It's Not Whether You Win or Lose, It's How The Game is Played: The Influence of Suspenseful Sports Programming on Advertising

Colleen C. Bee
Assistant Professor of Marketing
College of Business
Oregon State University
300 Bexell Hall
Corvallis, OR 97331
ph. (541)737-6059
fax (541)737-6023
colleen.bee@bus.oregonstate.edu

Robert Madrigal
Associate Professor of Marketing
Lundquist College of Business
University of Oregon
1208 University of Oregon
Eugene, OR 97403
ph. (541)346-5163
fax (541)346-3341
rmadriga@lcbmail.uoregon.edu

Colleen C. Bee (Ph.D., University of Oregon), Assistant Professor of Marketing, College of Business, Oregon State University, colleen.bee@bus.oregonstate.edu

Robert Madrigal (Ph.D., University of Oregon), Associate Professor of Marketing, Lundquist College of Business, University of Oregon, rmadriga@lcbmail.uoregon.edu

It's Not Whether You Win or Lose, It's How The Game is Played: The Influence of Suspenseful Sports Programming on Advertising

The current research investigates the interplay of program suspense, game outcome, advertisement placement, and ad execution on viewer reactions to advertising embedded in sports programming. In support of excitation transfer theory, results indicate that ad emotional response, attitude toward the ad, and attitude toward the brand are heightened immediately following a suspenseful sporting event. Additionally, when considering both program suspense and game outcome, only program suspense was found to influence ad responses. Findings also indicate that congruency between program suspense and ad suspense moderates the influence of programming on responses to advertising such that an effect is found only in the context of suspenseful programming with suspenseful advertising.

From crime dramas to scary movies, suspense plays a central role in many types of television programs. Unique among programs featuring suspense are sporting events (Peterson and Raney 2008). In contrast to scripted programs where the hero typically survives, sporting events are unscripted with action evolving naturally over the course of the program. Suspense builds throughout a highly competitive contest in the form of fearful apprehensions over the possibility that a favorite team might lose. Once an outcome is known, suspense ends. However, regardless of the game's outcome, the increased arousal associated with suspense decays more slowly and is thought to transfer to subsequent judgments through a process of excitation transfer (Zillmann 1996). The current research investigates how excitation transfer affects viewers' reactions to ads shown both during and following a suspenseful sports program.

In addition to being a central program element, suspense is also frequently used as an advertising tactic designed to capture viewer attention. In differentiating suspenseful advertising from other forms of advertising, Alwitt (2002) identified key characteristics of suspenseful advertisements. Suspenseful commercials may be thought of as mini-dramas with well-defined plots that proceed chronologically. As with other forms of suspense, suspenseful ads typically feature liked characters faced with conflicts that may or may not be resolved satisfactorily. For example, in a Stella Artois ad ("The Piano") viewers are uncertain regarding the outcome of a piano careening down a crowded street. In the final moments, the piano and pianist arrive safely in an art gallery, portraying the "smooth outcome" of Stella Artois. Another example of suspenseful advertising includes Sprint's series of Epic ads, referred to as "mini-movies" that also feature protagonists facing uncertain outcomes.

The current research builds on previous work considering how program context affects viewer response to advertising (e.g., Moorman, Neijens, and Smit 2007; Newell, Henderson, and

Wu 2001). Our contribution is the use of an experimental design to investigate how excitation transfer associated with varying levels of suspense during a sports program affects viewers' responses to embedded commercials, of which some are suspenseful and others are not. In particular, we are interested in differential effects in viewers' emotional responses to the ad, as well as their attitude toward the ad and attitude toward the brand. We also consider how viewers' responses may be moderated by the contest's outcome. Our design allows us to investigate effects arising from the differential placement of ads, both before and after the outcome becomes known.

THEORETICAL BACKGROUND

Only two studies were found that considered advertising embedded in suspenseful programming. Kennedy (1971) suggested that a suspenseful (vs. comedic) film would create a greater need for closure. Therefore, programming and ad position were posited to influence ad effectiveness such that ads in the closing position of a suspense (vs. comedic) film would be more effective. However, results indicated no program content differences based on ad position. In a later study, Soldow and Principe (1981) found that ad effectiveness in suspenseful programs was moderated by ad position. Attitudes for the first ad following a suspenseful episode were more positive that those for subsequent ads. Although ad order was not varied, such an effect implies that suspenseful programming may differentially affect viewers' responses to ads.

In the context of sports programming, prior research has investigated the extent to which viewers are able to recall advertisements placed in major sporting events such as the Super Bowl (Lord and Putrevu 1996; Newell, Henderson, and Wu 2001; Pavelchak, Antil, and Munch 1988) and the European Soccer Championships (Moorman, Neijens, and Smit 2007). The use of a

naturalistic context is a major strength of this research, but a limitation is that it does not experimentally control for game elements or the ads aired during the games. Thus, the literature would benefit from an experimental approach that manipulates game suspense, game outcome, ad suspense, and ad placement.

In investigating the effect of suspenseful programming, it is important to also consider arousal, a construct that has received considerable attention in the advertising literature (e.g., Broach, Page, and Wilson 1995; Gorn, Pham, and Sin 2001; Mattes and Cantor 1982; Shapiro, MacInnis, and Park 2002; Singh and Churchill 1987). Arousal refers to a state of felt psychological and physiological activation (Broach, Page, and Wilson 1995; Singh and Churchill 1987). Although suspense and arousal are positively correlated over the course of a highly competitive contest, the key distinction between the two is how each is affected by an outcome. Specifically, the period of cognitive and excitation adjustment differs following an outcome. Viewers' cognitive adjustment to an outcome occurs fairly rapidly and feelings of suspense immediately transition to affective (Madrigal 2008) and evaluative (Gan et al. 1997) responses that correspond to the favorability of an outcome. In contrast, excitation adjustment (i.e., arousal) occurs more slowly. According to Zillmann's (see 1996 for a review) excitation transfer theory, the sympathetic excitation (i.e., arousal) that viewers feel when they believe their favorite team may actually lose builds throughout the contest. Because sympathetic excitation decays more slowly, it persists even after the outcome becomes known. Heightened levels of this type of arousal are then transferred to subsequent reactions. In effect, the residual arousal that has not had time to completely decay "piggybacks" onto viewers' reactions to subsequent stimuli.

The excitation transfer paradigm has been used in previous advertising research to explain consumer reactions to various types of stimuli, such as music (Gorn, Pham, and Sin

2001), arousing film (Mattes and Cantor 1982), and general television programming (Moorman, Neijens, and Smit 2005). In each case, compared to less arousing stimuli, advertising reactions were intensified in a manner consistent with excitation transfer following highly arousing stimuli. Excitation transfer has also been used to explain how the positive effects of an appreciated or interesting program lead to more favorable attitudes (De Pelsmacker, Geuens, and Anckaert 2002). Consistent with this line of reasoning, we expect that the arousal derived from a highly suspenseful sporting event will transfer to viewers' emotional and attitudinal responses to an ad. Emotional response is a key element in the experience of suspense and excitation transfer (Zillmann 1996). Additionally, emotional response, attitude toward the ad and the brand are important in determining an ad's effectiveness (e.g., Aaker and Stayman 1990; Edell and Burke 1987; Moorman, Neijens, and Smit 2002; Murry, Lastovicka, and Singh 1992).

The transfer of excitation to subsequent reactions requires a grand resolution that is marked by an unequivocal ending to the suspense episode. The reason for this is that it is in the moments immediately preceding an outcome when empathic distress and its associated arousal reach its peak. As noted, although viewers' cognitive adjustment to the outcome occurs immediately, the excitation resulting from heightened levels of empathic distress decays more slowly. It is this residual excitation that is transferred to subsequent responses.

We therefore hypothesize that viewers' reactions will be most pronounced for the first ad shown immediately after the conclusion of a highly suspenseful sporting event. Excitation transfer will not affect ads shown prior to a grand resolution or when the program elicits little or no suspense. Additionally, we do not expect arousal to transfer to ads appearing later in the same pod immediately following the event's conclusion. Such an effect is consistent with the idea that program-induced affect diminishes over the course of a commercial break (Coulter 1998) and

that ads located at the end of a pod are least affected by program content (Murry, Lastovicka, and Singh 1992). We therefore propose the following interaction:

> **H1:** The ad positioned immediately following the conclusion of a high-suspense program will elicit (a) greater ad emotion, (b) a more favorable attitude toward the ad (A_{ad}), and (c) a more favorable attitude toward the brand (A_{br}) than will ads positioned prior to the conclusion, later in the pod following the conclusion, or in a low-suspense program.

The first hypothesis investigates the way in which program-induced arousal affects viewer response based on program suspense and ad positioning. Not considered were effects attributable to hedonically valenced responses to an outcome. The reason for this is that an outcome would have had no effect on ads shown in the middle of the program because the game was not yet over. However, outcomes are nevertheless important to consider because they have been shown to influence mood (Hirt et al. 1992; Zillmann 1996), an important predictor of ad evaluation. For example, program-induced positive (vs. negative) mood has been found to increase the time spent processing an ad (Aylesworth and MacKenzie 1998), improve ad effectiveness and recall (Goldberg and Gorn 1987), and create more favorable attitudes (Moorman, Neijens, and Smit 2005; Prasad and Smith 1994). However, it is not only important to examine the separate effects of program-induced mood and arousal on advertising but also their combined effects. Very little research has explicitly examined their independent and interactive effects and previous research accounting for both is inconsistent (Broach, Page, and Wilson 1995; Gorn, Pham, and Sin 2001; Shapiro, MacInnis, and Park 2002).

Research on excitation transfer would suggest a main effect of program suspense such that the effect of arousal is independent of outcome-induced valence. Thus, viewers' emotional responses and attitudes are expected to be more favorable following a high (vs. low) suspense program regardless of outcome. Such a view is consistent with Singh and Hitchon (1989) who

state that hedonic valence is irrelevant to ad evaluations given a high state of arousal. Subsequent empirical work has given credence to this claim (Gorn, Pham, and Sin 2001; Shapiro, MacInnis, and Park 2002). For example, related to suspense and game outcomes, Newell, Henderson, and Wu (2001) found that outcome did not have an effect on advertising recall in a high-suspense game. Thus, there is the potential for a main effect of program suspense.

Yet, other research suggests that how an outcome is appraised does matter. In particular, the increased arousal associated with suspense intensifies both positive and negative responses to an outcome (Madrigal et al. 2011; Zillmann 1996). Accordingly, it is possible that differences in ad responses will be polarized between winners and losers under conditions of high suspense, whereas such differences will be minimal following a low-suspense contest. Consistent with this idea, Aylesworth and MacKenzie (1998) found that mood valence differentially affected ad responses after controlling for a moderately high level of arousal. Similarly, although not considering mood valence per se, Broach, Page, and Wilson (1995) found that ad responses were polarized in a highly arousing program in the direction of program evaluation such that ads embedded in a pleasant program were evaluated more favorably than those in an unpleasant program. Both studies suggest the possibility that the valence arising from a contest's outcome may interact with program suspense. Given the lack of clear direction based on previous research, we predict that the main effect of program suspense on viewers' ad responses will be moderated by outcome.

H2: Following the conclusion of a highly suspenseful program, a significant difference will be found between those exposed to a win versus a loss. Those exposed to a high-suspense win (vs. loss) will report (a) greater ad emotion, (b) more favorable A_{ad}, and (c) more favorable A_{br}. No such difference is expected under conditions of low suspense.

Thus far, we have proposed that the heightened excitation associated with a highly suspenseful program will elicit stronger viewer responses to ads shown immediately upon the program's conclusion. Additionally, we posited that ad responses would be sensitive to the interactive effect of program suspense and outcome. The effects of program suspense on advertising may also depend on ad execution. For example, prior work suggests that the congruency between programming and advertising in creative execution or affective tone results in a more favorable response (e.g., Dahlén 2005; De Pelsmacker, Geuens, and Anckaert 2002; Kamins, Marks, and Skinner 1991; Moorman, Neijens, and Smit 2002). We add to this literature by considering how program and advertising suspense interact to influence ad responses.

Although the possible points of overlap between an ad and program are far reaching, we focus on only one facet of congruence – suspense. For our purposes, congruence is thought to exist when a suspenseful ad is paired with a program that is also high in suspense. Just as suspenseful programs are evaluated more favorably (Zillmanm 1996), so too are suspenseful (vs. non-suspenseful) ads (Alwitt 2002). It therefore follows that congruency in program and ad suspense will have a positive effect on advertising responses. Specifically, we expect that heightened viewer perceptions of program suspense will only affect suspenseful advertising in the context of a high-suspense program (vs. low-suspense program and nonsuspenseful ads). Thus, the following interaction is offered:

H3: In the context of a high-suspense program, (a) ad emotion, (b) A_{ad}, and (c) A_{br} for suspenseful ads will be positively predicted by perceived program suspense. No such effect is expected when suspense is low for either the program or the ad.

METHOD

The purpose of the current research was to examine program-advertising transfer and congruency effects. Therefore, an experimental design that exposed respondents to a sporting event program with embedded advertising was chosen. The study manipulated four factors, two within-subjects and two between-subjects. The within-subjects factors were ad position (two ads placed in the middle of the program and two ads placed immediately following the program) and ad execution (suspenseful and nonsuspenseful). The between-subjects factors were program suspense (high suspense vs. low suspense) and outcome (win vs. loss). Order and execution of the four ads were counterbalanced across respondents and within ad placements. The dependent variables were three advertising response variables: emotional response toward the ad, attitude toward the ad, and attitude toward the brand.

Procedure

The study was conducted in a computer laboratory setting with 112 undergraduates who received partial course credit. Students participated in small groups and did not interact during the experiment. Participants were randomly assigned to the various conditions. Stimuli were presented via a video projector and data were collected with an online survey. Upon completion of an introductory survey, participants followed a procedure similar to that used by Goldberg and Gorn (1987) where they watched the first half of the program, followed by two ads, the conclusion of the program, and then the final two ads. After viewing each ad, participants completed the ad response measures. Following the final ad survey, respondents completed a post-event survey. In addition, a separate sample (i.e., control group, $n = 56$) was exposed to only the four ads. The control group followed a similar data collection procedure, including a lab setting, small group participation, the same counterbalanced ads presented via video projector,

and the use of an online survey for the ad response measures. Ad response measures for the control group were collected following the viewing of each ad. Those in this group did not view the program or complete the introductory and post-event surveys.

Stimuli

Program Suspense and Outcome. Participants watched video footage from one of two games involving the men's basketball team from their own university, a high-suspense game and a low-suspense game. The games and final outcomes were edited so as to create four different "mini-games", each consisting of two four-minute halves. In the high-suspense win (loss) condition, the point total was extremely close throughout both halves with the home team winning (losing) in the final seconds. In the low-suspense win condition the home team jumped out to a quick lead and increased the lead throughout whereas in the low-suspense loss condition the home team dropped behind immediately and continued to fall further behind throughout the second half. The only audio was a recitation of the running score after each basket was scored. The running score was also displayed in the right bottom corner of the screen. To enhance suspense, the remaining time left in the period was displayed above the running score as a small horizontal box that gradually filled throughout the period as time expired (Alwitt 2002).

Ad Execution. Ad execution was varied by level of suspense. Based on the structural characteristics identified by Alwitt (2002), eight real television ads were pretested. From this group, two ads highest in suspense and two ads lowest in suspense were selected (see Table 1 for descriptions). Also, the placement of suspenseful and nonsuspenseful ads was counterbalanced and evenly distributed across respondents and ad positions.

Place Table 1 about here

Ad Position. Two ads were shown following the first half of the game (ad position 1a and ad position 1b) and two ads were shown immediately after the game (ad position 2a and ad position 2b). In order to reduce effects due to featured brands, product categories, or ad characteristics, each ad and ad execution was evenly distributed across ad positions and respondents. Although many other possible ad orders exist, eight different orders were used that evenly distributed suspenseful and nonsuspenseful ads across each ad position (1a, 1b, 2a, and 2b). A suspenseful ad was placed in the first ad position and a nonsuspenseful ad was placed in the first ad position in four of the eight ad orders. This procedure was followed for the high-suspense program, low-suspense program, and control group so that the ads and ad execution styles were evenly distributed across all ad positions for each program context and the control group (see Table 2).

Place Table 2 about here

Measures

Emotional Response toward the ad (Ad emotion). Emotional response is defined as a positive affective response to the viewing of an ad. Respondents were asked the extent to which they felt the following emotions while watching the ad(s): joyful, pleased, excited, thrilled, happy, enthusiastic, and relieved. Factor analysis revealed one common factor with variance explained ranging from 74% to 79%. Cronbach's alpha across ads for the seven-item scale ranged from .94 to .96 (M = 3.32).

Attitude toward the ad (A_{ad}). Three 7-point semantic differential scales measured attitude toward each ad: very bad/very good; very unfavorable/very favorable; very negative/very positive. Cronbach's alpha across ads ranged from .92 to .97 (M = 4.53).

Attitude toward the brand (A_{br}). Three 7-point semantic differential scales were used to measure attitude toward each brand: very bad/very good; very unfavorable/very favorable; very negative/very positive. Cronbach's alpha across ads ranged from .96 to .98 (M = 4.75).

Perceived Program Suspense. Perceived program suspense is used as a predictor of advertising responses and as a manipulation check. Adapted from Alwitt (2002), it was measured post-hoc by asking respondents to indicate their response to the program: I was curious about how this game would turn out, this game had suspense, I was unsure of what would happen until the very end of the game, each measured using a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha was .76 (M = 3.67).

Covariates. Two covariates were assessed: advertising suspense and fan identification. Perceived advertising suspense was assessed by asking respondents the extent to which they agree the ad used suspense as an appeal, measured on a 5-point strongly disagree/strongly agree scale. In addition to assessing suspense as an ad appeal, several other common ad appeals were also listed (i.e., humor, sex, fear, patriotism, sentimental, logic). This measure of advertising suspense was also used as a manipulation check. Fan identification was assessed by asking respondents to indicate on a 5-point scale how strongly they disagree (1) or agree (5) with the following six statements: when someone criticizes *insert school* athletic team, it feels like a personal insult; I am very interested in what others think about the *insert school* athletic teams; when I talk about a *insert school* athletic team, I usually say 'we' rather than 'they'; the successes of the *insert school* athletic teams are my successes; when someone praises a *insert school* athletic team, it feels like a personal compliment; and I would be upset if a story in the media criticized a *insert school* athletic team. Cronbach's alpha for the scale was .82 (M = 3.41).

Manipulation Checks. In addition to the program and advertising suspense manipulation checks already discussed, mood and arousal were assessed in response to the program on a 7-point scale ranging from 1 (do not feel at all) to 7 (feel a great deal). Positive mood included feeling happy, pleased, and joyful ($M = 3.50$, $\alpha = .92$); negative mood included feeling disappointed, discontented, and down-hearted ($M = 3.85$, $\alpha = .85$); and arousal included feeling excited, thrilled, and enthusiastic ($M = 3.61$, $\alpha = .92$).

RESULTS

Manipulation Checks

The two ads deemed as being most suspenseful did not vary in advertising suspense ($p = .43$), nor did the two ads found to be least suspenseful differ from one another ($p = .12$). The ad suspense manipulation was also supported by a significantly greater level of advertising suspense for the two suspenseful ads ($M = 4.11$) compared to the two nonsuspenseful ads ($M = 2.28$; $t(111) = 17.66$, $p <. 01$). Similarly, in the control group, the two suspenseful ads ($M = 3.92$) were perceived as more suspenseful than the two nonsuspenseful ads ($M = 1.73$; $t(55) = 15.02$, $p < .01$). Consistent with the program suspense manipulation, a close scoring game elicited significantly greater suspense ($M = 4.04$) and arousal ($M = 4.22$) than a blowout game ($M_{suspense} = 3.29$; $t(110) = 4.53$, $p < .01$; $M_{arousal} = 3.01$; $t(110) = 4.00$, $p < .01$). A win resulted in a significantly more positive ($M_{win} = 4.57$ vs. $M_{loss} = 2.51$; $t(110) = -8.35$, $p < .01$) and less negative ($M_{win} = 3.11$ vs. $M_{loss} = 4.55$; $t(110) = 5.49$, $p < .01$) mood than a loss.

Tests of Hypotheses

H1: Program Context × Ad Position. The first hypothesis proposed an interaction between program suspense and ad position for each of the ad response measures. It was expected that program suspense would only have an effect on the ad placed immediately following the conclusion of a high-suspense program. This is in comparison to ads placed prior to the outcome, later in the final pod, or in a low-suspense program regardless of ad position. Each ad measure was subjected to repeated-measures ANCOVA with ad position (1a, 1b, 2a, and 2b) as a within-subjects factor and program suspense (high vs. low) as a between-subjects factor. The covariates were ad suspense for both the suspenseful and nonsuspenseful ads, as well as fan identification. Covariates were included to account for any variance attributable to advertising execution and fan avidity, and therefore, to ensure that the results are, in fact, due to program suspense and ad position. The covariates were not found to interact with the other variables (all *p*s > .08). No other significant main effects were found (all *p*s >.30).

Consistent with the first hypothesis, the results indicate that advertising responses varied based on level of program suspense and ad position as evidenced by the significant interaction for ad emotion ($F(3, 105) = 4.45$, $p < .01$, Wilks' Lambda = .89), A_{ad} ($F(3, 105) = 2.14$, $p < .10$, Wilks' Lambda = .94), and A_{br} ($F(3, 105) = 6.74$, $p < .01$, Wilks' Lambda = .84). As indicated in Table 3, the mean for each of the three dependent measures is greatest in ad position 2a for the high-suspense program. This position was for the first ad appearing immediately after the end of the game. Contrasts were conducted comparing ad position 2a to each of the other ad positions. As indicated in Table 4, significant differences were found for each ad response measure between position 2a and all other ad positions following the high-suspense contest. In contrast, only one of the 12 comparisons (1b vs. 2a on A_{br}) for a low-suspense program was found to be significant. These results support our first hypothesis that advertising effects are maximized for

the first ad following a suspenseful program.

Place Tables 3 and 4 about here

The first hypothesis proposed and tested the effect of program suspense and ad position on advertising response. A concern arises regarding whether the effects on ad response are due to program suspense or perhaps to variations in the ads, brand perceptions, or for other reasons unrelated to program suspense. To mitigate this concern, we conducted two separate analyses involving the control group, a within-subjects analysis of ad order (1a, 1b, 2a, 2b) with only the control group and four one-way ANOVAs for each ad position comparing the means of the control, high-suspense, and low-suspense groups.

In the within-subjects analysis, no differences are expected across the four ad positions (1a, 1b, 2a, or 2b) for the dependent measures in the control group. As with the test of H1, advertising suspense was included as a covariate in the within-subjects analysis. The results revealed no significant differences among advertising response variables across the four ad positions: ad emotion ($F(3, 51) = 0.41$, $p > .74$), A_{ad} ($F(3, 51) = 1.49$, $p > .22$), and A_{br} ($F(3, 51) = 0.81$, $p > .49$). Also, no significant covariate effects were observed (all ps >.25). Given no differences, additional support was found for the test of our first hypothesis.

An additional test was also conducted to compare the control group with the high-suspense and the low-suspense group for each dependent variable at each of the four ad positions. In this comparison, a difference was expected between the control group and high-suspense group but only in the ad position immediately after the game (ad position 2a). We do not expect to see other significant differences. As expected, the only consistent differences were found between the control group and the high-suspense group at ad position 2a. Ads immediately following a high-suspense contest (ad position 2a) were more emotional and evaluated more

favorably than control group ads in position 2a. Complete results are presented in Table 5. The results of the analyses involving the control group suggest that the effects observed in the first hypothesis are the result of program suspense and ad position.

Place Table 5 about here

H2: Program Suspense × Outcome. Game outcome was not included in the testing of the first hypothesis because the outcome was not known in the middle of the game (ad positions 1a and 1b). The second hypothesis predicts that program suspense and outcome will interact to polarize advertising responses based on outcome following a high suspense game. Separate program suspense (high suspense vs. low suspense) × outcome (win vs. loss) ANCOVAs (ad suspense included as covariate) were conducted for each ad response at positions 2a and 2b. The second hypothesis was based on the interaction of program suspense and outcome, however this was not significant for any of the advertising response measures at ad position 2a: ad emotion ($F(1, 107) = 0.34$, $p = .56$), A_{ad} ($F(1, 107) = 0.004$, $p = .95$), A_{br} ($F(1, 107) = 0.08$, $p = .78$). Additionally, contrasts comparing those exposed to a win versus a loss were conducted within each level of program suspense. No significant differences were found for any of these comparisons (ps > .20). Thus, the second hypothesis was not supported and it can be concluded that advertising responses in the high suspense program were not polarized by game outcome.

However, a significant or marginally significant main effect of program suspense was found at ad position 2a for ad emotion ($F(1, 107) = 4.51$, $p < .05$), A_{ad} ($F(1, 107) = 5.64$, $p = .06$), A_{br} ($F(1, 107) = 8.77$, $p < .01$). Compared to a low-suspense program, a high-suspense program elicited greater ad emotion ($M_{high\ susp} = 4.00$, $M_{low\ susp} = 3.15$), A_{ad} ($M_{high\ susp} = 5.01$, $M_{low\ susp} = 4.31$), and A_{br} ($M_{high\ susp} = 5.25$, $M_{low\ susp} = 4.41$). Therefore, a high- (vs. low-) suspense program heightens advertising responses regardless of outcome. The main effect of

game outcome was not significant for ad responses at ad position 2a (all *p*s > .26). No significant main or interaction effects were found for advertising responses at ad position 2b.

H3: Program-Ad Congruency: The final hypothesis predicts that manipulated program suspense (high-suspense game vs. low-suspense game) moderates the effect of perceived program suspense (post-hoc measured suspense) on suspenseful (vs. nonsuspenseful) ad responses. In order to test the third hypothesis we followed the procedure outlined in Aiken and West (1991) for testing interactions between categorical and continuous variables. Manipulated program suspense was entered as a dummy coded categorical predictor, measured program suspense was entered as a continuous mean-centered predictor, and the interaction term was a product of the mean-centered measured program suspense variable and the categorical dummy-coded manipulated program suspense variable. The dependent variables were the advertising response variables for both suspenseful and nonsuspenseful ads.

Consistent with expectations, the interaction of manipulated program suspense and measured program suspense was found to be significant for suspenseful ads but not for nonsuspenseful ads, providing support for the third hypothesis (see Table 6). To interpret the significant interaction, we tested the significance of the simple slopes for the regression of measured program suspense (predictor) on suspenseful ad responses (dependent variable) within each suspense level of manipulated program suspense (moderator). The procedure tests if the simple slope of the regression of measured program suspense on advertising response for each level of manipulated program suspense (high-suspense game vs. low-suspense game) is significantly different from zero. Results were consistent with a congruency effect and support the third hypothesis (see Table 7). For those watching a high-suspense program, higher levels of measured program suspense were associated with increased ad emotion and more favorable

attitudes toward the ad and brand but only for suspenseful ads. No difference was observed in advertising responses for a low suspense program. The interaction for nonsuspenseful ads was not significant (all *p*s > .39).

Place Tables 6 and 7 about here

In summary, the first hypothesis was supported and results were consistent with excitation transfer theory in that responses were enhanced for the ad appearing immediately after a highly suspenseful sporting event. This effect was not found for ads embedded in the middle of the program, in a low suspense program, or in the final ad position. The second hypothesis, proposing an interaction of program suspense and outcome, was not supported. However, a main effect of program suspense was found where only a high suspense program, and not outcome, was found to affect subsequent advertising responses. Finally, manipulated program suspense was found to moderate the effect of perceived program suspense on responses to suspenseful ads.

DISCUSSION

The present research examined several elements related to sports programming and advertising, specifically the level of suspense in both programming and advertising, the placement of ads within the program, and the game outcome. Integrating these components allowed for an examination of excitation transfer. Consistent with the idea that program-generated excitation is transferred to subsequent ads, our results indicate that increased levels of suspense affect viewers' responses to advertising. This effect was found to be most prominent immediately following the conclusion of a suspenseful game and when a high-suspense program was combined with a suspenseful ad. Interestingly, game outcome did not affect ad responses.

The conclusion of a sporting event is an important initiator of excitation transfer. Viewers react more favorably to the ad appearing immediately after the conclusion of a highly suspenseful game. Such an effect was not found for ads appearing in middle of a game or for ads placed in low-suspense games. Although consistent with excitation transfer, our results are inconsistent with those of Moorman, Neijens, and Smit (2005), who found stronger carryover effects on advertising placed in the middle (vs. conclusion) of general television programming. The difference may be due to the nature of the program, general television versus suspenseful sports programming, as well response measurement. In our research, arousal is heightened during a suspenseful game and increases as the game approaches a conclusion. Knowledge of the outcome initiates the transfer of arousal to subsequent advertising. Therefore, upon conclusion of a high-suspense program, viewer reactions are amplified, and as a result, subsequent advertising is evaluated more favorably.

Program-induced mood and arousal have been found to independently influence advertising responses. However, the combination of these effects has generally been ignored. Using suspense as a proxy of arousal and outcome as a determinant of mood, it was expected that ad responses would be polarized between winners and losers under conditions of high suspense. However, only a main effect of program suspense was found. A program higher in suspense led to more favorable ad responses. Although contrary to our expectations, this result is consistent with excitation transfer (Zillmann 1996) and prior advertising research (Shapiro, MacInnis, and Park 2002). Similar to the results of Shapiro, MacInnis, and Park (2002), program-induced arousal affected advertising responses, whereas mood valence related to the favorability of an outcome had no effect.

The present study also sought to extend previous research by integrating high-suspense programming with suspenseful advertising. Although both constructs have been investigated separately, their interactive effects have not been previously considered. Our results support an effect of program-ad congruence. Congruency between high-suspense programming and suspenseful advertising enhances the effect of perceived program suspense on advertising. In a high-suspense program, increased levels of perceived program suspense were associated with more favorable responses when the ad was also suspenseful. Such an effect was not found for nonsuspenseful ads or a low-suspense program. Previous studies have provided evidence of program-ad congruence (Dahlén 2005; De Pelsmacker, Geuens, and Anckaert 2002; Kamins, Marks, and Skinner 1991), but prior research has not considered suspense in either programming or advertising. The congruency effect found in the current research is consistent with excitation transfer and could be attributable to the heightened levels of arousal in both high-suspense programming and suspenseful advertising.

From a practical standpoint, companies spend substantial amounts of money to advertise during sporting events, often because of the size and composition of the audience. Our results indicate that advertising is judged most favorably immediately upon the conclusion of an exciting game, but that game outcome had no effect on viewers' responses to the ad. So even while watching their favorite team lose, viewers' advertising responses were not affected. This result implies that advertisers should not worry about whether a loss by a favorite team will negatively affect responses to their ad or brand. The most important influence appears to be level of suspense for both the game and the advertisement. It appears that suspenseful advertising has its highest impact when embedded in similarly suspenseful sporting events. Advertisers could

strive to create ads that meet Alwitt's (2002) criteria for suspenseful advertising with careful attention to the characters, plot conflict, time structure, and alternative outcomes.

Limitations and Future Research

It is important to acknowledge the limitations associated with the experimental design used in this study and frame our contribution accordingly. First, although collecting data after each ad enhanced internal validity and allowed for a test of transfer effects, breaking the flow of a "normal" viewing experience may have compromised the generalizability of the results. Given a more naturalistic setting (e.g., Moorman, Neijens, and Smit 2007) where selective exposure and external distractions are likely to exist, it is possible that the effects reported here would be lessened.

Another limitation of the design concerns potential confounds associated with the manipulation of factors other than suspense in the advertisements (e.g., type of product or brand, level of product interest). Although ads were carefully selected based on pretests to ensure that they varied on the intended suspense dimension, it is possible that other non-suspense factors were also activated. To reduce the possibility of confounds affecting our first two hypotheses, we included two suspenseful and two non-suspenseful ads, used a counterbalanced design with eight different ad orders, and included a control group. In addition, we considered two covariates to account for advertising suspense and fan identification and included manipulation checks for both program and advertising suspense.

Regarding how the design may have affected the test of the third hypothesis, the findings indicate that perceived program suspense (post-hoc measured suspense) was positively related to each criterion only in the case of a highly suspenseful program and suspenseful ads. No such

effect was found when manipulated program suspense was low or for nonsuspenseful ads. So, even with the potentially more interesting suspenseful ads, perceived program suspense felt during the game was not related to any of the dependent variables given a low-suspense game. Yet, it is still possible that some other factor might underlie these results. Thus, to mitigate this concern, future research should include: 1) more than two suspenseful and two nonsuspenseful ads, 2) the specific design and selection of ads that are congruent with programming on several dimensions, and/or 3) assessment of perceptions of program-ad congruency and the level of product category and brand interest. The inclusion of these factors would provide opportunities for testing potential confounds. It would also allow for more types of ads and brands to be considered in the analyses. The consideration of multiple dimensions of congruency (e.g., mood, theme) in addition to suspense for a given ad would allow for explicit tests comparing effects attributable each dimension. In addition to main effects, it would also be possible to test whether another dimension of congruency (e.g., humor) might interact with suspense to create even more pronounced effects.

REFERENCES

Aaker, David, and Douglas M. Stayman (1990), "Measuring Audience Perceptions of Commercials and Relating them to Ad Impact," *Journal of Advertising Research*, 30(4), 7-17.

Aiken, Leona S., and Stephen G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*, Newbury Park, CA: Sage Publications.

Alwitt, Linda F. (2002), "Suspense and Advertising Responses," *Journal of Consumer Psychology*, 12(1), 35-49.

Aylesworth, Andrew, B., and Scott B. MacKenzie (1998), "Context Is Key: The Effect of Program-Induced Mood on Thoughts about the Ad," *Journal of Advertising*, 27(2), 17-31.

Broach, V. Carter, Thomas J. Page, and R. Dale Wilson (1995), "Television Programming and Its Influence on Viewers' Perceptions of Commercials: The Role of Program Arousal and Pleasantness," *Journal of Advertising*, 24(4), 45-54.

Coulter, Keith S. (1998), "The Effects of Affective Responses to Media Context on Advertising Evaluations," *Journal of Advertising*, 27(4), 41-51.

Dahlén, Micael (2005), "The Medium as a Contextual Cue: Effects of Creative Media Choice," *Journal of Advertising*, 34(3), 89-98.

De Pelsmacker, Patrick, Maggie Geuens, and Pascal Anckaert (2002), "Media Context and Advertising Effectiveness: The Role of Context Appreciation and Context/Ad Similarity," *Journal of Advertising*, 31(2), 49-61.

Edell, Julie A., and Marian Chapman Burke (1987), "The Power of Feelings in Understanding Advertising Effects," *Journal of Consumer Research*, 14(December), 421-433.

Gan, Su-Lin, Charles A. Tuggle, Michael A. Mitrook, Sylvere H. Coussement, and Dolf Zillmann (1997), "The Thrill of a Close Game: Who Enjoys It and Who Doesn't?"

Journal of Sport & Social Issues, 21, 53-64.

Goldberg, Marvin E., and Gerald J. Gorn (1987), "Happy and Sad TV Programs: How They Affect Reactions to Commercials," *Journal of Consumer Research*, 14 (December), 387-403.

Gorn, Gerald, Michel Tuan Pham, and Leo Yatming Sin (2001), "When Arousal Influences Ad Evaluation and Valence Does Not (and Vice Versa)," *Journal of Consumer Psychology,* 11(1), 43-55.

Hirt, Edward R., Dolf Zillmann, Grant A. Erickson, and Chris Kennedy (1992), "Costs and Benefits of Allegiance: Changes in Fans Self-Ascribed Competencies After Team Victory Versus Defeat," *Journal of Personality and Social Psychology,* 63(5), 724-738.

Kamins, Michael A., Lawrence J. Marks, and Deborah Skinner (1991), "Television Commercial Evaluation In the Context of Program Induced Mood: Congruency Versus Consistency Effects," *Journal of Advertising,* 20(2), 1-14.

Kennedy, John R. (1971), "How Program Environment Affects TV Commercials," *Journal of Advertising Research,* 11(1), 33-38.

Lord, Kenneth R., and Sanjay Putrevu (1996), "Super Bowl Ad Recall: Program and Involvement Effects," in *Proceedings of the Society for Consumer Psychology,* Paul. M. Herr and John Kim, eds., Boulder, CO: University of Colorado Graduate School of Business, 1-7.

Madrigal, Robert (2008), "Hot vs. Cold Cognitions and Consumers' Reactions to Sporting Event Outcomes," *Journal of Consumer Psychology,* 18(4) 304-19.

Madrigal, Robert, Colleen Bee, Johnny Chen, Monica LaBarge (2011), "The Effect of Suspense on Enjoyment Following a Desirable Outcome: The Mediating Role of Relief," *Media Psychology,* 14(3), 259-288.

Mattes, John and Joanne Cantor (1982), "Enhancing Responses to Television Advertisements via the Transfer of Residual Arousal from Prior Programming," *Journal of Broadcasting,*

26(Spring), 553-66.

Moorman, Marjolein, Peter C. Neijens, and Edith G. Smit (2002), "The Effects of Magazine Induced Psychological Responses and Thematic Congruence on Memory and Attitude Toward the Ad in a Real-Life Setting," *Journal of Advertising*, 31(4), 27-40.

------, ------, and ------ (2005), "The Effects of Program Responses on the Processing of Commercials Placed at Various Positions in the Program and the Block," *Journal of Advertising Research*, 45(1), 49-59.

------, ------, and ------ (2007), "The Effects of Program Involvement on Commercial Exposure and Recall in a Naturalistic Setting," *Journal of Advertising*, 36(1), 121-37.

Murry, John P., John L. Lastovicka, and Surendra N. Singh (1992), "Feeling and Liking Responses to Television Programs: An Examination of Two Explanations for Media-Context Effects," *Journal of Consumer Research*, 18(March), 441-451.

Newell, Stephen J., Kenneth V. Henderson, and Bob T. Wu (2001), "The Effects of Pleasure and Arousal on Recall of Advertisements during the Super Bowl," *Psychology & Marketing*, 18(11), 1135- 53.

Pavelchak, Mark A., John H. Antil, and James M. Munch (1988), "The Super Bowl: An Investigation into the Relationship Among Program Context, Emotional Experience, and Ad Recall," *Journal of Consumer Research*, 15(December), 360-67.

Peterson, Erik M. and Arthur A. Raney (2008), "Reconceptualizing and Reexamining Suspense as a Predictor of Mediated Sports Enjoyment," *Journal of Broadcasting & Electronic Media*, 52(4), 544-62.

Prasad, V. Kanti and Lois J. Smith (1994), "Television Commercials in Violent Programming: An Experimental Evaluation of Their Effects on Children," *Journal of the Academy of Marketing Science*, 22(4), 340-51.

Shapiro, Stewart, Deborah J. MacInnis, and C. Whan Park (2002), "Understanding Program Induced Mood Effects: Decoupling Arousal from Valence," *Journal of Advertising*, 31(4), 15-26.

Singh, Surendra N. and Gilbert A. Churchill (1987), "Arousal and Advertising Effectiveness," *Journal of Advertising*, 16(1), 4-10.

Singh, Surendra N. and Jacqueline C. Hitchon (1989), "The Intensifying Effects of Exciting Television Programs on the Reception of Subsequent Commercials," *Psychology & Marketing*, 6(1), 1-31.

Soldow, Gary F. and Victor Principe (1981), "Response to Commercials as a Function of Program Context," *Journal of Advertising Research*, 21(2), 59-65.

Zillmann, Dolf (1996), "The Psychology of Suspense in Dramatic Exposition," in *Suspense: Conceptualizations, Theoretical Analyses, and Empirical Explanations*, ed. Peter Vorderer, Hans J. Wulff, and Mike Friedrichsen, Mahwah, NJ: Lawrence Erlbaum, 199-231.

Table 1
Description of Advertising Stimuli

Ad	Ad Execution	Characteristics (Alwitt, 2002)	Description
Nike	Suspenseful	Characters (team), plot with conflict, time structure that results in perceived time pressure, alternative outcomes, suspenseful music, dark dramatic tone, protagonist prevails, very little information or words	International football (soccer) commercial featuring international players against monsters/demons in a dramatic match for the survival of football. In the final seconds, the international players win.
Virgin Atlantic	Suspenseful	Character (individual), plot with conflict, time structure that results in perceived time pressure, alternative outcomes, suspenseful music, dark dramatic tone, protagonist prevails, very little information or words	A man is sitting on a city bench in front of a building when a window above closes and a stone angel starts falling, about to land on the man. As we watch his life flash before his eyes the grim reaper sits beside him. The audience gets flashbacks to the falling angel and the grim reaper waiting (and eventually falling asleep). In the end, the man quietly walks away without disturbing the grim reaper.
Sudafed	Nonsuspenseful	Character, informative, product solution to a problem, positive music	Informational ad explaining the benefits of Sudafed for colds and allergies.
Bladder Control	Nonsuspenseful	Characters, informative, product solution to a problem, upbeat music	Two women playing golf illustrating the frustrations and subsequent solution to bladder control issues.

Table 2
Ad Order, Ad Position, and Ad Execution Information

Ad Order	Ad Position			
	1a	**1b**	**2a**	**2b**
1	Sudafed (NSusp)	Nike (Susp)	Bladder (NSusp)	Virgin (Susp)
2	Virgin (Susp)	Bladder (NSusp)	Nike (Susp)	Sudafed (NSusp)
3	Nike (Susp)	Sudafed (NSusp)	Virgin (Susp)	Bladder (NSusp)
4	Bladder (NSusp)	Virgin (Susp)	Sudafed (NSusp)	Nike (Susp)
5	Sudafed (NSusp)	Bladder (NSusp)	Nike (Susp)	Virgin (Susp)
6	Virgin (Susp)	Nike (Susp)	Bladder (NSusp)	Sudafed (NSusp)
7	Bladder (NSusp)	Sudafed (NSusp)	Virgin (Susp)	Nike (Susp)
8	Nike (Susp)	Virgin (Susp)	Sudafed (NSusp)	Bladder (NSusp)

Table 3
Mean Ad Response Based on Program Suspense and Ad Position (H1)

***DV* and Program Suspense**	**Ad Position**			
	1a	**1b**	**2a**	**2b**
Ad Emotion				
High Suspense (*n*=55)	3.51 (1.36)	2.90 (1.61)	**4.00** (1.69)	3.20 (1.56)
Low Suspense (*n*=57)	2.77 (1.42)	3.53 (1.50)	3.15 (1.47)	3.53 (1.76)
Control (*n*=56)	2.89 (1.34)	3.21 (1.47)	2.90 (1.49)	3.15 (1.56)
A_{ad}				
High Suspense (*n*=55)	4.53 (1.22)	4.34 (1.55)	**5.01** (1.55)	4.42 (1.41)
Low Suspense (*n*=57)	4.25 (1.12)	4.70 (1.37)	4.31 (1.39)	4.67 (1.58)
Control (*n*=56)	4.32 (1.10)	4.54 (1.24)	4.45 (1.20)	4.52 (1.31)
A_{br}				
High Suspense (*n*=55)	4.69 (1.08)	4.35 (1.32)	**5.25** (1.40)	4.61 (1.34)
Low Suspense (*n*=57)	4.62 (1.05)	5.19 (1.22)	4.41 (1.11)	4.79 (1.46)
Control (*n*=56)	5.01 (1.13)	4.86 (1.21)	4.74 (1.16)	4.96 (1.37)

Table 4
Test of H1: Within-Subjects Contrasts and F-values for the Effect of Program Suspense and Ad Position on Ad Response

***DV* and Program Suspense**	**Ad Position Contrast**		
	1a v. 2a	**1b v. 2a**	**2b vs. 2a**
Ad Emotion			
High Suspense	-0.49, $F(1, 54)=4.92$*	-1.10, $F(1,54)=10.07$**	-0.80, $F(1,54)=8.46$**
Low Suspense	-0.38, $F(1,56)=2.30$	0.38, $F(1,56)=1.59$	0.38, $F(1,56)=1.75$
A_{ad}			
High Suspense	-0.47, $F(1,54)=4.13$*	-0.67, $F(1,54)=4.73$*	-0.59, $F(1,54)=4.84$*
Low Suspense	-0.06, $F(1,56)=0.06$	0.39, $F(1,56)=1.68$	0.36, $F(1,56)=1.64$
A_{br}			
High Suspense	-0.56, $F(1,54)=5.25$*	-0.90, $F(1,54)=9.88$**	-0.64, $F(1,54)=7.51$**
Low Suspense	0.21, $F(1,56)=0.88$	0.78, $F(1,56)=10.44$	0.38, $F(1,56)=2.64$

*p < .05
**p < .01

Table 5
Between-subjects Comparison of Control, High Suspense and Low Suspense Groups (Overall F-values and t-values for Contrasts)

***DV* and Contrast**	**Ad Position**			
	1a	**1b**	**2a**	**2b**
Ad Emotion	$F(2,165)=4.67^{**}$	$F(2,165)=2.37$	$F(2,165)=7.68^{**}$	$F(2,165)=0.90$
Control vs. High Suspense	$t(165)=-2.39^{*}$	$t(165)=1.06$	**$t(165)=-3.74^{**}$**	$t(165)=-0.18$
Control vs. Low Suspense	$t(165)= 0.45$	$t(165)=-1.11$	$t(165)=-0.87$	$t(165)=-1.24$
Aad	$F(2,165)=0.92$	$F(2,165)=0.93$	$F(2,165)=3.93^{*}$	$F(2,165)=0.42$
Control vs. High Suspense	$t(165)=-1.00$	$t(165)=0.77$	**$t(165)=-2.12^{*}$**	$t(165)=0.37$
Control vs. Low Suspense	$t(165)=0.30$	$t(165)=--0.59$	$t(165)=0.52$	$t(165)=-0.55$
Abr	$F(2,165)=2.03$	$F(2,165)=6.36^{**}$	$F(1,165)=6.60^{**}$	$F(2,165)=0.89$
Control vs. High Suspense	$t(165)=1.56$	$t(165)=2.16^{*}$	**$t(165)=-2.19^{*}$**	$t(165)=1.33$
Control vs. Low Suspense	$t(165)=1.89$	$t(165)=-1.38$	$t(165)=1.42$	$t(165)=0.65$

* $p < .05$
** $p < .01$

Table 6
Test of H3: Interaction of Manipulated Program Suspense and Measured Program Suspense on Suspenseful and Nonsuspenseful Advertising

	Advertising Appeal			
	Suspenseful		Nonsuspenseful	
DV **Predictors**	**Standardized β**	***t*-value**	**Standardized β**	***t*-value**
H3a: Ad Emotion				
Manip Program Suspense (hi vs. lo)	.01	0.09, *n.s.*	.01	0.09, *n.s.*
Measured Program Suspense	.39	2.46, $p < .05$	.19	1.16, *n.s.*
Manip. Program Suspense × Measured Program Suspense	**-.29**	**-1.95, $p < .05$**	.05	0.35, *n.s.*
H3b: Aad				
Manip Program Suspense (hi vs. lo)	.04	0.35, *n.s.*	-.07	-0.69, *n.s.*
Measured Program Suspense	.41	2.67, $p < .01$	-.01	-0.03, *n.s.*
Manip Program Suspense × Measured Program Suspense	**-.47**	**-3.19, $p < .01$**	.13	0.75, *n.s.*
H3c: Abr				
Manip Program Suspense (hi vs. lo)	.04	0.38, *n.s.*	.13	1.23, *n.s.*
Measured Program Suspense	.32	2.03, $p < .05$	.09	0.54, *n.s.*
Manip Program Suspense × Measured Program Suspense	-.17	-1.12, *n.s.*	.07	0.49, *n.s.*

Table 7

Test of H3: Simple Slope Analysis of Suspenseful Ad Responses (DV) on Measured Program Suspense (Predictor) Within Each Level of Manipulated Program Suspense (Moderator)

	Moderator: Manipulated Program Suspense	
	High-Suspense Program	**Low-Suspense Program**
	Simple Slope t-value	**Simple Slope t-value**
H3a: Predictor: Measured Program Suspense DV: Ad Emotion	0.50 $t = 2.46$, $p < .05$	-0.02 $t = -0.13$, *n.s.*
H3b: Predictor: Measured Program Suspense DV: Aad	0.47 $t = 2.27$, $p < .01$	-0.27 $t = -1.83$, *n.s.*
H3c: Predictor: Measured Program Suspense DV: Abr	0.25, $t = 2.02$, $p < .05$	0.07 $t = 0.66$, *n.s.*