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**Employing incongruency as a form of communication-relevant
distraction to enhance attitude change in an advertising context**

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The University of Arizona, 1993

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EMPLOYING INCONGRUENCY AS A FORM OF
COMMUNICATION-RELEVANT DISTRACTION TO ENHANCE
ATTITUDE CHANGE IN AN ADVERTISING CONTEXT

by

William Thomas Reichert

A Thesis Submitted to the Faculty of the
DEPARTMENT OF COMMUNICATION
In Partial Fulfillment of the Requirements
For the Degree of
MASTERS OF ARTS
In the Graduate College
THE UNIVERSITY OF ARIZONA

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ACKNOWLEDGMENTS

There are many whom I wish to acknowledge for their guidance, expertise, criticism, and inspiration in the completion of this masters thesis. Taking the lead from a fellow associate, I have chosen to recognize the following people in APPENDIX H: Dr. David Buller (chair); Dr. Susan Heckler; Dr. Sally Jackson; (soon to be Dr.) Dale Brashers; the Reicherts; Walid Afifi (and members of the Topoi); Susan Morgan; Charlene Melcher; and Elizabeth Kronlage. Thanks to all of you. No man is an island.

DEDICATION

"If our young men miscarry in their first enterprises they lose all heart. A sturdy lad from New Hampshire or Vermont, who in turn tries all the professions, who teams it, farms it, peddles, keeps a school, preaches, edits a newspaper, goes to Congress, buys a township, and so forth, in successive years, and always like a cat falls on his feet, is worth a hundred of these city dolls. He walks abreast with his days and feels no shame in not 'studying a profession,' for he does not postpone his life, but lives already. He has not one chance, but a hundred chances."

-Ralph Waldo Emerson

This thesis represents a significant accomplishment at this time in my life. There are many who have in some way motivated, directed, yelled, inspired, hurt, loved, laughed with (and at), cried with, pushed, understood, misunderstood, supported, and believed in me over the past few years. This thesis is dedicated to all of you. You will have "a hundred chances" to do the same in the years to come.

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ABSTRACT

Rarely are messages devoid of visual information. Yet, theoretical explanations for the effect of visual elements on persuasion is limited. Marketers have shown that incongruent visual elements in advertisements can affect memory outcomes. This study bridged communication and consumer behavior research to develop a theoretical framework to explain the affect of incongruent visual elements on (1) attitude toward the ad, and (2) purchase intention. The results of this study provided limited support for the proposed framework. Findings indicated that relevant pictorials will yield more positive evaluations and purchase intentions than irrelevant pictorials. Expected pictorials were also found to impact evaluations. Several moderating variables are speculated to explain the impact of visual elements in an advertising context.

CHAPTER ONE

Introduction and Rationale

Advertising has been defined as a means to inform and/or to persuade consumers to form or change a specific attitude or behavior (Percy, 1983). Daily, consumers are exposed to a multitude of advertisements and marketing messages. Consumers do not perceive each of these messages to the same degree (Petty & Cacioppo, 1986). Individuals attend to different messages to the extent they are motivated, have the opportunity, and possess the ability to understand persuasive appeals (MacInnis, Moorman, & Jaworski, 1991).

There has been a significant amount of research in marketing and communication on how to increase the effectiveness of a message designed as a persuasive attempt. In the domain of consumer behavior, most of the research to date has only examined message effects (Hecker & Stewart, 1988; Houston, Childers, & Heckler, 1987). However, the vast majority of marketing communication consists of both visual and verbal elements to convey intended meaning (MacInnis et al., 1991). These messages combine visual graphics and verbal content to attract attention and communicate additional messages about the product (Percy & Rossiter, 1980).

A similar situation exists in communication research concerning message design. Surprisingly, a modest amount of research regarding the impact of visual elements of the message in a mediated context has been conducted. One must look to distraction research to find a theory contributing to the explanation of possible effects of visual elements on persuasive outcomes (Buller & Hall, 1990).

When designing messages to maximize their outcome, it has long been recommended in the consumer behavior literature that the visual and verbal message should be congruous. For example, visuals within an advertisement should reinforce the verbal message. However, current marketing studies have suggested otherwise. Houston, Childers, and Heckler (1987) found that inconsistency between visual and verbal elements had a positive effect on memory when compared to consistent elements.

This study will focus on the use of incongruency as a means to enhance persuasion. Specifically, visual and verbal incongruency within an advertisement has an affect that helps predict attitude change and intent to purchase the advertised product. In order to understand when incongruency is effective, it is necessary to first review how it has been studied in consumer behavior research as an impact on cognitive elaboration. Second, there is a need to specify its role as a message effect within the social

influence domain. Third, the distraction construct is identified as a means to explain incongruency's affect on attitude change and when incongruency can be utilized to enhance persuasive messages.

Marketing Review

Within the last decade, several researchers have explored the role of visual elements within advertisements (Edell & Staelin, 1983; Mitchell, 1981; Mitchell, 1983), especially the integration of visual and verbal cues (Childers, Heckler, & Houston, 1986; Childers & Houston, 1984; Childers, Houston, & Heckler, 1985; Heckler & Childers, 1992; Houston, Childers, & Heckler, 1987; Miniard, Bhatla, Lord, Dickson, & Unnava, 1991; Mitchell, 1986; Smith, Houston, & Childers, 1984). These studies have looked primarily at the effect of these elements on memory.

In the research conducted to date, the assumption has been that pictorials set the theme of the advertisement. As Heckler and Childers (1992) contend, a consumer's objective when viewing an advertisement is to form impressions. Studies have shown that visual elements in an advertisement are processed first (Mitchell, 1983) and establish a theme for subsequent processing of the verbal element (Childers & Houston, 1984; Childers, Heckler, & Houston, 1986; Edell & Staelin, 1983).

Recent research in consumer behavior has focused on the general effects of incongruency on information processing and memory effects (O'Brien & Meyers, 1985; Sujan, 1985; Sujan, Bettman, & Sujan, 1986). Findings provide strong evidence that when consumers are presented with mismatched or incongruent information, more product-related and attribute-oriented thoughts are generated. When consumers are presented with consistent, expected information, they will spend less time attending to, or elaborating on, the persuasive message. This has led to findings, mostly in memory research (Heckler & Childers, 1992), that incongruencies have a positive relationship with memory processes, (i.e., recall and recognition).

Incongruency has been described in consumer behavior research as a strategy employed to increase message processing (Hastie, 1980). In this sense, incongruency can be viewed as an important executional cue (i.e., a production technique in mediated communication) which may increase attention to, and comprehension of, advertising messages. The function of incongruent or mismatched information is to motivate the consumer to process the information in the advertisement, which, in turn, affects the strength and endurance of memories and brand attitudes (MacInnis et al., 1991).

Relevant to this study, several experiments have been conducted on visual and verbal incongruency (Heckler & Childers, 1992; Houston, Childers, & Heckler, 1987). Heckler and Childers (1992) developed a multidimensional definition of incongruency, partly in response to conflicting findings regarding incongruency. They conceptualized incongruency as an interaction of two dimensions: expectancy and relevancy. The degree to which the visual is either expected or relevant to the verbal message determines the effect of the message on memory. Expectancy is defined as, "The degree to which an item or piece of information falls into some predetermined structure evoked by the theme" (Heckler & Childers, 1992, p. 447). Therefore, when a consumer views a visual in an advertisement, a theme is established. When the verbal message does not immediately confirm that theme, the viewer will attempt to match, or make congruent, the two elements. In this sense, an unexpected pictorial will be one which is unlikely to immediately represent a certain product attribute.

The second dimension, relevancy, is defined as, "material pertaining directly to the meaning of the theme and reflects how information contained in the stimulus contributes to or detracts from the clear identification of the theme or primary message being communicated" (Heckler &

Childers, 1992, p.447). The relevancy of a visual to a certain verbal message can be thought of as the degree to which the two elements correspond. Does the verbal message have some bearing on the established theme at hand? Can the viewer make a connection between the visual and verbal elements in the ad? The answer to these questions help explain the degree of relevance between visual and verbal elements within an advertisement.

These two dimensions of incongruity will be utilized in this study. It is important to note the difference between the definition of incongruity as defined by Heckler & Childers (1992) and the definition commonly employed in communication research. Incongruity in communication is often defined as the level of discrepancy between communication channels. For instance, in the study of nonverbal communication, the discrepancy or incongruity of verbal and nonverbal behaviors can have certain effects on perception, arousal, and believability (Burgoon, 1985; Burgoon, Buller, & Woodall, 1989). The main difference between the two distinctions is that communication research has focused almost exclusively on channels at the interpersonal level, while the congruity research in marketing examines mediated contexts.

Marketing research has determined that viewers of advertisements generally process the visual element before

the verbal element. The visual element establishes a theme which may or may not be congruent with the verbal message. Contradicting traditional marketing wisdom, it has been found that certain types of incongruent messages can have differing effects on cognitive elaboration and memory outcomes. Incongruency has been defined as a multidimensional construct consisting of expectancy and relevancy. The degree to which expected and relevant visuals in an advertisement determine specific message outcomes will be explained in a distraction context. The research in consumer behavior provides a foundation for explaining incongruency's effect on cognitive elaboration. To add insight into how incongruency can have an effect on attitudes, the effect of certain message variables on persuasion will be reviewed.

Message Effects Review

The study of messages and their effect on persuasion has been a long standing tradition transcending many academic and applied fields (McGuire, 1986). Burgoon (1990) describes the inherent importance of language and social influence by making reference to the "voluminous amount of empirical research on language variables that impact the alteration of attitudes and/or behaviors" (p. 52). Any researcher interested in the effectiveness of enhancing or inhibiting certain attitudes or behaviors in an

advertisement must consider the rich, yet sometimes contradictory findings of message effects research, as most mediated communications contain some form of verbal message.

Message effects have been categorized several ways. Burgoon (1990) categorizes message variables either on a micro- or macro-level. Micro-level message variables include such elements as fear appeals, language intensity, opinionated language, and obscenity. Macro-level analysis includes compliance-gaining message strategies and sequential message strategies (e.g. foot-in-the-door and door-in-the-face). Burgoon (1989) also conceptualizes messages according to their emotional or logical appeal.

This study takes a micro-level look at the interaction of the verbal message and the visual element within advertisements. According to message effects research, verbal messages themselves may produce predictable outcomes on attitudes and behaviors, but advertisements and marketing communications are rarely exclusively verbal. Most forms of mediated communication contain some visual element. Given this information, we might ask what effect does an incongruent visual message have on the verbal message? Given a manipulation of the expectancy and relevancy dimensions of incongruity defined within this paper, what are the effects of expected-relevant, expected-irrelevant,

unexpected-relevant, unexpected-irrelevant visual elements on fixed messages?

Researchers have studied variables related to the message such as source credibility (Hovland & Weiss, 1951) and nonverbal behavior (Gorn, 1982; Shanteau, 1988). Some have suggested that message elements can distract receivers, directing their attention toward or away from relevant information in the advertisement, thereby facilitating or hindering persuasion (Buller, 1986; Buller & Hall, 1991). It is this research which helps to explain the effect of visual/verbal incongruency.

Distraction Review

Distraction is an area of research which has implications for explaining the effect of incongruency on persuasive outcomes. Buller and Hall (1991) propose a model of distraction which outlines several stages a receiver must pass through "before persuasive messages can be said to cause attitude change or bolstering" (p. 15). The stages of attention and comprehension are especially relevant to explain the effects of incongruency. First, the distraction literature will be reviewed. Then, incongruity will be applied to Buller and Hall's (1991) model of distraction.

Within the communication domain, several theoretical approaches have been proposed to explain the effect of distraction in the communication context (Buller, 1986).

The counterarguing hypothesis maintains that distraction may enhance persuasion by inhibiting the production of internal counterarguments against the advocated message. By contrast, the message-comprehension hypothesis contends that distraction inhibits or overloads cognitive processes, reducing comprehension of a persuasive message, and as a result decreasing attitude change. Buller (1986) found moderate support for the message-comprehension explanation of distraction and relatively weak support for the counterarguing hypothesis in his meta-analysis.

Buller (1986) also proposed a distinction in distracting cues to explain a unique set of results implicating credibility judgements as determinants of attitude change. The two categories are communication-irrelevant and communication-relevant distraction. Communication-irrelevant distraction is defined as anything outside of the message context which draws attention away from the message. Several studies in this area attempt to distract receivers from the message by using irrelevant films, slides, tasks, and external noise and measure subsequent attitude change (Insko, Turnbull, & Yandell, 1974; Kiesler & Mathog, 1968; Rosenblatt, 1966; Shamo & Meador, 1969; Silverman & Regula, 1968).

The effect of communication-relevant distraction on persuasion is paramount to this study. Buller (1986)

defines this type of distraction as a cue that distracts but adds additional meaning that is integrated into receivers' message processing. Two basic approaches have been taken toward distraction in this sense. One approach is to have the receivers focus on the source or message exclusively (Allyn & Festinger, 1961; Burgoon, Cohen, Miller, & Montgomery, 1978; Freedman & Sears, 1965; McCroskey & Mehrley, 1969). The other approach entails violations of expectations in communication contexts that direct attention to source characteristics (Burgoon, 1988; Burgoon, 1989; Burgoon & Miller, 1985; Stacks & Burgoon, 1981).

Buller & Hall (1991) present a model of distraction with four stages that include attention, comprehension, evaluation and attribution, and resolution. Within their definition, communication-relevant stimuli are either message or source attributes. Message attributes are further defined as including either the propositional content or the style of message delivery. The style of message delivery can include production and executional techniques which can attract attention, such as incongruency of visual and verbal elements.

The attention stage is a necessary phase in that the advertisements which attract the receiver's attention are more likely to persuade. Attention has been deemed a necessary but not sufficient antecedent to attitude change

(McCroskey & Mehrley, 1969). Buller and Hall (1991) offer a definition of attention relevant to this study, "[attention] involves voluntary sustained concentration...aimed at understanding or explaining stimuli, or in this case the message...concentration can be elicited by an orienting response which begs interpretation (e.g., violation of linguistic expectations)," (p.13). This is important in that the incongruity of an unexpected visual element discrepant from the verbal message can attract attention. Attracting attention as a necessary step to motivate the processing of a central message can lead to desirable persuasive outcomes (Petty & Cacioppo, 1986).

Buller considers two theoretically-based expectancy violation models as examples of communication-relevant distraction. They include the nonverbal expectancy violations theory (Burgoon & Hale, 1988) and an expectancy violations theory of language intensity (M. Burgoon & Miller, 1985). These theories both posit that a violation of expectations increases elaboration processes by the receiver to interpret the violation. These models, though interpersonal and message based, lend additional support to the notion that a visual and verbal element which are somehow incongruent can attract attention to restore balance or resolve the incongruent information. By attracting

attention, incongruent messages may lead to more persuasive outcomes.

The second stage of the distraction model is comprehension. At this stage, the viewer is compelled to extract meaning from the message. Buller and Hall argue that receivers not only judge the linguistic propositions of the message, but also the mode of presentation. It is proposed that receivers use both elements to arrive at an evaluation of the persuasive attempt. In this stage, the receiver determines if the presentation makes sense or not. This is especially relevant for incongruent messages. As mentioned in the marketing literature, incongruent messages increase cognitive elaboration.

Thus, more central processing occurs as a means to understand or comprehend the discrepant elements. For example, unexpected-irrelevant messages may be deemed bizarre or inconclusive. Mandler (1982) suggested that when unexpected-irrelevant incongruency is extreme, the receiver usually becomes frustrated and sometimes anxious. This may lead to negative evaluations. The receiver may "give-up" attempting to make sense of the discrepancy. Both of these reasons may lead to less effective means of persuasiveness. By contrast, messages which are unexpected, yet relevant, are beneficial. Due to increased elaboration, the receiver is able to make the connection between the unexpected visual

and the message. This fulfills the necessary level of comprehension which must precede attitude or behavioral changes according to the distraction model.

In stage three of Buller and Hall's theory, a valence is attached to the message after comprehension is attained. Valence is determined by the congruity or incongruity of receiver expectations regarding propositional content and appropriateness of the mode of presentation (Buller & Hall, 1991). It is important to note that the definition of congruity proposed by Buller and Hall is different than the definition set forth in this study regarding the incongruity of visual and verbal elements in advertisements. Buller and Hall (1991) view incongruity as receiver expectations regarding how the requests are framed and the style in which the message is presented. The effect of "style" in which the message is presented given a fixed verbal message is relevant to this study. Incongruity may positively violate receiver expectations if unexpected-relevant visuals are viewed as "clever." This may lead to more positive evaluations. Alternately, the irrelevant elements within an advertisement may be viewed as manipulative or "nonsensical." This may lead to more negative evaluations.

In the last stage, receivers choose whether or not to modify pre-existing attitudes and beliefs. Buller and Hall

(1991) argue that a receiver's willingness to resolve inconsistencies is partially dependent on the characteristics of the stimuli. Incongruity has been shown to have a positive effect on cognitive elaboration. This increased effort to understand an incongruent message may provide the motivation essential to resolve cognitive inconsistencies. This may also have a positive affect on attitude change.

The model of distraction provides a framework from which to explain the effects of incongruity on persuasiveness. Buller and Hall's (1991) model assumes a receiver must attend to four necessary stages before attitude change or bolstering can take place. The attention and comprehension stages are most important to explain incongruity's role in the persuasive process. Incongruity can attract attention to the presentation, and if relevant, as defined by Heckler & Childers (1992), may enhance the understanding of the message. All four stages are necessary prerequisites to attitude change within the distraction model.

Summary

It is proposed that the dimensions of incongruity (Heckler & Childers, 1992) are significant predictors of the persuasive outcomes of visual and verbal message incongruity. The research in consumer behavior provides a foundation for explaining the effects of incongruity within

a distraction framework. Marketers have found incongruity increases cognitive elaboration and memory outcomes. The research concerning message effects provides predictions of certain messages as variables related to the linguistic message. A model of distraction provided by Buller and Hall (1990) provides a more comprehensive framework to explain the effect not only of the linguistic message, but of the visual element as well. The following hypotheses are set forth.

Hypothesis one

Advertisements with pictorials perceived as relevant information will yield more positive attitude change than irrelevant pictorials.

Hypothesis two

Unexpected-relevant information will yield more positive attitude change than expected-relevant, while unexpected-irrelevant will yield less attitude change than expected-irrelevant.

Hypothesis three

Advertisements with pictorials perceived as relevant information will yield more intent to purchase than irrelevant pictorials.

Hypothesis four

Unexpected-relevant information will yield more intent to purchase than expected-relevant, while unexpected-irrelevant will yield less intent to purchase than expected-irrelevant.

CHAPTER TWO

Methods

Sample

Two hundred and seventeen subjects participated in the final study ($N=217$). An additional 260 students participated in the advertisement development phase. Undergraduate students enrolled in communication courses at a large southwestern university were recruited for the purposes of this study. Demographically, participants ranged in age from 17 to 47 ($M=21.7$), with a racial distribution of 85% white, 5% Hispanic, and 10% African-American, Asian, Pacific-Islander, or other ethnic background. Females represented a larger proportion of the sample (57%) than males (43%).

Advertisement Development

Four pretests were run to develop advertisements for the experimental manipulation.

Pretest One. The purpose of this pretest was to identify products to feature in the manipulations. It was important to identify products with which students have some familiarity to increase generalizability (Heckler & Childers, 1992). Students ($N=41$) were asked to list three shopping products that fit three criteria: (1) familiarity with the product, (2) frequency of advertisement evaluation (how often do they look at ads for this product), and (3)

high likelihood of purchase within six months. Based on these criteria, seven products mentioned most often by an equal number of females and males were selected for possible use in the study: athletic shoes (18%), clothing/t-shirts (16%), stereo speakers (11%), bicycles (9%), compact-disc players (9%), televisions (7%), and VHS videotape recorders (4%).

Pretest Two. The second pretest consisted of having subjects (N=98) evaluate items to be placed in the pictorial portions of the advertising stimuli. These items were designed to represent expected/relevant, expected/irrelevant, unexpected/relevant, and unexpected/irrelevant visual stimuli. Following the procedure outlined by Heckler and Childers (1992), thematic statements were developed for each product. A list of 10 visual objects were rated by the respondents on a 5-point scale anchored by "Extremely Unexpected" to "Extremely Expected" and "Extremely Relevant" to "Extremely Irrelevant" relative to the thematic statements (see Appendix A for visual development survey). Results indicated that four products (athletic shoes, bicycles, t-shirts, and stereo speakers) had sufficient potential to represent each condition (see Appendix B for pretest two results). Based on pretests one and two, descriptions of the four versions of the picture elements were developed and a free-lance

artist created line drawings illustrating the descriptions. One background was drawn for each of the four products. The main pictorial elements were placed within the background to create 16 unique ads representing each condition for each product. To simulate an actual magazine advertisement, pictorial elements were designed to represent approximately two-thirds of the total ad. This method ensured that evaluations of the products were based on the relative incongruency of visual and textual information, not on production quality.

Pretest Three. Pretest three was similar to pretest two, except that the description of the picture elements was replaced by the actual line-drawings created for potential use in the study. Student subjects ($N=70$) rated objects in the picture on the expectancy and relevancy dimensions. The results are summarized in Table 1. Evaluations on two of

Table 1

Visual Development Mean Ratings of Expectancy and Relevancy
for Pretest 3

AD ELEMENTS	MEAN EXPECTANCY (5-POINT SCALE)	MEAN RELEVANCY (5-POINT SCALE)
BIKE		
Cyclist on trail	4.57	4.56
Cow on trail	1.48	2.56
Cyclist upside down	2.66	4.00
Helmet, tire & pump	3.21	1.83
ATHLETIC SHOES		
Shoes with wings	3.18	3.76
Kangaroo	2.15	2.57
Basketball player	4.15	3.32
Cyclist	2.12	1.73
T-SHIRT		
Evolution	2.34	3.33
"2003" t-shirt	3.69	3.39
Computer	1.64	1.41
Close-up of t-shirt	3.25	2.59
T-shirts with logos	3.21	2.78
STEREO SPEAKERS		
Remote control	3.70	2.35
Happy listener I	4.00	3.76
Happy listener II	3.52	2.61
Breaking glass	3.51	3.89
Dancing fish	2.03	2.72
Armadillo	1.41	1.35
Rock-band	3.94	3.62

Note. N = 70.

the four products (bike and t-shirt) conformed to the appropriate four cells of the 2 (expectancy) x 2 (relevancy) design. That is, the differences between expected-unexpected and relevant-irrelevant pictorials were statistically significant and in the predicted direction. For the bike replicate, expected pictures ($\underline{M}=3.90$) were more expected than unexpected pictures ($\underline{M}=2.02$), $\underline{t}(28)=8.32$, $p < .05$, and relevant pictures ($\underline{M}=4.28$) were more relevant than irrelevant pictures ($\underline{M}=2.19$), $\underline{t}(17)=9.22$, $p < .05$. For the t-shirt replicate, expected-relevant pictures ($\underline{M}=3.69$) were more expected than unexpected-relevant pictures ($\underline{M}=2.34$), $\underline{t}(28)=-4.63$, $p < .05$, and expected-irrelevant pictures ($\underline{M}=3.25$) were more expected than unexpected-irrelevant pictures ($\underline{M}=1.66$), $\underline{t}(31)=-5.62$, $p < .05$. Relevant t-shirt pictures ($\underline{M}=3.76$) were considered more relevant than irrelevant t-shirt pictures ($\underline{M}=2.00$), $\underline{t}(36)=-6.71$, $p < .05$.

Pretest Four. The last pretest was used to identify realistic brand names to pair with the products selected in pretest three. Students ($N=51$) rated a list of brand names on two scales intended to measure credibility and quality. The credibility scale consisted of four 7-point bipolar adjective items measuring competency, honesty, and trustworthiness (O'Keefe, 1990). The quality scale consisted of three 7-point bipolar adjectives that assessed the quality of products bearing a particular brand name.

Students also indicated their familiarity with each brand name (see Appendix D for brand name survey). Honda was chosen as the brand name for the bike replicate due to its favorable overall rating ($\bar{M}=1.85$) and familiarity rating (100%). Birkenstock was chosen to represent the t-shirt replicate because of its similar overall rating ($\bar{M}=1.97$) and familiarity (96%). The results are summarized in Table 2.

Table 2

Mean Brand Name Attitudes and Familiarity Ratings forPretest 4

BRAND NAME	OVERALL MEAN ATTITUDE (7-POINT SCALE)	SD	% FAMILIAR
ATHLETIC SHOES			
Champion	1.95	.96	85.2
Big Dog	3.41	1.07	51.9
Wilson	2.20	.91	100.0
Montgomery Wards	4.12	1.12	100.0
BIKE			
Avocet	3.41	.88	14.8
Pearl Izumi	3.75	.84	00.0
Honda	1.85	.87	100.0
Shimano	3.20	1.13	29.2
Cycle Pro	3.22	.85	33.3
T-SHIRT			
Saucony	3.33	.84	33.3
Birkenstock	1.97	1.16	96.3
K-Swiss	2.49	1.37	91.7
New Balance	2.86	1.11	75.0
Vans	3.02	1.32	95.8
CD-PLAYER			
Mitsubishi	2.33	.93	100.0
Gold Star	3.42	1.15	55.6
Bose	2.83	1.25	44.4
Motorola	2.88	1.42	66.7
Boston Acoustics	3.50	1.11	29.2

Note. N = 51.

Final Ad Development. The thematic statements used in pretests two and three were developed into actual verbal messages for each replicate. These messages remained constant within each replicate. The verbal components were developed to include the brand name, product attribute descriptions, a benefit statement related to the attribute, and a headline reiterating the benefit statement. Care was taken to insure that the two messages followed the same format and that the brand name was mentioned in each ad. The verbal message was in reversed type and occupied the bottom third of the ad. Finally, verbal and pictorial portions of each ad were combined to create the stimuli for the experimental manipulation (see Appendix F for stimulus advertisements).

Experimental Procedure

The study was constructed as a replicated treatments design. The replicated treatments design was chosen to help test for treatment by message interactions and consequently establish more generalizability of findings. Each subject was provided with a booklet containing two advertisements. The booklets were constructed so that each contained the two ads (for bike and t-shirt) representing one of the four cells in the basic 2 (expectancy) x 2 (relevancy) design. Booklets were distributed randomly to the subjects.

Subjects were told that because product managers and advertising creators were interested in receiving consumer input earlier in the design process, they were being asked to evaluate ads in storyboard or rough draft form, as opposed to normal advertising practice which tests ads in their final, publishable form. Subjects were instructed to form an impression of each ad, noting and evaluating both the picture and written portions of the ad. They were told to view each ad for 20 seconds. At the end of the allotted time, subjects were instructed to turn the page and respond to the scales that tested the dependent variables (see Appendix G for instructions). Subjects repeated this procedure for the second advertisement within the booklet. This procedure for viewing the stimuli is known as incidental learning. It closely approximates the process consumers use to process advertisements (Heckler & Childers, 1992). After completion of the second set of scales, subjects were instructed to complete a brief aided recall measure, a series of items designed to check the manipulation (see Appendix I for instruments), and demographic information.

Dependent Variables

This study assessed three dependent variables (1) attitude toward the ad, (2) purchase intention, and (2) attitude toward the product. Five 9-point bipolar adjective

items were combined to measure attitude toward the ad (Heckler & Childers, 1992) (good-bad, superior-inferior, pleasant-unpleasant, boring-interesting, and very easy to understand-very difficult to understand) (see Appendix H for scales). The alpha reliability was .86 for the bike replicate and .81 for the shirt replicate.

A two-item scale was used to measure intent to purchase the advertised product. The first item asked subjects to what extent they were likely to purchase the advertised product on a 9-point bipolar adjective scale (very likely to buy-very unlikely to buy). The second item stated, "For me, this product is worth purchasing." This 9-point Likert item was anchored by "Strongly Agree" to "Strongly Disagree" (O'Keefe, 1990). Alpha reliabilities were .88 and .90 respectively for the bike replicate and the shirt replicate.

A four-item 9-point bipolar adjective measure was used to assess attitude toward the product (Heckler & Childers, 1992). Items were anchored by the same adjective pairs as in attitude toward the ad scale, except understandability. Alpha reliability for this scale was .85 for the bike replicate and .80 for the shirt replicate.

Data Analysis

This experimental design employed a 2 (expected/unexpected) x 2 (relevant/irrelevant) x 2 (replications) within-subjects factorial design. Expectancy

and relevancy were treated as between-subjects factors and the replication was treated as a within-subjects factor in a 2 x 2 x 2 repeated-measures MANOVA. Hypotheses One and Three predicted a main effect for relevancy. The effect of the replicate was tested by the interaction between relevancy and replication. Hypotheses Two and Four predicted a two-way interaction between expectancy and relevancy. The three-way interaction with replication tested the effect of the replicate.

CHAPTER THREE

Results

Manipulation Check

A MANOVA was performed to confirm that advertisements rated by the subjects differed as intended on expectancy and relevancy (average $\bar{r}=.53$; Bartlett's test of sphericity $F(1)=22.75$, $p < .05$). Subjects rated the primary visual element for each ad they viewed on single-item 5-point scales for expectancy and relevancy. As anticipated, expected ads differed significantly from unexpected ads, Wilks Lambda $=.49$, $F(2,212)=111.69$, $p < .05$; univariate $F(1,213)=159.41$, $p < .05$ (expected $\bar{M}=3.57$; unexpected $\bar{M}=2.06$).

There was also a main effect for relevancy. As expected, relevant ads were considered more relevant than irrelevant ads, Wilks Lambda $=.88$, $F(2,212)=14.74$, $p < .05$; univariate $F(1,213)=29.34$, $p < .05$ (relevant $\bar{M}=3.42$; irrelevant $\bar{M}=2.86$). An interaction between relevancy and replicate, Wilks Lambda $=.86$, $F(2,212)=16.49$, $p < .05$; univariate $F(1,213)=17.30$, $p < .05$ showed that the largest difference in relevancy was in the bike ads (Bike: Relevant $\bar{M}=4.06$; Irrelevant $\bar{M}=3.06$; Shirt: Relevant $\bar{M}=2.77$; Irrelevant $\bar{M}=2.66$).

Attitude toward Advertisement

A multivariate analysis of variance was used to test the hypotheses in this experiment. The average correlation between the three dependent measures (attitude toward ad, purchase intention, and attitude toward product) was .62 and Bartlett's test of sphericity was significant $F(3)=205.98$, $p < .05$.

Hypothesis One predicted that advertisements with pictorials perceived as relevant information would yield more positive attitude change than those with irrelevant pictorials. This hypothesis was supported. The main effect for relevancy was significant, Wilks Lambda=.93, $F(3,210)=5.41$, $p < .05$. As predicted, the relevant pictorials ($M=5.50$) produced more positive attitudes toward the ad than the irrelevant pictorials ($M=4.90$), univariate $F(1,212)=15.03$, $p < .05$. However, there was an ordinal interaction between relevancy and replicate, Wilks Lambda=.94, $F(3,210)=4.75$, $p < .05$; univariate $F(1,212)=11.75$, $p < .05$. It appears that the relevancy effect was limited to the ad for the shirt, (Bike, Relevant $M=5.94$; Irrelevant $M=5.86$; Shirt, Relevant $M=5.05$; Irrelevant $M=3.94$). The simple effect test for the shirt ad was significant, Wilks Lambda=.87, $F(3,210)=10.45$, $p < .05$; univariate $F(1,212)=30.55$, $p < .05$, while the simple effect test for the bike ad was not, Wilks Lambda=.98,

$F(3,211)=1.21, p >.05$. The results for attitude toward the ad are summarized in Table 3.

Table 3
Mean Attitude Toward the Ad Scores as a Function of
Expectancy, Relevancy, and Replicate

Relevancy	n	Replicate			
		<u>Bike</u>		<u>Shirt</u>	
		Exp	Unexp	Exp	Unexp
<u>Relevant</u>					
<u>M</u>	110	5.64	6.25	5.48	4.62
<u>SD</u>		1.78	1.52	1.49	1.71
<u>Irrelevant</u>					
<u>M</u>	107	5.91	5.82	4.47	3.40
<u>SD</u>		1.64	1.84	1.37	1.43

Note. N = 217.

Hypothesis Two predicted that unexpected-relevant pictorials will yield more positive attitude change than expected-relevant pictorials, while unexpected-irrelevant pictorials will yield less attitude change than expected-irrelevant pictorials. This hypothesis was not supported. Expectancy and relevancy did not interact for attitude toward the ad, Wilks Lambda=.98, $F(3,210)=1.54$, $p >.05$ (expectancy x relevancy x replicate, Wilks Lambda=.99, $F(3,210)=.97$, $p >.05$).

There was an unpredicted main effect of expectancy on attitude toward the ad, Wilks Lambda=.92, $F(3,210)=6.44$, $p <.05$; univariate $F(1,212)=5.22$, $p <.05$ (Expected $M=5.38$; Unexpected $M=5.02$). There also was an ordinal interaction between expectancy and replicate, Wilks Lambda=.93, $F(3,210)=5.35$, $p <.05$; univariate $F(1,212)=16.18$, $p <.05$ (Bike, Expected $M=5.78$; Unexpected $M=6.03$; Shirt, Expected $M=4.97$; Unexpected $M=4.01$). According to simple effect tests, expected pictorials produced more favorable attitudes toward the ad than unexpected pictorials in the shirt ad, Wilks Lambda=.86, $F(3,210)=11.35$, $p <.05$; univariate $F(1,212)=22.61$, $p <.05$, but not in the bike ad, Wilks Lambda=.96, $F(3,211)=2.68$, $p <.05$; univariate $F(1,213)=.99$, $p >.05$.

Purchase Intent

Hypothesis Three predicted that advertisements with pictorials perceived as relevant will yield more intent to purchase than pictorials perceived as irrelevant. This hypothesis was supported only in the shirt ad. There was no main effect of relevancy on purchase intention, Wilks Lambda=.93, $F(3,210)=5.41$, $p < .05$; univariate $F(1,212)=2.09$, $p > .05$. There was a disordinal interaction between relevancy and replicate, Wilks Lambda=.94, $F(3,210)=4.75$, $p < .05$. The univariate test was significant, $F(1,212)=8.25$, $p < .05$ (Bike, Relevant $M=4.37$; Irrelevant $M=4.64$; Shirt, Relevant $M=4.55$; Irrelevant $M=3.73$). The simple effects test revealed that there was no effect of relevancy on purchase intention for the bike replicate, Wilks Lambda=.98, $F(3,211)=1.21$, $p > .05$. As predicted, relevant pictorials increase purchase intent compared to irrelevant pictorials for the shirt ad, Wilks Lambda=.87, $F(3,210)=10.45$, $p < .05$; univariate $F(1,212)=9.27$, $p < .05$. The results for purchase intention are summarized in Table 4.

Table 4

Mean Purchase Intention Scores as a Function of Expectancy,
Relevancy, and Replicate

Relevancy	n	Replicate			
		<u>Bike</u>		<u>Shirt</u>	
		Exp	Unexp	Exp	Unexp
Relevant					
<u>M</u>	108	4.31	4.42	5.20	3.89
<u>SD</u>		2.14	1.92	1.90	2.04
Irrelevant					
<u>M</u>	108	4.72	4.56	3.93	3.52
<u>SD</u>		1.99	1.91	2.08	1.91

Note. N = 216.

Hypothesis Four predicted that unexpected-relevant pictorials will yield more intent to purchase than expected-relevant pictorials, while unexpected-irrelevant pictorials will yield less intent to purchase than expected-irrelevant pictorials. This hypothesis was not supported. Expectancy and relevancy did not interact on purchase intention, Wilks Lambda=.98, $F(3,210)=1.54$, $p > .05$ (expectancy x relevancy x replicate, Wilks Lambda=.99, $F(3,210)=.97$, $p > .05$).

A disordinal interaction between expectancy and replicate emerged from the analysis of purchase intention, Wilks Lambda=.93, $F(3,210)=5.35$, $p < .05$; univariate $F(1,212)=4.76$, $p < .05$ (Bike, Expected $M=4.52$; Unexpected $M=4.49$; Shirt, Expected $M=4.56$; Unexpected $M=3.71$). Once again the effect of expectancy was more pronounced in the shirt replicate (simple effects, Wilks Lambda=.86, $F(3,210)=11.35$, $p < .05$; univariate $F(1,212)=10.15$, $p < .05$) than in the bike replicate (Wilks Lambda=.96, $F(3,211)=2.68$, $p < .05$; univariate $F(1,213)=.06$, $p > .05$). Expected pictorials increased purchase intention in the shirt ads compared to the unexpected pictorial.

Attitude toward Product

The effect of expectancy and relevancy on attitude toward the product was not hypothesized in advance. However, there were significant findings which may be important. First, a significant main effect of relevancy on

attitude toward product was found, Wilks Lambda=.93, $F(3,210)=5.41$, $p < .05$; univariate $F(1,212)=9.70$, $p < .05$ (Relevant $M=5.75$; Irrelevant $M=5.30$). Also, there was a significant interaction between relevancy and replicate on attitude toward product, Wilks Lambda=.94, $F(3,210)=4.75$, $p < .05$; univariate $F(1,212)=6.07$, $p < .05$ (Bike: Relevant $M=6.09$; Irrelevant $M=5.97$; Shirt: Relevant $M=5.41$; Irrelevant $M=4.62$). Once again, it appears that the effect is confined to the shirt replicate, where relevant pictorials produced a more favorable attitude toward the product than irrelevant ads (shirt simple effect test, Wilks Lambda=.87, $F(3,210)=10.45$, $p < .05$; univariate $F(1,212)=15.60$, $p < .05$; bike simple effect test, Wilks Lambda=.98, $F(3,211)=1.21$, $p > .05$). The results for attitude toward the product are summarized in Table 5.

Table 5

Mean Attitude Toward the Product as a Function of
Expectancy, Relevancy, and Replicate

Relevancy	n	Replicate			
		<u>Bike</u>		<u>Shirt</u>	
		Exp	Unexp	Exp	Unexp
Relevant					
<u>M</u>	108	5.76	6.42	5.69	5.13
<u>SD</u>		1.64	1.19	1.46	1.52
Irrelevant					
<u>M</u>	109	5.88	6.07	4.70	4.54
<u>SD</u>		1.57	1.46	1.45	1.45

Note. N = 217.

A second significant finding is an ordinal interaction between expectancy and replicate on attitude toward the product, Wilks Lambda=.93, $F(3,210)=5.35$, $p < .05$; univariate $F(1,212)=8.12$, $p < .05$ (Bike, Expected $M=5.82$; Unexpected $M=6.25$; Shirt, Expected $M=5.19$; Unexpected $M=4.84$). Interestingly, the attitude toward the ad for bike replicate was higher for expected than unexpected pictorials (simple effects, Wilks Lambda=.96, $F(3,211)=2.68$, $p < .05$; univariate $F(1,213)=3.97$, $p < .05$), whereas the attitude toward the product for the shirt replicate was unchanged (simple effects, Wilks Lambda=.86, $F(3,210)=11.35$, $p < .05$; univariate $F(1,212)=3.09$, $p > .05$).

CHAPTER FOUR

Discussion

This study was designed to test the effects of incongruent pictorials on attitude toward the ad and purchase intention. It was predicted that the more relevant a pictorial, the more positive the effect. An interaction was predicted such that unexpected-relevant pictorials would produce a more positive effect than expected-relevant pictorials, and expected-irrelevant pictorials would produce a more positive effect than unexpected-irrelevant pictorials. The relevancy effect was supported, the interaction effect was not supported, and an unanticipated main effect for expectancy was found.

Relevancy

The hypothesized difference between relevant and irrelevant pictorials was confirmed. Ads with relevant pictorials received higher evaluations on (1) attitude toward the ad, (2) purchase intention, and (3) attitude toward the product than ads with irrelevant pictorials. This finding is consistent with other research in consumer behavior regarding the positive effects of relevant versus irrelevant visual stimuli (Heckler & Childers, 1992; Houston, Childers, & Heckler, 1987). Heckler and Childers (1992) found evidence that irrelevant pictorials produce greater memory outcomes, supporting the

notion of increased cognitive elaboration on the part of the receiver to attempt to make sense of the discrepant information. As Mandler (1982) hypothesized, the more discrepant the information, the more intense the affective response on the part of the receiver. If the receiver is unable to make sense of the information (unsuccessful accommodation), the affective intensity will be negatively valenced. It follows that ads containing irrelevant pictorials are not successfully accommodated, resulting in relatively strong negative evaluations. Whereas pictorials that can be assimilated will generally receive positive evaluations. This rationale is consistent with the findings of Meyers-Levy and Tybout (1989) regarding evaluations of new product introductions.

The relevancy findings in this study are also consistent with the distraction model proposed by Buller and Hall (1991). According to the model, irrelevant pictorials enhance motivation to attend to the ad to make sense of the information, but receivers will not be able to comprehend the message in stage two. Receivers may become frustrated or anxious trying to make sense of the message, and eventually "give up." At stage three, the receiver will make evaluations regarding the propositional content and appropriateness of the ad. The irrelevant information may

be thought of as nonsensical and/or manipulative, will receive negative evaluations.

Interaction of Expectancy and Relevancy

Hypotheses Two and Four predicted an interaction between expectancy and relevancy on attitude toward the ad and purchase intention such that unexpected-relevant pictorials will yield more positive attitude change than expected-relevant pictorials, while unexpected-irrelevant pictorials will yield less attitude change than expected-irrelevant pictorials. This finding was not confirmed.

Within the context of the distraction model, ads with unexpected-relevant pictorials should receive more positive outcomes than ads with expected-relevant pictorials because there is more motivation to attend to unexpected information. With greater attention, receivers are more likely to comprehend the ads with relevant pictorials than those with irrelevant pictorials. Moreover, unexpected-relevant pictorials may be seen as more "clever" and "creative" than pictorials that are expected and relevant. According to Mandler, evaluations of the ads will be positive because the information can be assimilated.

Similarly, ads with unexpected-irrelevant pictorials should have produced more negative evaluations than ads with expected-irrelevant pictorials. Due to the increased cognitive elaboration and heightened arousal of the

unexpected pictorial, evaluations should have been greater than expected pictorials. Therefore, ads that were unexpected and irrelevant should have produced more negative evaluations than expected-irrelevant ads. This reasoning was not supported for either attitude toward the ad or purchase intention. Two explanations are advanced to explain the lack of interaction between expectancy and relevancy. The first explanation identifies the presence of several moderating variables that may have influenced the results. The second explanation takes a critical look at the manipulations as a source of unintentional variance.

Moderating Variables. Several variables may have contributed to the absence of an expectancy by relevancy interaction. First, there is evidence to suggest that the valence of the pictorial may have had an unanticipated impact on the results. In a study of the effect of visual elements in advertisements on attitudes, Mitchell (1986) found that the valence of pictorial elements has an effect on attitudes toward the ad and attitudes toward the brand. His findings suggest that if verbal and visual elements (pictures or photographs) are congruent, that positive or negative evaluations of the visual element may create different attitudes. For example, a negatively-valenced pictorial of an airplane would cause less positive evaluations toward the ad than a positively-valenced

pictorial of an airplane. This suggests that an ad with a negatively-valenced, unexpected-relevant pictorial might create different attitudes than an ad with a positively-valenced, unexpected-relevant pictorial.

Pictorial valence was not controlled in this study. Hence, results may have varied due to the valence of the pictorial elements. For instance, subjects may have found the pictorial in the unexpected-relevant condition for the bike (cow riding a bike) as very appealing (positively valenced) even if they were unable to connect the pictorial to the written product attribute. This may explain the lack in interaction between relevancy and expectancy because subjects evaluated ads more positively than negatively in stage three of the distraction model if the pictorial was more positively than negatively valenced, regardless of incongruity. Since pictorials were not controlled for valence, the range of valence for the pictorials in the conditions may have neutralized the anticipated interaction effect. According to Mitchell's findings, the valence of the cow pictorial would effect attitudes toward the ad and brand attitudes. Students rating the cow ad were eager to mention that the cow pictorial was "cute." Male students occasionally chuckled when the cow ad was mentioned suggesting positive evaluations. Thus, pictorial-valence

may account for the high rating of the unexpected-irrelevant cow ad.

Additionally, pictorial valence may have had an effect between replicates. For example, the unexpected-irrelevant pictorial in the shirt replicate was a personal computer. A wide valence discrepancy between the cow and computer pictorials may have existed, creating unanticipated differences in evaluation.

A second factor that may have influenced attitudes is the assimilation of the pictorial element with a visual representation of the product. Interactive brand names and line-drawings have been shown to have an effect on memory outcomes (Houston, Childers, & Heckler, 1987; Lutz & Lutz, 1977). The unexpected-irrelevant pictorial for the bike replicate displayed a cow riding a bike. In the corresponding shirt replicate, a computer was shown opposite a t-shirt. The assimilation of these visual elements may have been markedly different. During the evaluation stage of the distraction model, a viewer may interpret the assimilation of the pictorial and product more positively than an unconnected pictorial and product. This may have its impact at the second stage of the distraction model. During this stage, a viewer attempts to comprehend a message. An assimilation of product and pictorial (whether irrelevant or not) may be viewed as more comprehensible than

if it was not assimilated with the product. Therefore, in stage three the viewer is more likely to positively evaluate a message they can comprehend. In this instance, a viewer may have perceived the cow riding the bike as less irrelevant ($\bar{M}=2.40$) than a computer assimilated with a t-shirt ($\bar{M}=1.40$). Attitudes toward the cow ad were much higher ($\bar{M}=5.82$) than the computer ad ($\bar{M}=3.40$). Following the rationale of the distraction model and the results of this study, the more relevant a pictorial in an ad, the more positive the evaluation. This uncontrolled influence may have neutralized the interaction effect

The availability-valence hypothesis used to explain vividness effects (Kisielius & Sternthal, 1984) suggests another possible explanation for the lack of interaction. Pictorial presentations are vivid only to the extent that they evoke elaboration of stimulus-relevant information from memory. Kisielius and Sternthal suggest that the favorableness or valence of information available in memory determines the favorableness of the resulting evaluation. Hence, a pictorial element (stimulus) could evoke varying degrees of favorableness if elaboration occurs. Following this reasoning, a "bland" computer might potentially evoke a very different valence than a "cute" cow resulting in varying ad evaluations. The evaluations evoked from memory by the pictorials would have an impact at stage three in the

distraction model. The resulting evaluations would then have an effect on attitudes toward the ad and purchase intention in addition to expectancy and relevancy. Not controlling for availability-valence may have neutralized the interaction effect.

Inconsistent Manipulations. Close inspection of the data and checks for manipulation provide some evidence that the manipulations may not have been as strong and consistent as desired. The concern is that subjects were not able to discriminate between expected/unexpected and relevant/irrelevant pictorials. While the manipulation check in the actual experimental conditions revealed main effects for expectancy and relevancy as intended, five of the eight cells in the 2 x 2 design did not yield the anticipated combination of expectancy and relevancy ratings. This inconsistency may have masked the interaction by confounding the results. As unanticipated, the unexpected-relevant pictorial in the bike replicate was perceived as expected ($\bar{M}=3.22$). Expected-irrelevant pictorials for both replicates were perceived as very relevant (bike, $\bar{M}=3.68$; shirt, $\bar{M}=3.86$). Also, there was a significant correlation between expectancy and relevancy ($r=.53$) when no relationship should exist between these two dimensions. This suggests subjects may have been viewing ads with expected-irrelevant pictorials as more relevant, and hence,

more positively than anticipated. There should have been no relationship between expected and relevant pictorials. The fact that it did exist, may mean the subjects were not viewing the ads as anticipated resulting in the lack of interaction.

Despite this information, the presence of the main effect for relevancy and expectancy, and extensive pretesting provide much stronger evidence that the manipulations worked as intended. There is reason to believe that subjects were in some way answering the check for manipulation differently than in the pretests. This may have been due to the preceding attitudinal ratings in the experiment which were not present in the pretests. Having subjects rate all four conditions for either relevancy or expectancy in the pretests as opposed to rating ads in one condition for both dimensions may also help to explain the inconsistency between the pretests and the experiment.

One last concern revolves around the amount of time subjects viewed each ad (20 seconds). According to the distraction model, expected-relevant pictorials in ads would attract a significantly smaller degree of attention compared to unexpected pictorials. Buller and Hall (1991) define attention as sustained "voluntary" concentration. Keeping time constant across ads is important for control purposes, but expected-relevant pictorials received sustained

"involuntary" concentration by the respondents. In a real viewing situation, viewers would spend less than 20 seconds looking at an ad with expected-relevant pictorials. This may explain the lack of interaction between relevancy and expectancy because subjects in the expected conditions viewed the ads longer than they would have under normal situations. This increase in viewing time may have neutralized the increased intensity and elaboration naturally occurring with unexpected pictorials. The neutralizing impact of time may have reduced the interaction effect by impacting the strong effects due to expectancy.

Expectancy

The results revealed an unpredicted main effect for expectancy on attitude toward the ad and purchase intention. According to the rationale proposed for this study, there should have been no main effect for expectancy. Unexpected-relevant and irrelevant ads should nullify each other as one should receive a strong positive evaluation and the other should receive a strong negative evaluation. Likewise, the modest positive evaluation for the expected-relevant ad should cancel the modest negative evaluation of the expected-irrelevant ad. This did not occur because ads with expected pictorials received more favorable evaluations than ads with unexpected pictorials. As mentioned earlier, unexpected pictorials attract more attention than expected

pictorials. Surplus attention given to ads with unexpected-irrelevant pictorials (information viewers are not able to assimilate) may be producing stronger negative evaluations than originally anticipated. This would explain why the ads with expected pictorials received more favorable evaluations than ads with unexpected information.

Limitations

While this study has expanded on previous attempts to study visual elements of advertising, concerns in other areas of this study must be acknowledged. First, this study should only be generalized to the college population. While this study attempted to increase generalizability by utilizing products identified by students as likely purchases, purchase decisions for college-aged consumers are quite different from other consumer segments.

Secondly, what is deemed as expected visual information may have changed since Heckler and Childers tested the incongruent dimensions in the mid-1980's. Ads have become increasingly competitive for consumers' attention. What may have been an unexpected visual several years ago may now be considered an expected visual.

The third concern revolves around the moderating variables mentioned above. These variables were not controlled during advertising development and may have had a significant impact on the results. Any future study should

take pictorial valence, assimilation, and availability-valence into account. Also, future studies should incorporate more replications to enhance generalizability and conclusiveness.

Fourth, stimuli should be chosen which clearly represent the intended condition. In this study subjects varied widely in their perceptions of expected and relevant pictorials. Also, respondents saw pictorials as mainly inconsistent with the conditions determined during the pretests. This may have been prompted by the instructions in the pretests. Subjects are told to rate the pictorial element to the degree to which they might expect to see these elements in an ad for a corresponding product. They may be interpreting the question as "is it possible" to see this combination, instead rating surprise or lack of surprise. This should be taken into account in future studies. Stimuli should consistently represent their respective corresponding condition.

Summary

The results of this study provide additional insight into the effects of visual components in advertisements. First, the results indicated that visual components in ads may affect (1) attitudes toward the ad, (2) purchase intention, and (3) attitudes toward the product. Relevant pictorials produce more positive evaluations than irrelevant

pictorials. Expectancy was also found to have an effect. The interaction of expected/relevant pictorials was not found, but several moderating variables were speculated upon to help explain the findings.

APPENDIX A
VISUAL DEVELOPMENT SURVEY

Given below is a statement briefly describing a possible print advertisement for a consumer product. Following the description is a list of items which might be placed in the PICTURE portion of the ads. Please rate each item in terms of:

the degree to which you would EXPECT to see the item in an ad like the one described (e.g., an attractive woman might be rated as extremely expected in a cosmetics ad, but only moderately expected in an ad for motorcycles).

AD #1: **AN ADVERTISEMENT FOR ATHLETIC SHOES, EMPHASIZING
NEW LIGHT-WEIGHT LEATHER CONSTRUCTION, WHICH MEANS
THE SHOE WILL MAKE YOU FEEL LIGHT ON YOUR FEET.**

<u>Possible picture elements</u>	<u>EXTREMELY UNEXPECTED</u>			<u>EXTREMELY EXPECTED</u>	
Athletic shoes	1	2	3	4	5
Athletic shoes with wings	1	2	3	4	5
Rhinoceros	1	2	3	4	5
Person flying on a giant feather	1	2	3	4	5
Casually dressed person wearing athletic shoes	1	2	3	4	5
Armadillo	1	2	3	4	5
Person wearing athletic shoes and dribbling a basketball	1	2	3	4	5
Business person wearing athletic shoes	1	2	3	4	5
Couple ballroom dancing while wearing athletic shoes	1	2	3	4	5
Kangaroo wearing athletic shoes athletic shoes	1	2	3	4	5

Given below is a statement briefly describing a possible print advertisement for a consumer product. Following the description is a list of items which might be placed in the PICTURE portion of the ads. Please rate each item in terms of:

how important the elements are in CONVEYING THE AD MESSAGE - (for example, you might rate an attractive woman as EXTREMELY RELEVANT in conveying a message about cosmetics, but NOT AT ALL RELEVANT in conveying a message about motorcycles).

AD #1: AN ADVERTISEMENT FOR ATHLETIC SHOES, EMPHASIZING NEW LIGHT-WEIGHT LEATHER CONSTRUCTION, WHICH MEANS THE SHOE WILL MAKE YOU FEEL LIGHT ON YOUR FEET.

Possible picture elements	NOT AT ALL RELEVANT			EXTREMELY RELEVANT	
Athletic shoes	1	2	3	4	5
Athletic shoes with wings	1	2	3	4	5
Rhinoceros	1	2	3	4	5
Person flying on a giant feather	1	2	3	4	5
Casually dressed person wearing athletic shoes	1	2	3	4	5
Armadillo	1	2	3	4	5
Person wearing athletic shoes and dribbling a basketball	1	2	3	4	5
Business person wearing athletic shoes	1	2	3	4	5
Couple ballroom dancing while wearing athletic shoes	1	2	3	4	5
Kangaroo wearing athletic shoes	1	2	3	4	5

APPENDIX B

PRETEST TWO RESULTS

<u>AD ELEMENTS</u>	<u>MEAN EXPECTANCY</u> <u>(5-POINT SCALE)</u>	<u>MEAN RELEVANCY</u> <u>(5-POINT SCALE)</u>
ATHLETIC SHOES		
Athletic shoes	4.8	4.6
Casually dressed person wearing athletic shoes	3.2	3.1
Person wearing athletic shoes and dribbling basketball	4.3	3.8
Business person wearing athletic shoes	2.8	2.9
Kangaroo wearing athletic shoes	2.4	2.5
Athletic shoes with wings	3.0	4.0
Armadillo	3.2	3.1
Rhinoceros	1.3	1.3
Couple dancing wearing athletic shoes	2.8	3.0
Person flying on a giant feather	2.4	2.5
BIKES		
Bicycle	4.6	4.3
Bike riders on a trail	4.5	4.3
Close-up of bike wheels	3.8	3.3
Bicycle helmet and gear	3.8	3.9
Superimposed arrows pointing in all directions	2.7	2.8
Llama	2.3	1.7
Computer	1.6	1.2
Cow	1.5	1.3
Person riding vertically up a cliff	4.2	4.3
Different bikes of different colors	3.7	3.0
T-SHIRTS		
Couple wearing t-shirts talking to each other	3.5	2.4
Two people: one with holes in shirt, the other without	3.5	3.7
Close-up of shirt's stitching	3.8	3.8
Close-up of tag on pocket	3.8	2.8
10 years later (before & after)	3.5	4.1
George Burns	2.3	2.2
Kangaroo	1.3	1.2
Computer	1.4	1.3
Three washing machines with X's through them	3.5	4.1
Volkswagen Bug	1.5	1.5

<u>AD ELEMENTS</u>	<u>MEAN EXPECTANCY</u> <u>(5-POINT SCALE)</u>	<u>MEAN RELEVANCY</u> <u>(5-POINT SCALE)</u>
<u>CD-PLAYERS</u>		
Cd-player	4.7	4.4
People happily listening to cd-player	4.5	3.9
Disk-changer for cd-player	3.5	3.1
Blueprint of cd-player	3.0	2.8
Conductor in room	3.4	3.1
Rock band in room	4.0	3.7
Kangaroo	1.2	1.1
Computer	2.5	2.0
Remote control	3.3	2.5
Tuning fork	2.6	2.5
A pin dropping	3.2	3.6
<u>TV</u>		
Television on table	4.0	3.4
Couple on couch watching TV	3.7	2.9
TV with big speakers	3.7	3.3
TV surrounded by other audio/visual components	3.3	2.8
Director and production crew in living room	3.5	3.5
Cowboys and Indians in living room	3.7	4.0
Couple on couch in jungle	3.5	3.6
Tiger & zebra in living room	3.4	3.3
Cow	1.6	1.2
Computer	1.7	1.4
<u>STEREO EQUIPMENT (Speakers)</u>		
Speakers	4.7	4.3
People at a party	4.5	4.3
Conductor in room	2.1	1.7
Person sitting quietly listening to music	2.0	1.9
Woman dancing on speaker	4.6	4.3
Glass of wine on speaker	3.5	3.0
Computer	1.7	1.3
Phone	1.9	1.3
Someone standing on speaker acting the fool	4.2	4.2
Armadillo	1.5	1.5
Crash dummies	2.8	2.7
A safe	2.2	2.2

<u>AD ELEMENTS</u>	<u>MEAN EXPECTANCY</u> <u>(5-POINT SCALE)</u>	<u>MEAN RELEVANCY</u> <u>(5-POINT SCALE)</u>
VCR		
VCR	4.7	4.2
Couple happily programming a VCR	4.3	4.2
Couple watching movie	3.7	2.8
VHS tapes	3.5	2.4
Smiley face	2.9	2.1
VCR with arms programming itself	3.7	4.0
Peace sign	2.1	1.5
Cow	1.6	1.3
VCR hooked to stereo	3.1	2.9
Building blocks	3.1	2.9
Baby	2.7	2.3

APPENDIX C

BRAND NAME SURVEY

Please check either "yes" or "no" when asked if you have heard of the brand names listed below. Also, CIRCLE the number on the scales that reflects how you feel about each manufacturer. Circle how you feel for each brand name if you've heard of that brand name or not. For example, if you have not heard of the brand name BENNETON, check "no". Then circle what you think about BENNETON, if they are honest, circle "1", or if dishonest, circle "7". If you have no opinion about their honesty, circle "4".

PRODUCT CATEGORY: ATHLETIC ATTIRE & SPORTING EQUIPMENTBrand name: **CHAMPION**

Have you heard of this brand name? Yes _____ No _____

In your opinion, do you think this manufacturer is:

Good	1	2	3	4	5	6	7	Bad
Competent	1	2	3	4	5	6	7	Incompetent
Honest	1	2	3	4	5	6	7	Dishonest
Trustworthy	1	2	3	4	5	6	7	Untrustworthy

Brand name: **BIG DOG**

Have you heard of this brand name? Yes _____ No _____

In your opinion, do you think this manufacturer is:

Good	1	2	3	4	5	6	7	Bad
Competent	1	2	3	4	5	6	7	Incompetent
Honest	1	2	3	4	5	6	7	Dishonest
Trustworthy	1	2	3	4	5	6	7	Untrustworthy

Brand name: **AVOCET**

Have you heard of this brand name? Yes _____ No _____

In your opinion, do you think this manufacturer is:

Good	1	2	3	4	5	6	7	Bad
Competent	1	2	3	4	5	6	7	Incompetent
Honest	1	2	3	4	5	6	7	Dishonest
Trustworthy	1	2	3	4	5	6	7	Untrustworthy

For this section, compare products made by the indicated manufacturer to similar products made by competing manufacturers. For example, if asked to rate a MERCEDES in the product category of automobiles, you might circle a "1" for QUALITY if you think MERCEDES is of higher quality compared to other automobiles. Circle the number on the scales reflecting your beliefs about EACH indicated group of products compared to similar products.

PRODUCT CATEGORY: SPORTING EQUIPMENT AND ATHLETIC ATTIRE

Compared to similar competing products, **CHAMPION** products are:

High quality	1	2	3	4	5	6	7	Low quality
Desirable	1	2	3	4	5	6	7	Undesirable
Reliable	1	2	3	4	5	6	7	Unreliable

Compared to similar competing products, **BIG DOG** products are:

High quality	1	2	3	4	5	6	7	Low quality
Desirable	1	2	3	4	5	6	7	Undesirable
Reliable	1	2	3	4	5	6	7	Unreliable

Compared to similar competing products, **AVOCET** products are:

High quality	1	2	3	4	5	6	7	Low quality
Desirable	1	2	3	4	5	6	7	Undesirable
Reliable	1	2	3	4	5	6	7	Unreliable

Compared to similar competing products, **PEARL IZUMI** products are:

High quality	1	2	3	4	5	6	7	Low quality
Desirable	1	2	3	4	5	6	7	Undesirable
Reliable	1	2	3	4	5	6	7	Unreliable

Compared to similar competing products, **HONDA** products are:

High quality	1	2	3	4	5	6	7	Low quality
Desirable	1	2	3	4	5	6	7	Undesirable
Reliable	1	2	3	4	5	6	7	Unreliable

Compared to similar competing products, **SAUCONY** products are:

High quality	1	2	3	4	5	6	7	Low quality
Desirable	1	2	3	4	5	6	7	Undesirable
Reliable	1	2	3	4	5	6	7	Unreliable

APPENDIX D
STIMULUS ADVERTISEMENTS
(Expected-Relevant Bike ad)

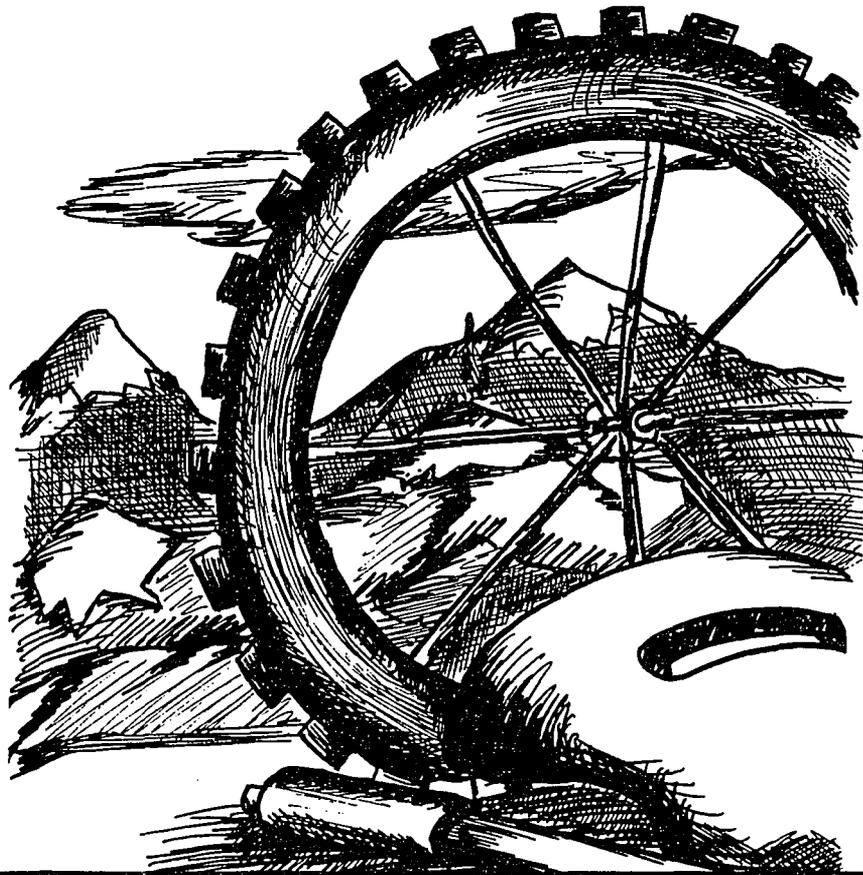


Go anywhere on mountain trails.

Honda mountain bikes, with new alloy frames give you the ability to go anywhere on mountain trails.

HONDA
Mountain Bikes

(Expected-Irrelevant Bike ad)



Go anywhere on mountain trails.

Honda mountain bikes with new alloy frames give you the ability to go anywhere on mountain trails.

HONDA
Mountain Bikes

(Unexpected-Relevant Bike ad)



Go anywhere on mountain trails.

Honda mountain bikes with new alloy frames give you the ability to go anywhere on mountain trails.

HONDA
Mountain Bikes

(Unexpected-Irrelevant Bike ad)



Go anywhere on mountain trails.

Honda mountain bikes with new alloy frames give you the ability to go anywhere on mountain trails.

HONDA
Mountain Bikes

(Expected-Relevant Shirt ad)



1 9 9 3



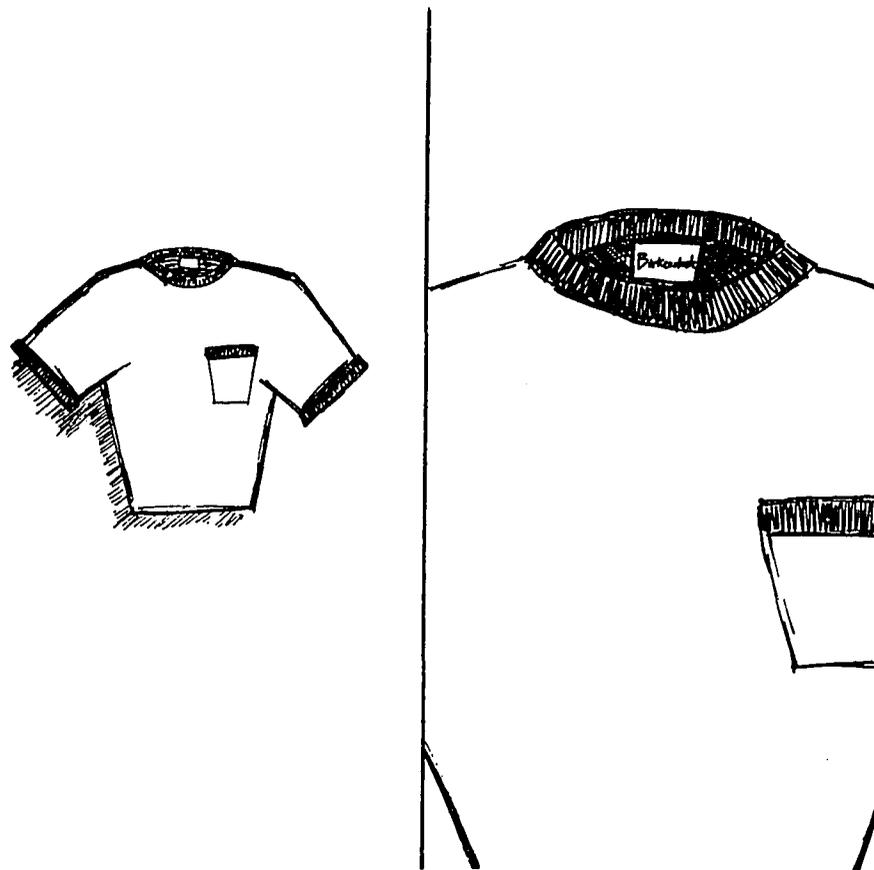
2 0 0 3

Longer lasting t-shirts.

Birkenstock classic pocket t-shirts with a new, rugged blend of cotton last longer.

BIRKENSTOCK
Classic Pocket T-Shirts

(Expected-Irrelevant Shirt ad)

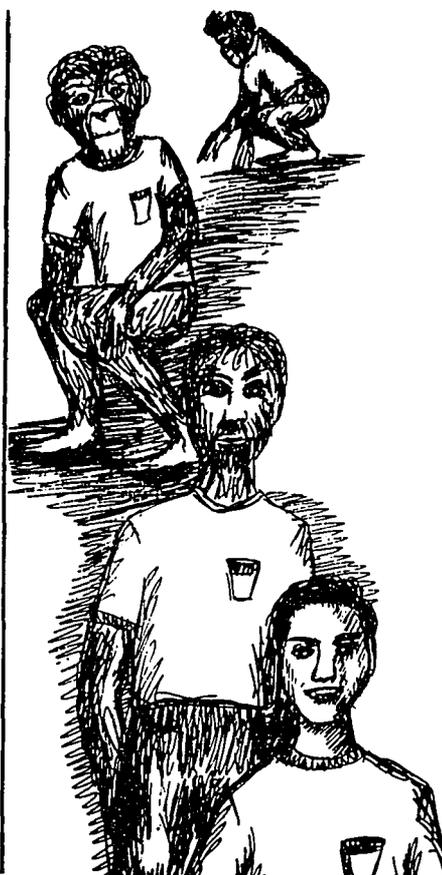


Longer lasting t-shirts.

Birkenstock classic pocket t-shirts with a new rugged blend of cotton last longer.

BIRKENSTOCK
Classic Pocket T-Shirts

(Unexpected-Relevant Shirt ad)



Longer lasting t-shirts.

Birkenstock classic-pocket t-shirts with a new rugged blend of cotton last longer.

BIRKENSTOCK
Classic Pocket T-Shirts

(Unexpected-Irrelevant Shirt ad)



Longer lasting t-shirts.

Birkenstock classic pocket t-shirts with a new rugged blend of cotton last longer.

BIRKENSTOCK
Classic Pocket T-Shirts

APPENDIX E

INSTRUCTIONS

**Advertising Evaluation
Survey**

This is an advertising development test designed to gather your opinions on several ads. Your opinions are important because product managers and advertising creators are interested in receiving consumer input earlier in the design process. The ads you are asked to evaluate are in "storyboard" or rough draft form, as opposed to usual test ads in final, publishable form. The ads feature a message for potential product introductions.

When instructed to do so, please turn the page and view the ad as you would normally view an ad in a magazine. Form an impression of each ad, noting and evaluating both the picture and word portions of the ad. You will have 20 seconds to view the ad. After 20 seconds, you will be asked to turn the page and complete a few questions regarding the ad you just viewed.

We will wait for everyone to finish their evaluation before going to the next ad. There are two ads and two brief questionnaires contained in this survey. Please do not skip ahead.

Thank you for your participation.

DO NOT TURN THE PAGE UNTIL INSTRUCTED TO DO SO.

APPENDIX F

SURVEY

PRODUCT EVALUATION

Please rate your feelings toward the **PRODUCT** you just saw,
using each of the scales provided below.
(Circle the appropriate number.)

Good	1	2	3	4	5	6	7	8	9	Bad
Inferior	1	2	3	4	5	6	7	8	9	Superior
Unpleasant	1	2	3	4	5	6	7	8	9	Pleasant
Interesting	1	2	3	4	5	6	7	8	9	Boring
Very likely to buy	1	2	3	4	5	6	7	8	9	Very unlikely to buy

For you, this product is worth purchasing.

Strongly agree	1	2	3	4	5	6	7	8	9	Strongly disagree
-------------------	---	---	---	---	---	---	---	---	---	----------------------

ADVERTISEMENT EVALUATION

Next, please rate your feelings toward the **ADVERTISEMENT**
you just saw, using each of the scales provided below.
(Circle the appropriate number.)

Good	1	2	3	4	5	6	7	8	9	Bad
Inferior	1	2	3	4	5	6	7	8	9	Superior
Unpleasant	1	2	3	4	5	6	7	8	9	Pleasant
Interesting	1	2	3	4	5	6	7	8	9	Boring
Very easy to understand	1	2	3	4	5	6	7	8	9	Very difficult to understand

APPENDIX G

ADDITIONAL INSTRUMENTS

Without turning back to the advertisements, please answer the following questions. For each of the products listed below, fill in the brand name, a short description of the main picture, and the written message of the ads you just viewed. Please fill in as much of the information as you can remember.

<u>Product</u>	<u>Brand</u>	<u>Main picture?</u>	<u>Written message?</u>
Bicycle			
T-shirt			

*ONCE YOU HAVE COMPLETED THE ABOVE INFORMATION,
PLEASE CONTINUE TO THE NEXT PAGE.

MANIPULATION CHECK

Please rate the pictures in the advertisements you just saw to the degree you would EXPECT to see those pictures in ads for those products. For example, a picture of an attractive woman might be rated as **EXTREMELY EXPECTED** in a cosmetics ad, but only moderately expected in an ad for motorcycles.

<u>Picture</u>	EXTREMELY UNEXPECTED			EXTREMELY EXPECTED	
	1	2	3	4	5
Cyclist on trail (bicycle ad)	1	2	3	4	5
T-shirt in 2003 (t-shirt ad)	1	2	3	4	5

Next, rate the pictures to the extent that the pictures help CONVEY THE AD MESSAGE. For example, if an ad for cosmetics emphasized how it helped you have "young looking skin", you might rate an attractive woman as an **EXTREMELY RELEVANT** picture. On the other hand, a large fish or man standing next to her in the picture, would be rated as **NOT AT ALL RELEVANT** in conveying the ad message.

<u>Picture</u>	NOT AT ALL RELEVANT			EXTREMELY RELEVANT	
	1	2	3	4	5
Cyclist on trail (bicycle ad)	1	2	3	4	5
T-shirt in 2003 (t-shirt ad)	1	2	3	4	5

 The last few questions are for sorting purposes only:

What is your age? _____

What is your gender? _____ Male _____ Female

What is your racial background?

_____ African-American	_____ American Indian
_____ Asian	_____ Hispanic
_____ Pacific Islander	_____ White
_____ Other	

APPENDIX H

ACKNOWLEDGMENTS

The Committee: Thank you for your expertise, patience, and flexibility. I would like to particularly thank Dr. David Buller for his guidance. I'm not sure you knew what you were getting into until after you saw the first draft. Your contribution contributed directly to the quality of the thesis. Thank you. Secondly, I owe a BIG thanks to Dr. Susan Heckler. Susan, if it were not for you, there would have been no idea to test. You were always there to answer a question or offer advice. Your help was unexpected, yet extremely relevant. Does that give you an indication of my attitudes toward you? Extremely positive! Last, but not least, I would like to thank Dr. Sally Jackson for her contribution to the research design and statistical analysis of this project. Sally, I'll never forget your "Hhhhhmmmmm" when looking at the first data run. I look forward to working with you in the future.

Dale Brashers: Dale, thank you for answering my endless stream of questions, and never hesitating to help this student in need. I treasure the fact that 90% of the Department's social gatherings you've attended have been at my house. Your encouragement and suggestions are truly appreciated. See you in Columbus!

The Reicherts: Mom, Dad, Grandma & Grandpa, Sarah, and Adam, I say "thanks" for the support you've given me since I arrived in Arizona. We weren't sure I'd make it, but as a long-distance support unit, you were unwavering. 'Bet you never thought you'd still have to supply your 28-year old son with financial assistance and supplies. Have faith, your investment will pay off. Grandma and Grandpa Reichert, your unwavering support is also not taken for granted. You've never once questioned your grandson's pursuit of happiness. That has provided me with a strong sense of confidence to move forward during the tough times. Thank you. Sarah and Adam, I'm carving the way for you.

Walid Afifi: You've been a real source of support since my arrival. I'm holding you personally responsible for my continuance in the program. We've shared academic moments (SPSS, SCA, Western, etc...) and social pursuits (SCA, Western, Football games, U2, Topoi, that bar we're known to frequent, random dating behavior, and many other unmentionables). I appreciate your friendship. TOPOI: Alan Aldrich and Mike Nitz (and Clucky) have added a new dimension to the words "farm, animals, and zoo." Guys, our colloquia, kangaroo courts, and random clucking behavior make it partially worthwhile.

Susan Morgan: You're been a real source of inspiration since meeting to discuss our 610 paper in September 1991. We've come along way, baby. Thank you for listening to me and believing in me. Maybe we still might open that restaurant (or ad agency, or publishing firm, or...). FELLOW CLASS OF 1993: Alisa, Alan, Susan, and Anne Marie - we made it. God knows there were times when we thought we wouldn't. Good luck to all of you. We did a good job not letting each other fall too far behind. Anne Marie, thanks for giving me the time to work on my thesis this second year.

Charlene Melcher: Charlene, my most inherently incompatible friend, thank you for your suggestions during the stimulus development phase of this project. You have a damn good head on your shoulders. You'll make a significant contribution to this field. 'Want to fight about it?

Elizabeth Kronlage: Elizabeth, you've been my dear friend "outside" of the Department. Your time and support have contributed to this thesis in indirect, yet significant ways. Of all these people, you are the only one who knew me during my Missouri days. You are extremely special to me. I treasure our time together in Tucson.

Assorted Others: I would like to acknowledge these people for their support; Randy Sykes, (Gregg Seibert), Joe Robertson, Lori Smith, Gabrielle Dostal, Joel Cardwell and family, Matt Bond, Julie Fuller, Charlette Anne Baker, Linda Wolfshuk, Dr. Vaughn Huff, Dr. Hank Kenski, Nancy Linnefelter, The Burgoons, Christal Tietze, Earl Rush, Jack Riordan, Bob Humphreys, Dr. Bob Kahn, and many others. Those who offered a challenge in a less positive sense also deserve mention; Michael Durney. I did it, and I did it well.

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