The Influence of Program Context Intensity: An Examination of Television Advertising during War News

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Abstract

Advertisers often shy away from graphic, emotionally-charged programming under the assumption that the programming intensity will impair viewer recall, as well as negatively influence viewer perceptions. This paper empirically investigates this assumption and finds that advertisers are at least partially mistaken. We utilize war news programming as a fitting emotional context in which to embed advertising stimuli. Results from a four-group after-only experiment show: 1) more intense programming reduces the ability of both proponents and opponents of the war to recall advertisements; 2) proponents of the war are more likely to recall ads in lower-intensity programming than are opponents of the war; 3) the degree of polarization for or against the war ("against" versus "strongly against" and "support" versus "strongly support") has a significant impact on recall for proponents, but not for opponents; and (4) across all sub-groups of viewers, multiple measures of viewer perceptions (ad effectiveness, product value, product quality, purchase intentions, affective connections to the firm) reveal no negative effects from viewing ads during intense war programming.

Introduction

Television coverage of the wars in Iraq and Afghanistan is often so intense that networks precede the programming with warnings. Advertisers tend to shy away from such programming under assumptions that the programming intensity will negatively influence viewer recall and the impressions viewers form. Implicit in these assumptions is the belief that all viewers (e.g., opponents of the war as well as proponents of the war) are equally influenced by the intensity of programming. These assumptions, that more intensity is bad and that all viewers are affected by intensity in the same manner, are made for many other types of programming as well. For example, graphic coverage of a pro-life demonstration or an in-depth report on the final days of a terminally ill cancer patient would also be extremely intense. However, it is not altogether certain that such intensity would have the same effect for all viewers in all situations. Often, viewers of war news hold wide-ranging levels of anger and accord, contentment and sadness, and enthusiasm and hostility. War programming draws in both viewers who are strongly in support of, as well as viewers who are strongly against the conflict. Interestingly, both parties may be highly-involved. These unusual audience characteristics suggest that the context of highly intense programming would benefit from further study.

Although there are many topics addressed with intense programming, the program context of war news represents a distinctive and as-yet unstudied area for advertising researchers. The intensity of such programming can be readily measured in the images, sounds, and vocabulary used in the programming. In particular war news intensity can be seen to vary in types of *images* used (e.g., improvised explosive devices detonating at close range vs. distant puffs of smoke), *sounds* (e.g., explosions and automatic weapon fire vs. analysts debating), and

words (e.g., "civilians massacred" versus "those lost in the conflict"), thus strengthening or decreasing the emotional impact of the programming.

A good deal of previous research has established television programming context influences a viewer's ability to recall embedded advertisements (see, for example Hoffman and Batra 1991; Starr and Lowe 1995; Furnham, Gunter, and Walsh 1998; Sharma 2000; Furnham, Gunter, and Richardson 2002). Earlier studies have focused on common types of programming including sitcoms (Kennedy 1971; Horn and McEwan 1977), dramas (Aylesworth and MacKenzie 1998; Sharma 2000), talk shows (Goldberg and Gorn 1987; Kamins, Marks, and Skinner 1991), nightly news (Mundorf, Zillmann, and Drew 1991) and even the Super Bowl (Pavelchak, Antil, and Munch 1988). Additionally, researchers have explored advertising effects in the context of so-called "negative video" referring to a variety of downbeat and depressing news stories (Lang, Newhagen, and Reeves 1996). However, to date, no one has investigated the influence of programming intensity, especially within the unique context of emotionally-charged war news.

The current study examines the influence of programming intensity on viewers by embedding advertisements in war news programming of differing intensity levels (low versus high). Both the high-intensity and low-intensity condition cover news about the war in Iraq. After viewing one of the levels of programming, and subsequent to a fifteen-minute distraction task, subjects are asked to recall the advertisements as well as their perceptions of ad effectiveness, product value, product quality, their purchase intentions, and their affective connections to the firm. Subjects also provide a self-assessment of their attitude toward the war.

The following sections discuss extant research addressing programming influence and its relation to viewer recall and the unique polarizing program context of war news. After this

review, the hypotheses, methods, and results of the experiment are detailed, followed by a discussion of the managerial implications of polarizing programming, the limitations of this research, and a discussion of future studies that would facilitate our understanding of the unique issues surrounding polarizing programming.

Literature Review

Program-Contextual Influence

Programming context can be defined as the particular subject matter of the program (Soldow and Principe 1981; Gunter and Furnham 1997). For example, the context of a television program such as *ER* is one of intense drama. Program context differs from program emotionality in that context focuses on the content of the program, rather than the program's appeal to emotions. Context denotes the "reality" of the television show, not the applied human expression.

Researcher have studied program context for many years. Axelrod's (1963) work found that the mood induced by a program influenced the attitude toward the product in the ad, which in turn affected recall abilities. Kennedy's (1971) study provided evidence that the viewer's attitude toward the ad depends on the type of program being viewed (during both a suspense thriller and a situation comedy). Further, the research found that commercials inserted in the suspense thriller were more likely to be recalled than those in the situation comedy due to the nature of the program. Additionally, Clancy and Kweskin (1971) published a study which also revealed that program context influenced the viewer's attitude, which in turn influences ad recall. Horn and McEwan (1977) tested the effects of program context on recall ability, finding it was not necessarily the program context that affected recall, but the style (i.e., production quality) in

which the context was presented. This serves to add another interesting dimension to viewers' attitudes. Overall, when viewers liked and connected with the program context, reception and recall of the ads proved to be higher than when the program context was not well-liked or was rejected by the viewer.

More recent research into television media consumption has shown that program context influences viewers' perceptions of advertisements (see Mundorf, Zillmann, and Drew 1991; Aylesworth and MacKenzie 1998; De Pelsmacker, Geuens and Anckaert 2002). A majority of results highlight the influences of program context, commercial context, and induced mood. There is a wide range of explanations for programming influence, ranging from consistency effects (where similarity between the programming and advertisements facilitates recall) (Kamins, Marks, and Skinner 1991), to mood congruence (where similarity between mood and programming facilitates recall) (Bower 1981), to applicability and contextual congruity where features of context and "contextual primes" overlap with presented advertising stimuli (Higgins 1996; Sharma 2000), and to assimilative tendencies and mood intensities (Goldberg and Gorn 1987). Additional research has examined the mechanism though which programming influences recall in terms of the transfer of arousal from programming context to advertising (Mattes and Cantor 1982).

Further research examines the effects of programming on consumer perceptions with mixed results. Huh and Reid (2007) examined the effect of biased programming on advertisements and found it to have little influence on advertisements' credibility. Shanahan, Hermans, and Hymen (2003) investigated the effect of violent commercials (as the "programming" context for other commercials) on subjects' abilities to recall other advertisements. In general, the preponderance of evidence suggests that program context is

related to ad recall as well as to the emotional responses of viewers (see Park and McClung 1985; Norris and Colman 1992). A study by Aylesworth and MacKenzie (1998) discovered that mood influenced attitudes by affecting the number of cognitions the viewers gathered about the ads before they needed to recall them at a later point in time. Clearly, viewers cannot exhibit an emotional reaction to a program without the program containing a specific message that establishes a particular context. It must be acknowledged, therefore, that emotions, context, and viewer attitudes all influence viewers' abilities to recall advertisements.

Emotions and Program Context

An individual's emotional state also impacts his or her reception, processing, storage, and evaluation of advertising stimuli (Bower 1981; Stout and Rust 1993; Shapiro, MacInnis and Park 2002). In terms of television programming and advertising, previous research has found that emotional reactions to programs influence viewers' abilities to recall embedded ads (see, for example, Axelrod 1963; Aylesworth and MacKenzie 1998; McGrath and Mahood 2004). From these studies, it is evident that a person's emotions experienced while viewing a program affect the transmission and reception of the ad's message. Programs that evoke positive or happy emotions amongst viewers produce better ad recall rates of both positively- and negatively-valenced ads (Goldberg and Gorn 1987).

Subsequent research utilized the Consistency Effects Model to suggest that people who view a happy (or sad) commercial receive it better when their emotions are congruently happy or sad (Kamins, Marks, and Skinner 1991). Additional research has supported this mood-to-context consistency effect, wherein any mood-commercial contrast or incongruity proves less effective (Aylesworth and MacKenzie 1998). Moreover, Lord, Burnkrant, and Unnava (2001) used

congruency theories to reveal a correlation between the mood that viewers experience during the viewing of programs and his or her mood during subsequent recall of commercials. Thus, emotional stimuli within television programs often dictate the state (e.g., happy/sad or positive/negative) in which viewers receive advertising messages, and in turn relate to their general abilities to recall the ads. The consistency effects model has been used to examine consistency of advertisements with programming. This same theoretical underpinning can be used to hypothesize that a person's viewpoint on a particular programming topic would also affect his or her ability to recall advertisements placed in programming consistent with their attitudes.

Programming Intensity

Another aspect related to advertising recall is the intensity or strength of the programming. Studies of emotional intensity relative to recall appear to have unresolved and conflicting results. While some research has shown that the more intense the mood induced (positive or negative), the *better* the recall (Srull 1983); Pavelchak, Antil, and Munch's (1988) study found that viewers with intense emotional program experiences, regardless if they are positive or negative, are *less* likely to recall ads. This later research reasoned that strong emotional ties to a program clearly limit the viewer's cognitive resources available to pay attention to the ads, because the viewer is more focused on processing the program message. Viewers have a limited capacity for processing information (Lang 1995; Lang, Newhagen, and Reeves 1996). If they are cognitively occupied in processing the program content as well as emotionally occupied in the program context, then their abilities to process advertising messages will suffer.

In summary, the literature indicates increasing involvement with the programming context should increase advertising recall, that consistency of the programming with the advertisements should increase subjects' ability to recall ads, and that there are mixed results on the effect of programming intensity on recall.

Hypotheses

The ability of a viewer to recall ads depends on several factors. First of all, the emotions felt by the viewer determine how the ad will be perceived, and perhaps more importantly, if the ad will even be attended to at all. Second, the context of the program being viewed also plays an important role in recall. Prior research has mainly tested these notions using happy or sad programming. Despite the amount of research that has been conducted in this area, a theme that has not yet been explored is that of recall ability and advertisement effectiveness during the viewing of contextually intense and often highly emotional war news programming. While prior studies have focused on arousing news in print media (Grabe, Lang and Zhao 2003), the effects of viewing "negative video" (Lang, Newhagen, and Reeves 1996) and recall abilities during nightly peacetime news (Mundorf, Zillmann, and Drew 1991), it seems reasonable to suggest that the effect of increasing the intensity of war news programming should also decrease viewers' abilities to recall advertisements. Based on prior research revealing that more emotional and arousing programming leads to *lower* recall rates (Pavelchak, Antil, and Munch 1988; Aiken, Malkewitz, and Bowe 2004; McGrath and Mahood 2004); we hypothesize:

H₁: Subjects viewing ads embedded in *more-intense* war news programming will have *lower* ad recall rates than those subjects viewing advertisements embedded in *less-intense* war news programming.

One of the intriguing characteristics of war news programming is that the audience contains both proponents and opponents of the polarizing issue. Interestingly, both proponents and opponents of the topic may be highly involved. Past research has linked increased levels of program involvement to improved recall for advertising (Furnham, Bergland, and Gunter 2002). However, it is only possible for one of two groups' views to be "consistent" with the current state of the topic in question. For example, we would expect a proponent of the war to find more consistency with war news coverage than would an opponent of waging war in Iraq (just as a pro-life proponent would be expected to find more consistency with programming covering a prolife demonstration). The very nature of polarized programming assures that in every viewing audience there will be both those who find consistency with the programming, as well as those who find their views inconsistent with the current situation. As an extension of mood-consistency effects (Kamins, Marks, and Skinner 1991; Aylesworth and MacKenzie 1998; Sharma 2000), we hypothesize that viewers with programmingconsistent attitudes (i.e., proponents of the war whose beliefs are consistent with the current situation of a war being waged with Iraq) should be more able to recall advertisements. As this attitude-to-programming context consistency effect is present in both low-intensity condition and the high-intensity condition, we specifically hypothesize that consistency of war views will lead to higher recall in both the more- and less-intense programming conditions:

- H2a: Proponents of the war will have *higher* ad recall rates than opponents when viewing ads embedded in *less-intense* war programming.
- H2b: Proponents of the war will have *higher* ad recall rates than opponents when viewing ads embedded in *more-intense* war programming.

In addition, the level of polarization of both proponents and opponents of the programming is hypothesized to have an impact on viewers' abilities to recall advertisements embedded in the programming, due to increased involvement with the topic. For example, someone who is "strongly against" the war should have more involvement with the topic than someone who is just "against" the war. Greater polarization is associated with greater involvement, which should reduce the amount of cognitive resources available to process and recall advertisements. Past research has measured subjects viewing graphic and unpleasant "negative video" (Lang 1995; Lang, Newhagen, and Reeves 1996) and found this to be the case. The limited capacity information processing theory implies that greater attention and cognitive processing would be given to this programming context (i.e., the war news story itself), leaving subjects with diminished capacity for processing and remembering advertising. In the cases of both those subjects for and against the war, and in the case of both more-intense and less-intense programming, those who are more polarized can be expected to use more of their available processing capacities, thus decreasing their capacities to attend to advertisements. Therefore, in the case of less-intense programming we hypothesize:

- H3a: In *less-intense* programming, *increased* levels of involvement for proponents lead to *decreased* recall of advertisements
- H3b: In *less-intense* programming, *increased* levels of involvement for opponents lead to *decreased* recall of advertisements

And, in the case of more-intense programming we hypothesize:

H3c: In *more-intense* programming, *increased* levels of involvement for proponents lead to *decreased* recall of advertisements.

H3d: In *more-intense* programming, *increased* levels of involvement for opponents lead to *decreased* recall of advertisements.

Finally, important hypotheses can be generated regarding viewers' perceptions of the content of the advertisements, the products, the companies, and of their purchase intentions. Previous studies of emotions, affective valance, and program contexts led to the general conclusion that more emotional engagement amongst subjects induces more negative evaluations of the advertising firm, and that ads are less effective when embedded in negative programs (France and Park 1997; Gorn, Pham, and Sin 2001). From a different perspective, prior research has found that higher applicability, derived from contextual activation, will positively influence consumer evaluations (Meyers-Levy and Sternthal 1993; Shen and Chen 2007). Since the ads embedded in the highly intense war programming are viewed as less applicable, we posit that they will negatively influence consumer evaluations. It is hypothesized that subjects viewing the more intense and more emotional news will be likely to develop more disapproving and more negative attitudes, and express more hesitant behavioral intentions relative to the advertising firm and its products. This "rub-off" effect, wherein watching more intense, more disturbing war news will more negatively affect perceptions, would occur regardless of the viewer's position towards the war. Thus, the following can be hypothesized:

- H4a: Subjects viewing the *more-intense* war news programming will rate the advertisements as *less effective*.
- H4b: Subjects viewing the *more-intense* war news programming will rate the advertised products as *less valuable*.
- H4c: Subjects viewing the *more-intense* war news programming will rate the advertised products as of *lesser quality*.
- H4d: Subjects viewing the *more-intense* war news programming will report *lower purchase intentions*.

H4e Subjects viewing the *more-intense* war news programming will report *lower levels of affective connections* to the advertising firm.

Method

Before the main study ensued, the experimental stimuli were pre-tested to ensure face validity. Although both programming clips dealt with recent news of the war in Iraq, they were noticeably different in content and tone. While both video conditions were approximately fourteen minutes in duration, the more-intense programming clip showed five explosions, three amputees, and had a key word count of eight (i.e., key words were "suicide, explosive(s), bomb(er), death/dead, wounded"). The less-intense programming clip showed two distant explosions, one amputee, and contained a key word count of two. While the more-intense programming principally revolved around close-encounter ground battles, the less-intense programming dealt with tactical aerial strikes viewed from a distance, and a reported kidnapping of a non-American. A panel of experts judged the content of the two news videos as being appropriate for the main study, and then a pre-test with 38 subjects evaluated both programming stimuli according to a five-item semantic differential scale measuring how the subjects felt after viewing the video. The initial question was phrased as "This news segment made me feel:" and the five items measured were the degree of *emotion* the videos evoked (anchors were emotional - unemotional), *depression* (depressed - cheerful), programming *intensity* (intense - not intense), sad (sad – happy), and upsetting (upset – content). Given that there were two stimuli to rate (more-intense versus less-intense programming), a within-subjects paired-samples t-test examined each subject's responses to each of the videos. The pairing of the responses in the paired-samples t-test allows for the reduction in overall variance due to the same subjects rating both stimuli. The results of the pre-test revealed that the more-intense video affected the subjects more (i.e., it was thought to be significantly more emotional, depressing, intense, sad, and upsetting). Means ranged from 2.29 (for sadness of the more-intense condition) to 3.42 (for the emotional ratings of the less-intense condition). Additionally, all p-values were less than .013 and t-scores ranged from 2.63 (depression) to 5.49 (sadness). Across all five variables, the more-intense programming generated lower means – that is, the condition was seen as more emotional, intense, upsetting, depressing, and sad. Consequently, the two experimental stimuli were deemed appropriate for the main study.

The four-group, after-only study closely followed the experimental design utilized by Mundorf, Zillmann, and Drew (1991) and Aylesworth and MacKenzie (1998). It employed two levels of programming conditions (high and low intensity), as well as two different orders of advertisement presentation to control for order effects. A brief description of the four advertisements including images and text is included in Figure 4, detailing the nature of the advertisements (two humorous, two serious) and the executional elements of each advertisement (topic of the commercial, the setting used, the brand advertised and the product focus of the advertisment). Using different orders of advertisement presentation increases the likelihood results from the study are due to the stimuli and not to either order effects such as those found by Newell and Wu in their examination of Super Bowl advertisement order effects (2003). Utilizing both humorous and serious advertisements further increases control by addressing congruence and contrast effects; it could be suggested that using only serious ads would be more congruent with the serious nature of war programming and thereby facilitate recall. Simultaneously, it could be suggested that humorous ads would be better recalled due to the contrast they provide (perhaps seen as a "relief" from the intense programming. By inserting both the humorous and serious advertising in different orders, we mitigated possible

complications due to factors other than the intensity of the programming and the viewer's stance on the war.

Insert Figure 4 about here

Each video began with five minutes of war news programming, followed by two 30second commercials, then another five minutes of war news programming, followed by two more 30-second commercials, and then concluded with three minutes of war news programming. Selection of the commercials was based on the time of day in which they aired, the tone of the ads, as well as the products advertised. Each thirty-second commercial had been aired during the national nightly news on one of the top four major television networks. The products advertised were commonly used items (aspirin, an automobile, a retail store, and a credit card). All products were national brands.

The programming was specifically selected for content that was war-related, but neither slanted to be pro-war or anti-war. After exposure to the videos, subjects were put through a fifteen-minute researcher-led distraction task, followed by administration of the test instrument. The distraction task consisted of a set of statistical probability questions administered to increase the amount of time and cognitive load between the viewing of the advertisements and subsequent testing of recall. After being given some time alone to answer the questions, subjects were led by the researchers through the solutions to the statistical questions. Thus, the 15-minute increment could be precisely monitored. Following this, the administration of the test instrument began with a manipulation check against the pre-test, where subjects were asked how the news segment made them feel. Responses were collected using the pre-test's semantic differential scale. The subjects were then asked to recall various elements of the four commercials embedded

in the news video, and the extent to which they were for or against the war. Table 1 provides a description of methodological procedures.

Insert Table 1 about here

Rather than using a dichotomous measure of advertisement recall, we utilized more indepth measures wherein subjects identified multiple elements from each advertisement. Recall scores were measured through identifiable elements consisting of recall of the advertisement *topic*, the *product* advertised, the advertisement's *setting*, and the *brand* or company name portrayed in the advertisement. For example, if a viewer recalled that an advertisement had a credit card in it (*product*) and that the setting of the advertisement was on a beach (*setting*), but the subject did not remember the advertisement was for a sweepstakes using the credit card (*topic*) or did not remember that the card was issued by Capital One (*brand*), the subject had successfully identified two of the four elements. The more extensive measure we utilized resulted in a possible score of 0 (no elements remembered in the ad) to 4 (all four elements remembered) for each of the four commercials, resulting in a possible range of 0 - 16 for the recall score for all four advertisement's elements, rather than all of them, is often the case in viewed advertisements.

To aggregate subjects according to levels of support or opposition, we ran frequency analyses and segmented subjects into five groups based on their self-reported responses. We grouped subjects who were against the war (26%), who were *strongly* against the war (17.1%), who were proponents of the war (27.5%), and those who were who reported they were strong

proponents of the war (7.9%). Those who were neutral and reportedly did not possess any feelings concerning the war (21.5%) were not utilized in the subsequent analysis.

The experiment utilized 396 undergraduate students in a relatively narrow age range (i.e., 18-25 years old) and with a slightly disproportional gender split (41.6% female and 58.4% male). Because of the study's focus on recall, and the uncertainty of the respondents' attitude toward the war, the large sample size was needed to insure that there would be an adequate number of respondents in each of the cells to be used in the study. The sample was taken from students enrolled in undergraduate programs at three different universities located in the western United States. Students were randomly assigned to one of four experimental conditions distinguished by the emotional intensity of the stimulus materials (high vs. low) as well as the order in which the advertisements appeared (humorous ads first vs. serious ads first).

Results

In order to confirm the pre-test's results that identified varying intensity levels of the war news clips, the more intense condition was tested against the less intense condition in terms of the adjective list. Now in a between-subjects' test with a considerably larger sample, the programming clips were again rated as significantly different in intensity – independent samples t-test statistics ranged from 9.40 to 3.54 and all were significant at p<.001.

Hypothesis H_1 predicted that subjects viewing the more intense programming would have lower ad recall rates than subjects viewing advertisements embedded in the less intense programming. Supporting this prediction, the more emotionally intense condition yielded a lower mean for the recall measures (t = -2.53, p<.01). Figure 1 reports the means according to experimental condition.

Insert Figure 1 about here

Additional post-hoc analyses for each of the four individual recall measures (*topic*, *product, setting, and brand*) indicated significant differences in the ability of subjects to recall the *topic* (intense mean 2.09, less intense mean 2.34, t = -2.97, p<0.003) and *setting* (intense mean 1.99, less intense mean 2.34, t = -3.27, p<0.001), but did not achieve significance for neither *brand* (intense mean 1.80, less intense mean 1.96, t = -1.805, p<0.072) nor *product* recall (intense mean 1.87, less intense mean 1.93, t = -0.639, p<0.0.523). So, across the specific measured elements of recall, subjects in the intense condition recalled fewer topic and setting attributes, and there were no significant differences with regards to brand or product recall.

Hypothesis H₂ sought to evaluate the consistency of the viewer's stance on the polarizing programming topic (proponent or opponent of the war) on the viewers' ability to recall advertisements embedded in the war news. Attitude-to-programming context consistency effects led us to hypothesize that regardless of the level of intensity of the war news programming, those whose views were more consistent with the war programming (i.e., proponents' views consistent with the current situation of waging the war) would be more inclined to remember the embedded advertisements. This hypothesis was supported in the less-intense programming (H_{2a}), as those proponents of the war remembered the advertisements better than did those who were opponents of the war (t = -2.54, p<.01). However, in the more-intense programming, there were no significant differences between proponents and opponents of the war (t = 0.261, p < 0.80).

Insert Figure 2 about here

Hypotheses H_{3a} through H_{3d} sought to evaluate whether increases in the level of polarization decreases the ability of proponents (opponents) of programming to recall embedded advertisements. This hypothesis necessitated a comparison of opponents of the war ("against the war") versus those holding stronger beliefs (those "*strongly* against the war," or more polarized), and a similar comparison of those "for the war" versus those "strongly for the war." In the low intensity condition, increasing levels of polarization for both proponents and opponents was not significant (H_{3a} for low intensity opponents was t = 0.299, p < 0.765, and H_{3b} for low intensity proponents was t = 0.184, p < 0.854). In the high intensity condition, H_{3c} for high intensity opponents was not supported (t = 0.406, p < 0.686), but H_{3d} for high intensity proponents of the war was supported (t = 2.057, p<0.05).

Lastly, H_{4a-e} tested the rub-off effect wherein contextual intensity is high and viewer perceptions should likely be more negative (i.e., the "less favorable" advertising condition, as noted by Shen and Chen 2007). Thus, according to hypotheses H_{4a-e} the more intense news video should yield lower measures of each of the five measures of viewer perceptions (ad effectiveness, product value, product quality, purchase intentions, and affective connections to the firm). However, analyses revealed that in this case, regardless of the intensity of the news video, there appeared to be no significant negative effects on viewer perceptions. In every case, subject perceptions were not significantly different between subject groups. Hence, H_{4a} (*ad effectiveness*, t = -0.363, p = 0.714), H_{4b} (*product value*, t = -0.590, p = 0.556), H_{4c} (*product quality*, t = -1.453, p = 0.151), H_{4d} (*purchase intentions*, t = -1.026, p = 0.308), and H_{4e} (*affective connection to the firm*, t = -0.182, p = 0.856) were not supported.

Discussion

The current study tested advertising recall and effects on viewer perceptions in a previously uncharted advertising context – that of a polarizing context with varying degrees of intensity. The research adds to the field of strategic advertising through its empirical investigation of program-contextual influence. In essence, it appears that firms are correct in remaining cautious regarding advertising during intense war news (H₁). As the war programming increased in terms of intensity and emotionality, viewers were less likely to remember the ads. Specifically, viewers of the more-intense programming context were less able to recall the ad topic and setting. Firms are likely incorrect in their assumptions of an associative "rub-off" effect that negatively influences viewer perceptions. Regardless of contextual intensity, the current study found no evidence of viewers lowering their judgments of an ad, a firm, a product, related product's value, or the viewers' purchase intentions.

This work also adds to the literature by contributing some resolution to the conflict surrounding whether or not emotionally intense programming leads to higher (Srull 1983) or lower (Pavelchak, Antil, and Munch 1988) advertising recall. It appears in the context of war news, the greater the intensity of the programming, the lower the levels of viewer recall.

The current study also demonstrates that in the case of polarizing programming, high involvement with the topic of interest may result in differing recall, depending on if viewers' attitudes are consistent (proponents of the war) or inconsistent (opponents of the war) with the programming in which the advertisements are embedded. In this case, those supporting the war in Iraq tended to remember advertisements more effectively than opponents of the war. We would expect this same result to be obtained in other situations where viewers' positions would be consistent with programming. For example, we would hypothesize that those with pro-choice

views would recall advertisements embedded in intense abortion programming better than would those with pro-life views, due to the consistency of their pro-choice view with the programming in which the advertisements were embedded.

This novel notion of polarization and segmentation of viewers into proponents and opponents becomes more important as the percentage of polarized opponents viewing lowintensity programming increases. In a case where both groups are approximately equal in size, and responses do not vary between groups, differences are relatively unimportant. However, in a situation where the majority of viewers are opponents of the programming topic, and where the polarizing programming is of lower intensity, this study provides evidence that the majority of viewers would not remember advertisements as well as the minority of viewers who were proponents of the programming topic.

The current research also raises some very interesting questions with respect to the proposed *attitude-to-programming context* extension of consistency theory. The data show partial support for this effect. However, a post-hoc analysis revealed that in both experimental conditions, subjects had *higher* recall rates for the humorous commercials compared to the serious/somber commercials (regardless of the order of presentation). Perhaps the better recall of humorous ads is due to the contrast effect or novelty effect being stronger than the consistency effect. Perhaps viewers, while more involved in the intense war news, are eager for a cognitive and affective "break" provided by the humorous advertisement. The television commercials that make us laugh are not deemed to be rude or insensitive, but rather they are a welcomed respite to be appreciated. Prior research has labeled this process mood regulation (see Chang 2006). Another possible explanation for the finding that humorous ads are more accurately recalled can be found in excitation transfer theory (Zillman 1971, 1983). Here, residual arousal from a

primary stimulus (the war news) transfers and strengthens reactions to a second stimulus (the ads). In this case, the humorous commercials may simply have been judged as significantly more arousing (i.e., more humorous or more emotion-inducing) than the serious commercials. This heightened arousal would lead to more and deeper encoding of the stimuli, eventually resulting in improved recall.

Furthermore, the visual fluency of an ad (Reber, Winkielman, and Schwarz 1998; Winkielman, et al. 2003), or the types of images used in the advertisements and the way they are presented (Orth and Malkewitz 2008; Orth, Malkewitz, and Bee *forthcoming*), could significantly influence recall rates. More specifically, the larger size of the product pictured in an ad, the higher level of image-ground contrast for a product, or brighter and higher-value colors all serve to attract attention and facilitate information processing, much as an advertisement's audio component featuring music or words that are already a part of a viewer's experience and memory facilitate processing and recall. It can be argued that there might an interaction of visual fluency with programming intensity and levels of viewer involvement.

In summary, we believe that the findings of this experiment shed light on the complex cognitive and affective processes surrounding the relationship between program-context intensity and advertising. In the context of war news, recall is decreased by increasing program intensity. Also, examining viewers' responses in light of the consistency (or inconsistency) of their views with the programming demonstrates that proponents do not always act as Hawks, nor do opponents always act as Doves.

This research is the first to address the theoretically interesting and little-understood area of the intensity of polarizing programming context on viewers. Although limited here to an analysis of proponents and opponents in the context of war news, there is increasing

programming of several other issues similar to war news that have highly-polarized audiences. For example, emotional intensity in the context of war news might easily relate to emotional intensity in issues such as abortion, physician-assisted suicide, flag burning, prayer in public schools, same-sex marriage, etc. Each issue has highly accessible programming, and a large percentage of viewers falling into both proponent and opponent camps. While viewer perceptions are not related to group membership, recall tends to take the form of an inverted U, with proponent and opponent groups remembering less than neutral viewers. Again, perhaps advertisers should shy away from programming that may be aired to extremely polarized audiences.

Limitations and Future Research

Limitations of the current work stem from the subject pool as well as the imperfect sample of advertising stimuli. Although it can be argued that student samples are valuable in studying a wide range of conceptual variables (Petty and Cacioppo 1996), others might claim that in many situations the sample can be deeply flawed (Sears 1986). While college students likely go through the same consumer information processes as non-students, perhaps their backgrounds have some bearing on this research. Perhaps the sample of subjects maintains an above-average level of media awareness and persuasion knowledge (Friestad and Wright 1994). Perhaps they are (in large part) too young, inexperienced, and unaffected by war news. Maybe they think of the news as just another TV show – one that simply has to "pay the bills" with another commercial break. Regardless, future studies should incorporate a larger range of viewers in order to evaluate possible differences.

Future studies should also incorporate a larger range of commercials in several polarizing programming contexts (war programming, same-sex marriage, pro-life versus pro-choice programming, right-to-life versus death with dignity programming). On more than one occasion, the humorous commercials embedded in the wart news made subjects laugh out loud. The serious commercials on the other hand did not evoke any discernable emotion from the subjects. Conceivably the differences in tone, and even production quality of the advertisements, influenced the current research. Likewise, different polarizing contexts might have differential influence on the proponents and opponents in that context. A study involving advertisements embedded in slanted programming coverage might further our understanding of programming intensity effects on viewers with differing levels of involvement. One possible study of this nature would entail embedding advertisements in overtly pro-life programming versus overtly pro-choice programming of differing levels of intensity, and showing this to subjects with different levels of polarization on the topic (pro-choice versus strongly pro-choice); a second would be to embed advertisements in highly-spirited political program of different levels of intensity, selected for its pro-Republican and pro-Democratic slant. This could then be shown to subjects with different levels of polarization on the topic (registered Democrats versus Democratic-leaning). Both examples would clarify the role of intensity and polarization in viewers' responses to advertisements.



Figure 1 Hypothesis 1: The Effect of Programming Intensity on Ad Recall

Figure 2 Hypothesis 2: The Effect of Programming Intensity and Subjects' Position on the War (Support, Against) on Ad Recall



Figure 3 Hypotheses 3: The Effect of Level of Attitude toward the War on Ad Recall in High and Low Intensity Programming



Table 1 Experimental Procedures

- 1. Prior to Main Study
 - a. Video stimuli judged by panel of experts according to levels of intensity (high/low), valence (positive/negative) and emotionality (high/low)
 - b. Key word (suicide, explosive(s), bomb(er), death/dead, wounded) count eight for highly intense video and two for low intensity video
 - c. Pretest within-subjects test of differences using semantic differential scales (emotional, depressing, intense, sad, and upsetting) (n = 38)
 - d. Researchers choose test commercials two humorous and two serious in tone
- 2. Main Study Procedures (n = 396)
 - a. Subjects (undergraduates from three universities in Western US)randomly assigned to experimental condition
 - b. Subjects view video
 - c. Part 1 Further validation of Pretest through use of same semantic differential scale
 - d. Part 2 Distraction task given as a set of statistical probability questions with researcher-led follow-up to last exactly fifteen minutes
 - e. Part 3 Recall measured through the following ad elements: topic, product, brand, and setting
 - f. Subjects asked to what extent are they for or against the war in Iraq
 - g. Part 4 Perceptions measured through questions covering each of the following: ad effectiveness, product value, perceived price, purchase intentions, and affective connections to the advertising firm

Figure 4 Overview of Commercials Used in Data Collection



Serious # 2 (WalMart)



Meredith Vieira: A heart attack can strike without warning ...



... and doctors know 81 milligrams of aspirin is NOT enough to save your life during a heart attack ...



...so you should always have genuine Bayer at hand it has enough aspirin to help save your life.



The more you know, the more you trust Bayer



Teacher: I can't think of a smarter investment than education...Announcer: Wal Mart annually gives over \$40 million to education and over \$150 million to communities



... nationwide. Wal Mart's teacher of the year program recognized 3,500 teachers in local communities across the United States this year ...



Wal Mart employee: I'm proud to work for a company that supports education



Announcer: Last year Wal Mart gave 7,000 scholarships to college-bound students. Wal mart and Sam's Club Foundation helps our students reach for the stars





Screen is black, Sound of alarm going off as clock on screen switches from 6:59 to 7:00 am, cut to husband and wife in bed,



... they race to get into the bathroom first, Husband wins, then cut to husband in Mercury Voyager with victorious smile ...



Man jumps up and scares rescuers, man says "Did you get it, honey?" Wife appears, says "Yes, I got it!" and man laughs maniacally ...



...a pattern emerges, both are trying to outwit the other to get the Mercury, next day wife wakes fully clothed, following day ...



Announcer says "what would you do on your own private island? Check your mail for the Capital one no-hassle island giveaway...



...husband puts dummy into bed so wife thinks he is sleeping ... Announcer voiceover: "Introducing Mercury Mariner...Save yourself the hassle and get two!"



...you could instantly win your own island, or one of hundreds of island giveaways." Final cut to man saying ""What's in your wallet?



(Capital One Credit Card)



Search and rescue helicopter spots still, lifeless man on beach (he's actually playing possum)



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