

CREATIVITY AND MEMORY EFFECTS

Recall, Recognition, and an Exploration of Nontraditional Media

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ABSTRACT: Using a combination of exploratory and traditional approaches, we replicate and extend previous research on creativity and memory effects. The first study examines creativity's effect on advertising recall using two nontraditional media: airport terminal and preshow cinema advertising. Results suggest that differences in how consumers interact with nontraditional media influence the effect of advertising creativity on memory. For cinema advertising, where media consumption is similar to traditional media, creativity enhanced recall. For airport advertising, where media consumption often occurs when consumers are in a distracted state, creativity had no effect. The second study continues this investigation of exposure context and extends previous creativity research by investigating the recognition dependent variable in a forced-exposure context. Recognition is measured at four time-delay intervals: no delay and delays of one-week, three-weeks, and five-weeks. Creative advertising was found to enhance recognition, and this positive effect increased over time.

Over the past two decades, advertising researchers investigating creativity have been searching for paradigms to guide research (see Sasser and Koslow 2008). To date, the main approach has been information processing. Using this model, past research has linked creativity to increased advertising effectiveness. Smith et al. (2007), for example, find that in terms of relevance and divergence, advertising creativity improves a variety of important cognitive and outcome variables. Ang, Lee, and Leong (2007) find that in terms of novelty, meaningfulness, and connectedness, advertising creativity leads to higher recall and more favorable attitudes toward the advertisement.

Using an information-processing approach has led to important insights into consumer cognition, and research on creativity should leverage these findings. As Sternberg and Lubart (1996) note, however, research on creativity has been constrained by viewing it as the extraordinary outcome of ordinary processes. Creativity is treated as exceptional rather than typical. This has made it difficult to build a research stream and to build the foundational concepts needed for a better understanding of advertising creativity.

As contrasted with the traditional information-processing approach, a more exploratory approach may be more appropriate for building such a foundation. West, Kover, and Caruana

(2008), for example, directly ask consumers about creative advertising and then examine how their conceptualizations differ from those of professional creatives. This exploratory, relatively descriptive method has the potential to lay the groundwork needed for research into advertising creativity. That said, exploratory work is also often slow and potentially unfocused.

This paper combines, as best as possible, these two approaches. Our method is modeled after the seminal work of David Stewart and coauthors on advertising effectiveness (Stewart and Furse 1986; Stewart and Koslow 1989). Stewart's work took an existing data set (the ARS copytesting database) and augmented it through content analysis of the advertisements' executional factors. The results laid the foundation for a generation of advertising research. This approach—the use of data from previous work to explore new questions—is an effective compromise between the traditional and exploratory approaches discussed above.

With the goal of exploration rooted in theory, this study addresses two important questions regarding creativity: (1) the role of creativity in nontraditional media effectiveness, and (2) the effect of advertising creativity on recognition. Following the Stewart model, we add the variable of creativity to previous research investigating the effectiveness of various executional features for nontraditional media (e.g., repetition and location). We find that creativity has a beneficial effect on recall of cinema advertising, but does not affect recall of airport terminal advertising. While there are many potential explanations for this result, we posit that the difference is rooted in the modestly forced exposure of cinema advertising

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The authors acknowledge the helpful comments and guidance from the special issue editors, Sheila L. Sasser and Scott Koslow.

versus the incidental exposure of airport advertising. Based on the potential importance of attention and exposure conditions, we complete a third study looking at these issues. For this study, we replicate the method used in Till and Baack (2005). This study focuses on attention effects by using recognition as the dependent variable and increases exposure to advertising by using students in a classroom setting. The study finds that creative advertising, viewed in a relatively nondistracted context, leads to increased recognition.

LITERATURE REVIEW

Creativity and Advertising

There is a long tradition of research on creativity. Some of the earliest works on the topic include the book *The Art and Science of Creativity* (Kneller 1965) and early psychological writings on creativity and intellect by J. Paul Guilford (Guilford 1950, 1956). Academic research on creativity began by introducing scales for measuring creativity (e.g., Barron 1988) and by discussing creativity in more holistic terms (e.g., Bell 1992; Blasko and Mokwa 1986). These writings often view creativity in terms of violating expectations, often through contradictory ideas (e.g., Ang and Low 2000; Blasko and Mokwa 1986; Reid and Rotfield 1976). In the past decade, a generally agreed on definition of creativity has emerged, where creative advertisements are defined as being highly unique (also referred to as divergent or novel) and highly relevant (also referred to as meaningful and related to the concept of involvement) (Ang, Lee, and Leong 2007; Smith et al. 2007).

Research on advertising and creativity has also examined creativity from an organizational perspective. This research often looks at the "creative" position and the role of creativity within an advertising agency (e.g., Koslow, Sasser, and Riordan 2003, 2006). The research finds that creativity plays an important, albeit complicated, role for advertising practitioners.

This focus on creativity's definition and organizational role has much merit, but academic research empirically linking creativity to effectiveness has been somewhat limited. Only seven studies have empirically investigated this important issue. These will each be briefly reviewed. Kover, Goldberg, and James (1995) attempted to connect levels of advertising creativity to purchase intent, commercial liking, and congruency, and found preliminary evidence that advertising creativity led to increased purchase intent. Ang and Low (2000) linked advertising creativity in terms of advertising novelty, meaningfulness, and valence of feelings to attitude toward the ad, attitude toward the brand, and purchase intent. Similarly, Stone, Besser, and Lewis (2000) investigated the link between creativity and advertisement likability and found that creative advertisements were seen as more likable.

Taking a more cognitive focus, Pieters, Warlop, and Wedel (2002) found that participants paid more attention to original (more creative) ads, and that this increased attention led to increased recognition. Till and Baack (2005) found that creative advertisements led to greater unaided brand and commercial feature recall, and that aided recall might not be cognitively challenging enough to be sensitive to differences between creative (award-winning) and normal commercials. In addition, they did not find an effect of creative advertising on brand attitude or purchase intent.

Ang, Lee, and Leong (2007) introduced the advertising creativity cube, which conceptualizes creativity in terms of three dimensions: novelty, meaningfulness, and connectedness. The study found complicated interactions, but in general, found that advertisements that scored high on the three creativity dimensions also scored high on recall and attitude toward the advertisement. Most recently, Smith et al. (2007) defined advertising creativity as both relevance and divergence, and linked advertising creativity to increased attention, motivation to process, depth of advertising processing, attitude toward the advertisement, attitude toward the brand, and purchase intent.

While the consistent finding of this literature stream is that creative advertising is effective, there still remain questions regarding the roots of this effectiveness. Moreover, the majority of the studies have used experimental methods. This approach leaves questions regarding the generalizability of the results to more ecologically valid settings. Our aim is to respond to these issues through two separate studies. In the first study, we add the variable of creativity to two preexisting data sets looking at nontraditional media in an ecologically valid context. In the second study, we build on the results of the first study by investigating the recognition variable.

Creativity and Cognition

Creativity in advertising has been linked to increased attention, motivation to process the advertisement, and depth of processing (Smith and Yang 2004). These outcomes are theoretically rooted in attention effects. The amount of attention paid to advertisements is a function of the amount of cognitive capacity allocated to the task. When consumers are focused on another task or divide their attention between a task and an advertisement, little processing occurs (MacInnis and Jaworski 1989). Only when consumers focus more attention on the advertisement itself do higher levels of processing occur. Studies have found that increased attention leads to increased recall (Mulligan 1998), both aided and unaided (Craik et al. 1996; Olsen 1995).

Motivation is a key factor in increasing the amount of attention given to advertising (MacInnis and Jaworski 1989). Motivation is increased through a variety of methods, including novelty (MacInnis, Moorman, and Jaworski 1991). Novel

stimuli is a core component of creativity (Ang and Low 2000; White and Smith 2001) and has been linked to increased attention to advertising (Bettman 1979; Johnston et al. 1990). In addition, advertising relevance, another potential component of creativity, increases the desire consumers have to understand an advertising message (Smith and Yang 2004).

The originality or divergence plus personal relevance in creative advertisements may lead to greater depth of processing of the advertising message. Consumers may be more likely to move beyond the advertisement's message and consider the categorical or personal implications of the advertising (Smith and Yang 2004). This processing produces higher levels of recognition and recall of brand information (MacInnis and Jaworski 1989).

Even with novel and relevant (creative) stimuli being used, consumer opportunity and ability can hinder the amount of attention given to an advertisement and thus limit message processing (MacInnis and Jaworski 1989). Opportunity is defined as situational factors that either impede or enhance brand processing. These factors include distractions, time compression of the message, and the inability of the consumer to control the pace at which the message is delivered. Ability, on the other hand, is defined as the consumer's proficiency in interpreting the information found in the advertisement. Opportunity and ability are potentially important limiting factors for the processing of creative out-of-home advertising.

STUDY 1

Creativity and Out-of-Home Media

This study looks at two types of out-of-home advertising: airport terminal and preshow cinema advertising. Airport terminal advertising is of increasing importance as the rate of consumer travel continues to increase. In broad terms, the number of trips Americans take is up from 145 billion in 1969 to 379 billion in 2000—an increase of more than 160% (Gardyn 2000). Cinema advertising is also increasing in importance. Representing a \$258 million market in the United States, cinema advertising is growing faster than most other media, including such heavyweights as television and the Internet (Zenith Optimedia 2004). With the advent of new digital transmission technology, the cinema advertising market is predicted by industry experts to reach more than \$1 billion in revenue in 2008 (Arbitron 2007).

While creativity effects with these media have not been explicitly investigated, previous research on out-of-home advertising has emphasized the importance of novelty and of gaining audience attention. One of the earliest articles on the topic, Hewett (1975) focuses on the role of curiosity in outdoor advertising. Other researchers have linked novel or unusual advertising messages to increased recall (e.g., Young

1984). In addition, Donthu, Cherian, and Bhargava (1993) found a link between attention and recall for outdoor advertising. The literature in general agrees that the first step in effective out-of-home advertising is getting audience attention (Young 1984).

Within the out-of-home context, creativity, and the linked increase in attention, may be particularly important. The use of a creative advertisement may motivate message processing by attracting attention and encouraging further processing. The importance of creativity is reflected in the inclusion of out-of-home media categories in major advertising award contests, including the Clios, One Show Awards, and Mobius Awards.

For cinema advertising, consumers are captive or fixed, and may actually welcome the diversion or distraction that advertising provides. The marketing message is also fixed, making cinema advertising the most similar to traditional advertising of all out-of-home media. In cognitive terms, the consumer is motivated to attend to the advertisements, resulting in deeper processing. This depth of processing is often increased by the novel or unique features of the advertisement (Smith and Yang 2004). Based on these cinema advertising features, the attention and involvement-based advantages of creative advertising should then lead to increased effectiveness. As this study uses aided and unaided recall as dependent variables, we hypothesize that

H1a: For preshow cinema advertising, there will be a positive relationship between advertisement creativity and unaided recall.

H1b: For preshow cinema advertising, there will be a positive relationship between advertisement creativity and aided recall.

For airport terminal advertising, while the advertisements are fixed, the audience is a moving target. Consumers within the terminal are often moving, and generally have limited cognitive resources and lack the opportunity or motivation to process advertising (Cronin 2006). They are far more concerned with walking, making their flight, and other distractions than they are with advertising (Wilson and Till 2008). They may never move beyond what Smith and Yang (2004) refer to as preattentive processing. Without this initial message processing, consumers may not notice the novel or divergent creative message within the advertisement. This is likely to prevent advertising creativity from leading to increased advertising effectiveness. Therefore, we hypothesize:

H2a: For airport terminal advertising, there will be no relationship between advertising creativity and unaided recall.

H2b: For airport terminal advertising, there will be no relationship between advertising creativity and aided recall.

Method

Rating of Creativity

There is a split in past research between studies that use students to rate advertising creativity (e.g., Ang, Lee, and Leong 2007) and studies that use advertising professionals (e.g., Till and Baack 2005). Evidence suggests that advertising professional ratings exhibit less variance than student ratings (Reid, King, and DeLorme 1998), that the use of expert judges has greater face validity (Kover, Goldberg, and James 1995), and that it better reflects the advertising industry focus on creativity (Haberland and Dacin 1992).

The judges used for assessing creativity in this study were five advertising professionals from two different agencies. Each judge was given digital photographs of the advertisements and asked to rate its creativity on a scale of 0 to 100 with a higher rating reflecting higher creativity. The ratings of the five judges were averaged for each advertisement. Creativity scores ranged from 14 to 88.4 for the cinema advertisements and 34 to 88.8 for the airport terminal advertisements. Intraclass correlation coefficients (ICC) were used to measure coder reliability and the coefficients for both samples were significantly different from zero, showing high reliability (airport terminal ICC = .907; cinema advertising ICC = .980).

Cinema Study Procedure

Participants for the study were recruited by two graduate students at a Midwestern theater. Every moviegoer exiting the theater was handed a survey. Two separate surveys were used to measure aided versus unaided recall, with half receiving an aided version and half receiving an unaided version. To encourage participation, respondents were offered a free movie ticket. Surveys were to be completed by the participant within 24 hours of seeing the movie and returned via a business reply envelope. Surveys were distributed over the course of 17 days and 13 movies. A review of the participant's demographic information indicated that they did not significantly differ from the average moviegoer (MPAA 2005). All 14 unique cinema ads were local advertisers and were shown using four-color, 35mm static slides projected onto the screen via a slide projector with each ad appearing on screen for an average of 10 seconds and generally reappearing every 3.25 minutes.

Four dependent variables were used: brand name and "any recall" for both unaided and aided recall. The "any recall" measure counted as a recall if the participant listed any of the uniquely identifiable characteristics of the advertisement, including the brand name. A total of 3,438 surveys were handed out with equal distribution between the aided and unaided versions. A total of 877 aided surveys (51%) were returned and 910 (53%) of the unaided surveys were returned.

After removing surveys that were incomplete, the number of surveys used in subsequent analyses is 627 for aided and 604 for unaided, resulting in a response rate of 36% and 35% for the aided and unaided surveys, respectively.

Airport Study Procedure

To ensure that participants for this study had an opportunity to view all of the advertisements in the concourse, they were recruited from the rear of the C concourse in New York City's LaGuardia airport's Central Terminal Building (CTB). Over the course of two days, 63 recall surveys were collected. Five surveys, which were incomplete, were eliminated from the final analysis. Surveys were collected during the hours of 8:00 A.M. to 7:30 P.M. A review of the participant's demographic information indicated that he or she did not significantly differ from the average LaGuardia Airport CTB passenger (PANYNJ 2005). A total of 24, four-color advertisements in the concourse were included (predominantly nationally advertised brands).

As with the cinema study, four dependent variables were used to measure recall of airport terminal advertising: aided brand name recall, unaided brand name recall, aided "any" recall, and unaided "any" recall. The survey instrument was a four-page questionnaire that asked participants to first list any advertisements they had remembered seeing while inside the concourse (unaided recall). On the next page, participants were then asked to do the same but this time they were given 13 product categories to prompt their memory (aided recall).

Results

Simple regressions were run to test for the effect of creativity (independent variable) on the different variants of recall (dependent variable): unaided brand, aided brand, unaided "any," and aided "any."

A control variable was included in each analysis. For the cinema study, repetition or the number of times an ad appears in one complete cycle of the slide carousel was included. This was measured as a continuous variable ranging from one to six, with nearly two-thirds of the ads having six appearances. For the airport study, ad location was included. This was categorized into three distinct areas of the concourse (gate, security, and corridor) to reflect different passenger traffic and behavior patterns. Both variables control for opportunity to view the advertisements.

For cinema advertising, the β coefficient on creativity for unaided recall of brand names is significant (.57, $p < .05$). A similarly significant β for creativity is found for unaided recall of "any" advertising characteristic (.58, $p < .05$). For both aided brand name recall and aided "any" recall, the creativity β is also significant: brand name recall (.56, $p < .05$) and "any"

recall (.61, $p < .01$). Together, these results support H1a and H1b (see Table 1). The control variable, repetition, was not significantly related to recall.

For airport terminal advertising, none of the four regressions had a significant β for creativity, thus failing to indicate a relationship between recall and creativity. For unaided recall of brand names (.14, *n.s.* [not significant]) and of "any" advertisement characteristics (.31, *n.s.*) the β s were not significant. The same pattern of nonsignificance was found for aided recall of brand names (.02, *n.s.*) and recall of "any" characteristic (.01, *n.s.*). These results support H2a and H2b (see Table 1). The control variable, location, was not significantly related to recall.

STUDY 2

Creative Advertising, Attention, and Recognition

For the second study, our particular interest is recognition. The use of recognition is well established in the advertising literature (Kumar and Krishnan 2004; Shapiro and Krishnan 2001) and has been found to be distinct from other measures of advertising effectiveness, most notably, recall (Shapiro and Krishnan 2001).

More important, past cognitive psychology and marketing research has linked increased recognition rates to increased attention (Mulligan 1998; Navalpakkam and Itti 2005) and, in fact, recognition has been used as an operationalization of attention (Moore, Stammerjohan, and Coulter 2005). The majority of past studies on advertising creativity and effectiveness have used recall or more attitudinal measures of effectiveness. While increased attention will influence these variables, recognition is a more immediate measure of attention. Therefore, the strong link between attention and recognition allows the second study to better focus on the relationship between exposure context and attention.

As shown in Study 1, exposure context may play an important role in the relationship between advertising effectiveness and creativity. When consumers do not have the opportunity or are not motivated to process advertisements, they may not move beyond the preattentive stage of information processing. In the first study, the lack of motivation and opportunity led to no advantage in terms of recall for airport advertising; in the forced-exposure context of cinema advertising, however, creative advertising was more effective. For this second study, we replicate the forced-exposure context used in Till and Baack (2005) (as will be discussed in more detail later). The combination of a forced-exposure context and a dependent variable measuring attention allows us to begin to address the relationship between these variables.

As discussed above in Study 1, past research posits that at their core, creative advertisements are novel or original (Ang

and Low 2000; White and Smith 2001). This novelty and visual prominence is then strongly linked to increased attention (Bettman 1979; Johnston et al. 1990), and advertising originality has been specifically linked to increased recognition (Pieters, Warlop, and Wedel 2002). In addition, creative advertising is linked to increased motivation to process the advertisements leading to deeper processing and involvement with the advertisements (Smith et al. 2007). This increased processing leads to cognitive advantages, including increased recognition (Craik and Lockhart 1972). For the forced-exposure setting, participants should process the advertisements to the degree necessary for these advantages to accrue. Therefore, the following hypothesis is proposed:

H3: Recognition levels will be greater for creative commercials than control commercials.

A core claim of Till and Baack (2005) is that the cognitive advantages of creative advertising increase as the task becomes more cognitively difficult. In addition, advertising effects are assumed to have an effect on consumer behavior over time (Berkowitz, Allaway, and D'Souza 2001). Moreover, research finds that delay does affect advertising effectiveness, and that delayed measurement may result in different results than more immediate measurement (Grossman and Till 1998; Singh, Linville, and Sukhdial 1995; Till and Priluck 2000). This leads to a question as to whether the potential recognition advantages of creative advertising persist, or even improve, over time. There is recent evidence that creative advertising is processed more deeply than noncreative advertising (Smith et al. 2007). This increased processing results in stronger memory encoding, and this memory will therefore be more resistant to memory decay over time (Craik and Lockhart 1972). The following hypotheses emerge:

H4: Recognition levels will decrease over the four delay conditions.

H5: Delayed recognition levels will be greater for creative commercials than control commercials.

Method

Advertising Samples

For the creative commercials, we used One Show award winners. The use of award-winning advertising as a proxy for creativity is consistent with other studies of advertising creativity (e.g., Till and Baack 2005). One Show bases its awards primarily on ad creativity as assessed by a panel of distinguished advertising professionals from across the world. Ten advertisements were randomly selected from a pool of 125 advertisements from the 2001, 2002, and 2003 One Show award winners.

TABLE I
Cinema and Airport Terminal Regression Results

	Unaided brand names	Unaided "any"	Aided brand names	Aided "any"
<i>Airport terminal advertising</i>				
Creativity	.14 (.641)	.31 (1.531)	-.02 (-.104)	.01 (.026)
Location	.20 (.913)	.29 (1.439)	-.02 (-.084)	.01 (-.042)
df	2,21	2,21	2,21	2,21
R ² (adj.)	-.041	.076	-.094	-.095
<i>Cinema advertising</i>				
Creativity	.57* (2.433)	.58* (2.451)	.56* (2.789)	.61** (3.292)
Repetition	.28 (1.174)	.27 (1.134)	.39 (1.955)	.36 (1.934)
df	2,11	2,11	2,11	2,11
R ² (adj.)	.504	.502	.645	.694

Notes: The numbers for creativity, location, and repetition are the standardized regression coefficients, which are equal to the correlation between said variable and recall. *t* statistics are in parentheses.

* $p < .05$.

** $p < .01$.

To create the pool of control advertisements, procedures similar to those in Cho et al. (1999) and Till and Baack (2005) were used. Television advertisements were sampled during prime-time television (7:00 P.M. to 10:00 P.M.) during four randomly selected days of the week in the fall of 2006. The networks used—NBC and CBS—were randomly selected from a pool of the four major networks. Duplicate commercials and separate commercials for the same brand name were removed, and only 30-second commercials were sampled. From this pool of control commercials, 10 were randomly selected.

Materials

We embedded 20 commercials (10 award-winning and 10 control) in a television show. Our objective in choosing the television program was for the show to be of at least some interest to undergraduate students. We selected the half-hour show *Everybody Loves Raymond*. In total, we inserted four two-and-a-half-minute pods of five commercials. This resulted in a total of 20 advertisements (10 minutes of advertising total) for the program. To control for order effects, the presentation order of the 20 commercials was alternatively award-winning and control.

To control for brand familiarity effects, a survey of 34 students at a Midwestern university was completed. No significant difference in familiarity scores was found between the creative and control brands advertised.

Participants

Undergraduate students enrolled in business courses at a private Midwestern university were participants. The sample met the typical profile of undergraduate students. While participants were aware that they were participating in a research study, they were not aware that the focus of the study was advertising. Instead, participants were told that the focus of the study was the television program. A total of 107 participants from four different courses took part in the study.

Procedure

Participants watched the 30-minute *Everybody Loves Raymond* program, which included 20 minutes of program content and 10 minutes of commercial content. After watching the program, participants completed an interpolated task (a questionnaire about the program) to reinforce the study ruse and to clear short-term memory.

Participants then completed a recognition task. Depending on delay condition, this task was completed immediately after exposure to the television show (no delay) or with a one-week, three-week, or five-week delay.

Recognition Measure

Participants watched a video containing both the 20 target commercials they were previously exposed to during the tele-

TABLE 2
Test of Within- and Between-Subjects Effects

Source	Sum of squares	df	Mean square	F	Significance	Partial η^2
<i>Within-subject</i>						
Creative	39.2	1	39.2	23.3	0	.18
Creative \times two-level delay	10.2	1	10.2	6.1	.02	.05
Error	178.3	106	1.7			
<i>Between-subjects</i>						
Intercept	12,705.3	1	12,705.3	3,412.3	0	
Delay	112.4	1	112.4	30.2	0	.22
Error	394.6	106				

vision program and 30 distracter commercials. The distracter commercials were made up of 15 One Show award winners and 15 control commercials, again sampled from normal television, which were not included in the initial sample. Of the 30 distracter commercials, 20 were randomly selected from the pool and 10 were consciously selected to match the product category of 10 of the target commercials (5 creative and 5 control). The recognition measure was a forced-choice method where the participants answered "yes" or "no" to "Did you see this commercial during the television program?" This forced-choice method has been used previously to measure recognition (Shapiro and Krishnan 2001).

Results

A 2×2 repeated-measures ANOVA (analysis of variance) was used to measure the effect of the within-subject variable of commercial type (creative versus control) and the between-subjects variable of delay (no delay versus any delay).

The within-subject analysis for commercial features revealed interesting differences between commercial type (creative versus control). Commercial type had a significant main effect on recognition levels, $F(1, 106) = 39.2, p < .001$ (see Table 2). Creative commercials were significantly better recognized than control commercials (8.80 versus 7.60).

Not surprisingly, the time delay had a significant main effect on recognition levels, $F(1, 106) = 3412.3, p < .001$ (see Table 2), with the delay reducing overall recognition scores (no delay recognition mean = 18.73; one-week delay = 17.00; three-week delay = 13.95; five-week delay = 14.31). A Tukey's post hoc analysis was used to analyze the differences between the four delay conditions. This analysis found a significant difference between each of the delay conditions, except for between the three- and five-week delay conditions. The interaction between commercial type and time delay was also significant, $F(1, 106) = 6.1, p = .02$ (see Table 2). This interaction is based on no delay versus any delay (the three delay conditions collapsed). A graph of recognition levels for each of

the delay conditions visually explores the relationship between the recognition advantage for creative advertisements and time (see Figure 1). This depiction shows that the advantage of the creative advertisements increased over the time delay. Moreover, the recognition advantage of creative advertisements over control advertisements is larger after a five-week delay (five-week difference = 1.69) than it is for no delay (no delay difference = .47). This difference is statistically significant, $t(45) = 2.3, p = .03$.

Overall, the analysis suggests that creative advertisements led to higher recognition levels, and that the advantage creative advertisements have when compared to the control advertisements increased over the time delay. Therefore, H3–H5 were supported.

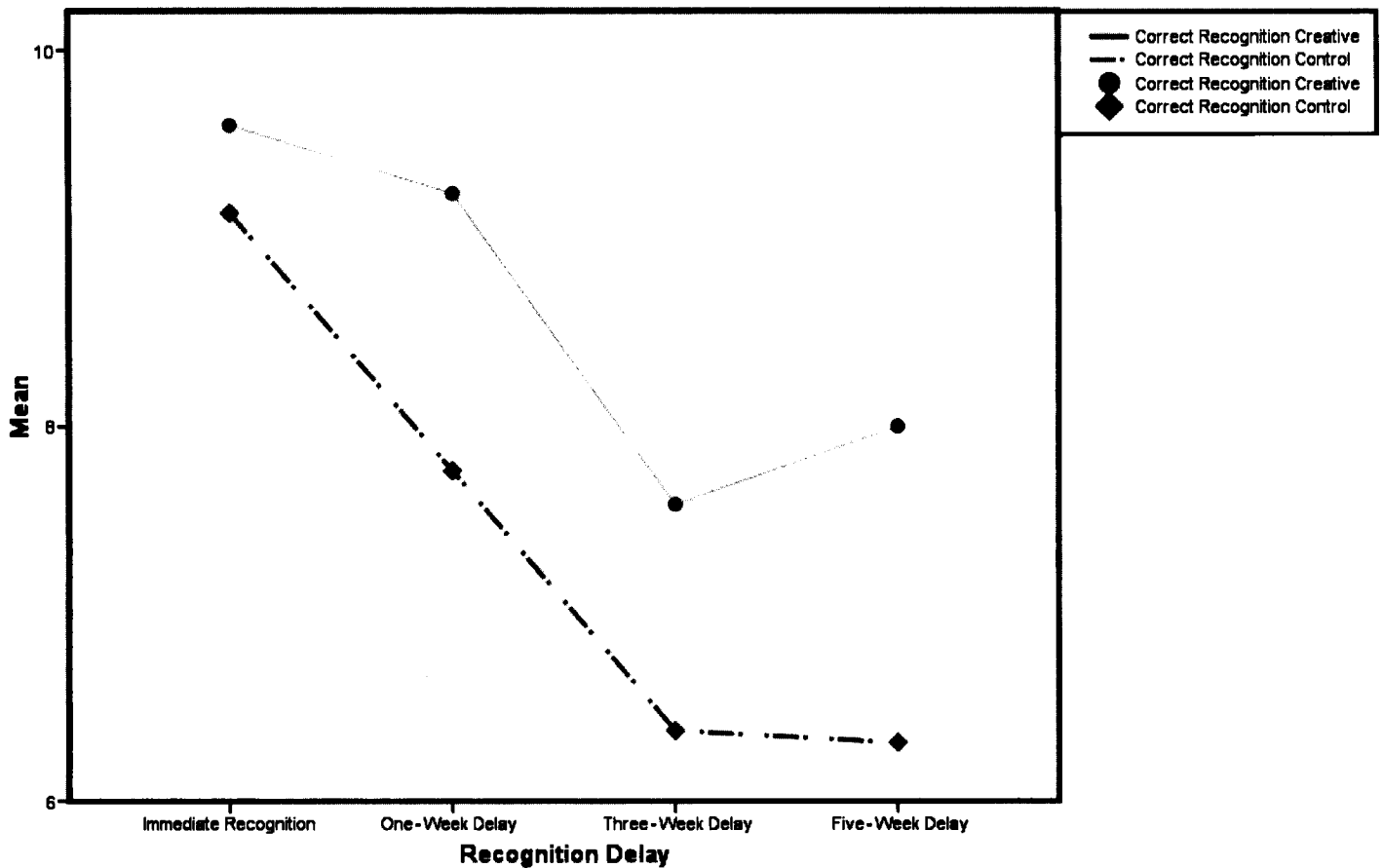
DISCUSSION

The results of the first study partially replicate previous research by linking advertising creativity to increased aided and unaided brand and ad execution recall for preshow cinema advertising. In contrast, the results find no effect for advertising creativity on airport terminal advertising recall for aided brand recall, unaided brand recall, or ad execution recall.

The different findings for the two out-of-home media may be rooted in fundamental differences in how consumers interact with the two types of media. For airport terminal advertising, consumers are in a highly distracted state and opportunity for message processing is low. They are mobile, are constantly avoiding pedestrian traffic, are frequently in a hurry, and often have anxiety regarding making their flight. This may lead to a lack of attention to advertising.

In comparison, consumers exposed to cinema advertising are a captive audience more comparable to traditional advertising and are often engaged with the advertising as a means of entertainment. The opportunity for message processing is therefore greater. Not surprisingly, the results of previous studies looking at creativity effects using traditional media are supported with the more conventional cinema advertising sample.

FIGURE 1
Delay Condition and Recognition Level Interaction



The results suggest that there may be a threshold of attention that advertising must garner before the beneficial effects of creativity found in previous studies, and in the cinema sample for this study, come into play. Consumers must have the opportunity and motivation to process the creative advertising message. While creative advertising may be more attention grabbing, in some settings, all advertisements, regardless of level of creativity, may fail to gain audience attention.

The results have important implications for practitioners. Message-processing opportunity, ability, and motivation are of paramount importance for nontraditional advertising media. For this media, practitioners should consider message processing as the primary objective of their advertising efforts and realize that a base level of consumer opportunity and motivation may be necessary before advertising creativity increases effectiveness. To increase consumer processing, previous research on airport terminal advertising suggests that practitioners should focus on tactical execution factors such as multiple exposures, increased size, and beneficial locations (Wilson and Till 2008). For cinema advertising, on the other hand, the results suggest that practitioners should apply models already developed and applied to traditional advertising media.

The second study built on the importance of exposure context on attention effects highlighted in the first study. This study measures attention, using the recognition variable in a forced-exposure setting. The results suggest that creative advertisements generate significant attention advantages when exposure levels are high. This effect was found for immediate recall, and for one-week, three-week, and five-week delayed recognition.

These results have interesting theoretical implications. They build on past research, showing that when exposure levels are high, creative advertising leads to increased attention. They also support the claim in Till and Baack (2005) that creative advertising advantages are rooted, at least partially, in the cognitive difficulty of the task. In this study, the difficulty of the task was increased through larger delays between ad exposure and the recognition task. As the delay increased, so did the effectiveness advantage for creative advertising.

The results are also important for practitioners. Recognition is important for point-of-purchase decisions and not all decisions require listing all possible brands from memory (recall). Therefore, the results of this study extend previous recall results regarding the cognitive advantages of creative advertis-

ing (e.g., Till and Baack 2005). This presents the possibility for advertisers to achieve actionable results from advertising campaigns without the expense associated with gaining the needed exposure to influence consumer recall.

CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

The two studies hint that level of processing may play an important role for creative advertising. For the recognition study, participants were directed to view the television show and had relatively deep processing. For cinema advertising, participants were relatively captive and again had fairly deep processing. In comparison, participant processing of airport terminal advertising was limited, and in this context, the advantage for creative advertising disappeared. Future researchers should directly test the effects of level of processing on creative advertising effectiveness, preferably using one media with different exposure conditions. For example, if possible, a comparison could be made between high-distraction and low-distraction environments using two airport terminals with similarly creative advertisements. Research might also explicitly address differences between recall and recognition measures of creativity effectiveness.

All the studies have limitations. For the cinema and airport terminal studies, while the research goals require a nonlaboratory, real-world testing environment (Calder, Phillips, and Tybout 1981), these conditions lead to limitations. The use of existing advertisements may confound recall results, as some respondents may be familiar with the brand or the advertisement. Also, internal validity may be difficult to maintain as natural settings include many uncontrollable variables (Calder, Phillips, and Tybout 1981). For the experimental recognition study, the method used also leads to limitations. The classroom viewing environment is artificial, and the recognition method used may not generalize well to real-world recognition conditions.

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