wells, Leavitt, and McConville (1971) developed a reaction profile for TV advertisements, which had personal relevance, irritation, humor, uniqueness, vigor, and sensuousness as its six dimensions. Schlinger (1979) developed a viewer response profile for TV

advertisements which was composed of seven dimensions; namely, entertainment, confusion, relevant news, brand reinforcement, empathy, familiarity, and alienation. The alienation factor represented the extent to which consumers perceive an advertisement to be irritating. Aaker and Bruzzone (1981) analyzed consumer reactions to over 500 TV commercials and proposed four factors, which were entertaining, personal relevance, dislike, and warm. The factor *dislike* represented irritating, silly, pointless, or phony advertisements.

In the current study, ad irritation, a component of attitude towards the advertisement, was measured using three items. In addition, brand attitude (prior and post-exposure), feelings of the respondent after an ad exposure, ad credibility, and attitude towards the advertiser were measured using multiple items. Each of these constructs was measured on a 6 point Likert scale ranging from 1 (Strongly Disagree) to 6 (Strongly Agree). The items were derived from past studies (See Appendix for a description of the items used to measure the study variables). The reliability of the measures ranged from 0.56 to 0.94. Most of the co-efficient α values exceeded 0.60.

ANALYSIS AND RESULTS

To determine gender differences in perceived ad irritation, an ANOVA was performed with ad irritation as the dependent variable. Significant differences were found for Tylenol PM, and Kellogg's All Bran ads. Table 1 presents the ANOVA results.

As Table 1 indicates, men found the ads for Tylenol PM and Kellogg's All Bran significantly more irritating than did women. However, for the remaining three ads (Schweppe's Ginger Ale, Range Rover, and Red Roof Inn) perceived ad irritation was higher for women than men, although the difference was not significant. As repeated exposures to ads may cause irritation (Greyser 1973), we examined whether the gender of the subjects was significantly associated with the frequency of ad exposures, thereby contributing to the differences in perceived irritation.

Gender by frequency of exposure cross tabulations were performed for each ad and χ^2 values indicated that gender was significantly associated with level of exposures for Kellogg's All Bran ($\chi^2 = 6.94$, $p < 0.10$), Range Rover ($\chi^2 = 15.99$, $p < 0.01$), and Tylenol PM ($\chi^2 = 15.98$, $p < 0.01$) ads. Cell counts revealed that prior to this exposure, more women viewed the Kellogg's All Bran and Tylenol PM ad many times than did men, but more men viewed the Range Rover ad many times than did women. This finding indicates that statistical analyses of the effects of ad irritation on brand attitudes should control for the levels of exposures. Although women saw the ads (Kellogg's All Bran and Tylenol PM) more often, men felt more irritated (see Table 1). Past research has shown that there is some optimal level of repetition to avoid advertising wearout (Craig, Sternthal, and Leavitt 1976), and the direct effect of feelings on brand attitudes is strongest at lower exposure levels (Stayman and Aaker 1988). Consequently, additional analyses on the effects of ad irritation on brand attitudes were performed only on those subjects who have never seen these advertisements before. Table 2 presents the stepwise regression results of the determinants of brand attitudes for men and women who saw these ads for the very first time (single exposures). The default stepwise criteria were that the probability of F-value for a variable to enter the model has to be less than or equal to 0.05, and the probability of F-value to remove the variable from the model has to be greater than or equal to 0.10. The independent variables, which remained in the final model, are significant predictors of brand attitude.

As Table 2 indicates, prior A_b 's were significant predictors of post-exposure A_b 's for all five ads for men and women. This is consistent with Brown and Stayman's (1992, p. 41) conclusion that "the effects of ad attitudes on relevant outcomes does appear to be influenced by the existence of brand familiarity." Besides prior A_b , ad credibility, attitude toward the advertiser, and positive feelings were significant predictors of brand attitudes. All the coefficients (β 's) were positive, meaning believable claims by honest advertisers helped build favorable brand attitudes. Humorous ads (Schweppe's Ginger Ale)

TABLE 1
ANOVA of Gender on Ad Irritation

Advertisement	Gender	Mean Irritation Score	F-Value
Tylenol PM	Male	3.11	$F_{1,117} = 2.87^b$
	Female	2.78	
Kellogg's All Bran	Male	3.69	$F_{1,116} = 8.87^a$
	Female	3.10	
Schweppe's Ginger Ale	Male	3.21	$F_{1,119} = 0.39$
	Female	3.36	
Red Roof Inn	Male	2.59	$F_{1,118} = 0.45$
	Female	2.73	
Range Rover	Male	3.07	$F_{1,119} = 2.01$
	Female	3.45	

^aSignificant at 0.01 level.

^bSignificant at 0.10 level.

TABLE 2
Significant Predictors of Brand Attitude (Single Exposure)

Advertisement	Gender	Predictors	β (t-value)
Tylenol PM	Male	Attitude Toward the Advertiser	0.67 (5.75) ^a
		Prior Brand Attitude	0.35 (3.60) ^a
	Female	Ad Credibility	0.25 (2.15) ^b
		Prior Brand Attitude	0.37 (3.77) ^a
		Attitude Toward the Advertiser	0.35 (2.19) ^b
Kellogg's All Bran	Male	Ad Credibility	0.32 (2.35) ^b
		Prior Brand Attitude	0.38 (3.33) ^a
	Female	Ad Irritation	-0.28 (-2.09) ^b
		Ad Credibility	0.29 (2.59) ^b
		Prior Brand Attitude	0.32 (4.04) ^a
Schweppe's Ginger Ale	Male	Positive Feelings	0.26 (2.75) ^a
		Prior Brand Attitude	0.49 (7.69) ^a
	Female	Ad Credibility	0.45 (4.47) ^a
		Positive Feelings	0.17 (2.46) ^b
		Prior Brand Attitude	0.47 (8.43) ^a
Red Roof Inn	Male	Ad Credibility	0.45 (5.23) ^a
		Positive Feelings	0.28 (4.31) ^a
	Female	Prior Brand Attitude	0.42 (5.59) ^a
		Attitude Toward the Advertiser	0.28 (2.73) ^a
		Ad Credibility	0.20 (2.05) ^b
Range Rover	Male	Prior Brand Attitude	0.46 (6.43) ^a
		Ad Irritation	-0.23 (-2.69) ^a
	Female	Ad Credibility	0.22 (2.03) ^b
		Attitude Toward the Advertiser	0.39 (3.71) ^a
		Prior Brand Attitude	0.38 (5.55) ^a
	Male	Ad Irritation	-0.26 (-3.31) ^a
		Prior Brand Attitude	0.42 (5.66) ^a
	Female	Ad Irritation	-0.29 (-3.88) ^a
		Attitude Toward the Advertiser	0.25 (2.48) ^b
		Prior Brand Attitude	

^aSignificant at 0.01 level; ^bSignificant at 0.05 level.

induce positive feelings which in turn affect brand attitudes.

Ad irritation was a significant predictor of brand attitudes for men viewing the Kellogg's All Bran ad. This was expected since men perceived the ad more irritating than women (see Table 1). Also, the coefficient was negative, meaning the higher the level of irritation, the weaker the brand attitude. For women, positive feelings, rather than irritation was significant in predicting brand attitude. Thus, men and women did react differently to ad irritation.

For the Red Roof Inn ad, irritation was a significant predictor of brand attitudes of women. For the Range Rover ad, brand attitudes of both men and women were negatively affected by ad irritation (see Table 2). Women did perceive the Red Roof Inn ad to be more irritating than men (see Table 1) but the difference was not significant. In fact, men's rating of the perceive irritation of the Red Roof Inn ad was only 2.59 on a 6 point scale, the lowest overall.

DISCUSSION

The purpose of our study was to examine whether gender differences in the processing of ad irritation is significant for gender segmentation. The design of the study does not allow us to identify the reasons behind gender differences in ad irritation. The cognitive responses of the subjects were not recorded. Thus, we do not know what went through the subjects' minds when they saw the commercials. Although gender differences in information processing (Meyers-Levy and Sternthal 1991; Meyers-Levy and Maheswaran 1991) can be used to explain some of the observed effects, these attempts are speculative at best.

Meyers-Levy and Maheswaran (1991) concluded that gender differences emerge when males use a schema-based strategy, whereas, females engage in a detailed elaboration of message content. For the Kellogg's All Bran ad, comparing the cereal with a laxative might invoke a schema for males who will consider that annoying. As a product class, ads for laxatives received the second highest average irritation score in an analysis of prime time

television commercials (Aaker and Bruzzone 1985). Thus, men were significantly more irritated than women by the Kellogg's All Bran commercial (see Table 1) and this affected their brand attitudes negatively (see Table 2).

The Red Roof Inn commercial showed that someone was ignorant if they spent \$70 for a motel room. The person was "put down" with respect to knowledge or sophistication and this might be irritating and uncomfortable to viewers (Aaker and Bruzzone 1985). However, women are likely to be more affected by this than men for at least two reasons. First, a detailed processing is needed to see beyond the humor of the wallet being tossed out. Second, women are guided by communal concerns (Meyers-Levy 1988) and their "affiliation orientation involves concern for other people's feelings, seeking approval from others, creating nurturing relationships with others, and maintaining interpersonal harmony" (Prakash 1992, p. 43). Thus, the irritation induced by the Red Roof Inn ad had a significantly negative effect on brand attitudes of women, rather than men.

Finally, the irritation induced by the Range Rover ad had a negative effect on brand attitudes of men and women. A possible explanation lies in gender differences in elaboration thresholds for making product judgments (Meyers-Levy and Sternthal 1991). The ad was so different from most automobile commercials that the degree of message incongruity was high enough to exceed both genders' threshold for elaboration. Consequently, both males and females engaged in detailed processing resulting in a significant negative effect of irritation on brand attitudes.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

A potential limitation of this study was the use of student subjects. Student samples tend to be more homogeneous and yield correlations that are higher than non-student samples (Brown and Stayman 1992). However, this homogeneity may be desirable while testing theory (Calder, Phillips and Tybout 1981), and scholars have discussed the merits of

using student subjects (Greenberg 1987). Given that the current study was one of the few that examined the implications of gender differences in ad irritation, the use of student subjects may not be a limitation. In fact, the use of student subjects in studies on gender issues in advertising is quite common (e.g., Meyers-Levy 1988; LaTour, Pitts and Snook-Luther 1990; Severn, Belch, and Belch 1990; Meyers-Levy and Maheswaran 1991; Prakash 1992; Quinn, Meenaghan and Brannich 1992; Kellaris and Rice 1993; Kempf, Palan and Laczniak 1997; Jones, Stanaland and Gelb 1998; Wolburg and Pokrywczynski 2001). Nevertheless, caution should be exercised in generalizing our findings to other populations.

Additional research should be conducted on gender differences in perceived ad irritation. Meyers-Levy and Sternthal (1991, p. 85) asserted that gender differences in elaboration thresholds should be investigated to examine "the proposition that gender segmentation may be useful even when males and females exhibit similar knowledge and interest in a message topic." The paucity of studies that applied gender differences to the designing of advertising formats prompted Prakash (1992, p. 43) to propose that "it is important to fill this gap in advertising research because of strategic implications for market segmentation and advertising management." If men and women are different with regard to perceived ad irritation, the hypothetical "irritation life cycle" proposed by Greyser (1973, p. 8) may become a useful tool for media planners and advertisers.

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APPENDIX

All constructs measured on a 6-point Likert scale
(1 = Strongly Disagree...6 = Strongly Agree)

Ad Irritation

I liked the ad.*
This ad was irritating.
This ad was stupid.

Ad Credibility

This ad was believable.
This ad was misleading.*
I am not convinced with this ad.*

Positive Feelings

I was pleased to see this ad.
I was excited to see this ad.

Negative Feelings

This ad made me feel sleepy.
After seeing this ad I felt sad.

Attitude Toward the Advertiser.

The advertiser of this ad is dishonest.*
The advertiser of this ad is good.
The ad's advertiser is unpleasant.*

Brand Attitude

I like the advertised brand.
This is a good brand.
I will recommend this brand to others.
This is a nice brand.

Gender Differences in Ad Irritation: . . .

Chakrabarty, Yelkur and Brown

Attitude toward Advertising

Advertising in general is good.

In general, advertising is pleasant.

I am not in favor of advertising.*

Prior Brand Attitude (Tylenol PM)

Tylenol PM is an effective pain reliever.

Tylenol PM helps to sleep.

I would recommend Tylenol PM to my friends.

Prior Brand Attitude (Red Roof Inn)

Red Roof Inn is an economical motel.

I like to stay in Red Roof Inn.

I would recommend Red Roof Inn to my friends.

Prior Brand Attitude (Kellogg's All Bran)

Kellogg's All Bran is a healthy cereal.

I like Kellogg's All Bran.

I would recommend Kellogg's All Bran to my friends.

Prior Brand Attitude (Range Rover)

Range Rover is a good car.

I like to drive a Range Rover.

I would recommend Range Rover to my friends.

Prior Brand Attitude (Schweppes's Ginger Ale)

I like to drink Schweppes's Ginger Ale.

Schweppes's Ginger Ale has ginger flavor.

I would recommend Schweppes's Ginger Ale to my friends.

* Reverse worded items.