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AN INVESTIGATION OF AFFECTIVE RESPONSES TO EMOTIONAL ADVERTISING APPEALS

By

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ABSTRACT

AN INVESTIGATION OF AFFECTIVE RESPONSES

TO EMOTIONAL ADVERTISING APPEALS

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Advertisers have begun to use emotional advertising appeals with increased frequency, yet the process through which an emotional advertisement will influence a purchase decision is not well understood. This dissertation examines affective responses to emotional television advertisements.

The 2x2x3 experimental design includes two types of emotional appeals for familiar and unfamiliar brands where the advertisement is repeated either one, two, or three times. Subjects were asked to come to a laboratory setting where they viewed a television program which included the test advertisements. Data from fifteen subjects were collected for each of the twelve experimental conditions for a total of 180 subjects. In addition, information about brand attitudes for the familiar brands was collected approximately two weeks prior to the experiment.

The data were analyzed in a causal framework with the measurement model evaluated prior to the estimation of the causal parameters. The scale development and analysis of the measurement model provides guidelines for future

research in measuring emotional responses and attitudes toward advertisements.

The causal analysis reveals a number of relationships. Emotional feelings experienced during the advertisement exposure are found to have a strong positive effect on an attitude toward the advertisement (Aad). Aad is found to significantly effect brand attitude only for unfamiliar brands. In addition, repeated advertisement exposure linearly decreases emotional feelings for three of the test commercials but increases emotional feelings for the fourth commercial. Prior brand attitudes are also found to affect emotional feelings experienced during commercial exposure. These relationships and implications for future research are discussed.

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CHAPTER I

INTRODUCTION

"The emotional eighties" and the "Era of emotion" are terms which have been used to describe the increased use of emotional advertising appeals during this decade. The advertisements of Purina pet foods, where the cat or dog is portrayed as a friend who is always there, and the advertisements of Hallmark cards, where a greeting card is presented in the context of a heart-warming situation, are two examples of an emotional advertising appeal. Fear, guilt, and sexual appeals also attempt to generate an emotional response from the individual; although when advertisers refer to an "emotional appeal," they seldom are referring to these types. Rather, the term "emotional appeal" is used to refer to positive, instead of negative, appeals.

Researchers have recently begun to place more emphasis on the study of emotional advertising appeals, affective responses, and the role that affect can play in decision-making and product usage situations. The literature includes contrasts of "affective" and "rational" advertising appeals [Batra and Ray 1985], the effects of attitudes (toward both brands and advertisements) on purchase considerations [MacKenzie, Lutz, and Belch 1984], and the emotional aspects of the consumption experience [Hirschman and Holbrook 1982]. Of particular

interest here are the affective responses generated by emotional advertising appeals.

Definitions

There is some inconsistency in the literature with respect to the terms "affect," "attitude," "mood," "feelings," and "emotion." The literature on affective responses to advertising typically considers Attitude Toward the Advertisement (Aad) to be an emotional response [Mitchell 1983] or includes emotional response as a component of Aad [Batra and Ray 1985]. However other researchers suggest that affect should have a conceptual status as a construct separate from attitude [Allen and Madden 1985a].

Many definitions for these terms can be found in the literature. Holbrook and O'Shaughnessy [1984] consider "affect" to be a general category of responses and have clearly differentiated various affective constructs and defined their conceptual uniqueness. They develop a typology of motivational/affective constructs with distinctions among the constructs made on the basis of "active vs. reactive," "acute vs. chronic," and "specific vs. general" contrasts. Emotion is a state which is the result of a reaction to a specific event, person, or situation, and has a short period of duration. Emotion can be described as "reactive," "acute," and "specific." Mood, a construct which is also receiving attention in the

literature, differs from emotion only in that it is comprised of a general response predisposition rather than a reaction to something specific. Mood can be described as "reactive," "acute," and "general." On the other hand, attitude is a very different type of affective construct. An attitude is a predisposition to approach or avoid a specific target, and this state persists over time. Attitude can be represented as "active," "chronic," and "specific" on the three contrasts.

The distinction between "mood," "emotion," and "feelings" is especially blurred in the literature. Kleinginna and Kleinginna [1981] have located 92 definitions of emotion in the literature and, based on their findings, have proposed the following definition:

> Emotion is a complex set of interactions among subjective and objective factors, mediated by neural/hormonal systems, which can (a) give rise to affective experiences such as feelings of arousal, pleasure/displeasure; (b) generate cognitive processes such as emotionally relevant perceptual effects, appraisals, labeling processes; (c) activate widespread physiological adjustments to the arousing conditions; and (d) lead to behavior that is often, but not always, expressive, goal-directed, and adaptive [p. 355].

Note that in this definition emotion is defined as having a physiological component, as giving rise to feelings, and as motivational in nature. Holbrook and O'Shaughnessy [1984] support the position of Lyons [1980] which also posits a physiological component to emotion that may or may not result in feelings. Emotion is again viewed as motivational; yet feelings are viewed as non-motivational. Izard [1979] also supports the perspective that emotions motivate.

Isen [1984] views emotion in a similar way--as an intense reaction with physical and mental manifestations, and specific and affect-goal directed in its effects. However her definition for feelings contrasts with the perspective that feelings are a result of emotion. She defines "feelings" or "feeling states" to be equivalent to "moods" which are mild, everyday affective experiences that are less focused and less intense than emotion. The feeling states result from seemingly small everyday occurrences and can occur with or without the presence of emotion. She states further that

> in most cases feelings are not terribly attention-getting--even when they are having a pronounced effect on thought and behavior. Unlike strong emotion, these states do not interrupt our thought and behavior; rather, they gently color and redirect ongoing thoughts and actions, influencing what will happen next but

> almost without notice and certainly without ostensibly changing the context or basic activity [pp. 186-187].

In her review of the literature on mood states, Gardner [1985b] defines mood as a subcategory of feeling states and as a state of which one may or may not be aware. In contrast, she views emotion as a state of which one is almost always aware.

Clore and McCarty [1985] also distinguish between emotion, feeling, and mood. They define mood as having causes that are not easily identifiable, longer lasting than emotion, and having fewer distinctive states than emotion. They also discuss nonemotional moods (being in the mood to go out for dinner) and nonemotional feelings (bodily feelings of pain, hunger, and sleepiness and cognitive feelings of doubt, confusion, and certainty).

Given the above discussion of terminology, a decision needs to be made about what terms to use in this research. Of interest here are consumers' affective reactions to emotional advertisements. Since <u>reactions</u> to a <u>specific</u> object (an advertisement) will be measured, labeling this affective construct "emotion" might seem appropriate. Yet, emotion might be an unsuitable label since emotion has been defined as a state which is one is aware of and is attention-getting and interrupts activity. It is hard to imagine that an individual would experience this type of response to every emotional advertisement seen during

the course of an evening's television viewing. The definition given by Isen [1984] for feeling states seems more appropriate since a response to a television advertisement is a "small everyday occurrence." However, "mood" is often used as a label synonymous for "feeling state." Therefore, the affective response to an advertisement will be called "emotional feelings." The affective response directed toward the brand in the advertisement will be called "brand attitude." The affective response directed toward the advertisement will be called "attitude toward the advertisement."

While the affective constructs of emotional feelings, brand attitude, and attitude toward the advertisement are defined as being distinct, this is not to say that they are unrelated. The relationship between these constructs is the focus of this research.

Purpose and Contributions

While emotion can be distinguished from other affective constructs, there is still uncertainty about different types or dimensions of emotional response and how to measure these types. In addition, the effects of emotional advertising are not well understood. The purpose of this research is to investigate consumers' emotional responses to advertising and examine how these responses affect brand attitudes and purchase intentions

in addition to examining how these effects may differ as a result of repeated advertising exposure.

This research provides several theoretical and managerial contributions. First, it describes an empirical investigation of the effects of emotional response to advertisements. Managers can benefit from the knowledge of how different emotional advertising responses ultimately affect purchase intentions. This is especially important given the increasing use of emotional advertising appeals.

Second, this study provides an overall test of a model which includes various affective responses to advertisements. In addition to testing for the moderating effects of involvement, the causal effects of repetition are included. This is a stronger analysis of the effects of repeated advertising exposure than the ANOVA analysis found in most of the literature. The primary advantage that a causal analysis has over ANOVA in this context is that it can give a coefficient for the effect of repetition on different dependent variables where ANOVA can only indicate whether the effect is significant. Kenny [1979, Chapter 10] gives a discussion of other advantages of causal analysis over ANOVA in the general situation. In addition, examining how affective responses change with repeated advertisement exposure can help uncover the theoretical process which may be operating. This issue is discussed further in Chapter II.

Finally, this research provides further scale development and testing for affective responses to advertising. A valid scale for measuring emotional response to advertisements is not only important for academic research; it would also benefit managers who wish to determine the effectiveness of their emotional advertisements. Valid measures of affective responses are especially important for evaluating emotional advertisements since it has been found that traditional measures such as day-after recall measures and cognitive response measures of the mean number of times the brand is recalled cannot always differentiate two emotional advertisements when copytesting [Stout and Leckenby 1985; Zielske 1982].

Plan of the Dissertation

This research will investigate different types and effects of affective responses to advertising. Chapter II provides background for this study. It begins with a review of the literature for the affective responses of emotional feelings and attitude toward the advertisement. Hypotheses are then presented. Chapter III contains a description of the methodology used to test the hypotheses. Chapter IV contains data analysis and Chapter V follows with conclusions and recommendations.

CHAPTER II

LITERATURE REVIEW AND HYPOTHESES

This chapter begins with a review of the literature for the affective constructs of emotional feelings and attitude toward the advertisement (Aad). This review provides the support for the hypothesized relationships found at the end of the chapter.

Emotional Response

Three major issues are evident in the literature on emotion. One issue considers the different dimensions of emotional response. A very important problem is one of how to measure emotional feelings. Finally, while the literature is not yet well developed, the effects of using emotion in advertising are considered.

The Dimensions of Emotion

Psychologists have studied the concept of emotion and have tried to uncover its dimensions for many years. While there are a very large number of possible emotions, it would be desirable to know if different emotions share any underlying dimensions. Both theoretical and empirical perspectives have been taken in attempting to identify the dimensions of emotion. The most support for a typology of emotional content is found for the three dimensions of Pleasure, Arousal, and Dominance (PAD). Holbrook and

O'Shaughnessey [1984] give examples of the both positive and negative emotions within each category. Positive Pleasure examples are joy and friendliness, and negative examples are sadness and loneliness. In the Arousal category, vitality and liveliness are representative of the positive direction and sluggishness and overstimulation represent the negative direction. Examples of positive Dominance are competence and self-fulfillment, and of negative Dominance are futility and listlessness. Advertisers typically focus on the positive side of these dimensions by illustrating the pleasurable aspects, the arousal or excitement, and the feelings of self-fulfillment that may accompany the use of a product. However, fear appeals can fit in the PAD typology as well. Evoking a level of fear in a consumer relevant to the use or the non-use of a product may result in a low level of pleasure and dominance and a high level of arousal.

Empirical support for the PAD typology comes from the work of Russell and Mehrabian [1977] who found the three dimensions both necessary and sufficient to define emotional states. They found that forty-two verbal-report emotion scales could be considered to be a function of the three dimensions, and, in a second study, found that subjects' ratings of 151 emotion-denoting terms could be adequately categorized into the three dimensions as well. Additional support for the PAD dimensions comes from Plutchik's review of studies examining facial expressions

[Plutchik 1980, pp. 250-253]. Seven studies (ranging in time from 1938 through the mid 1960's) essentially supported a three dimension conceptualization of emotion with two of the dimensions equivalent to the Pleasure and Arousal dimensions; although in most of these studies, the third dimension was uninterpretable.

While there exists both theoretical and empirical support for the PAD dimensions of emotional response in the psychology literature, other dimensions of emotion have been hypothesized as well. Plutchik [1980] discusses an emotion test called the Emotions Profile Index (EPI) which includes eight emotional dimensions. The EPI has been tested for its validity and has been applied in situations when the emotional profile and personality traits of individuals such as depressed patients, narcotic addicts, adolescents, and psychiatric residents were desired. Holbrook and Westwood [1985] have attempted to validate the EPI in an advertising situation.

Other conceptualizations of emotion can be found in the advertising literature. Stout and Leckenby [1984] coded respondent verbatim responses after exposure to an advertisement and developed three categories of "Energizing" (feelings of arousal), "Hedonic Tone" (pleasant/ unpleasant feelings), and "State Anticipation" (feelings of appraisal) emotional reactions. They emphasized that for a response to be coded as an emotional reaction, the respondent would have to indicate that the

emotion was felt personally rather than simply recognizing that the actors in the commercial were experiencing that emotion. Notice that the "Hedonic Tone" and the "Energizing" categories correspond directly to "Pleasure" and "Arousal" dimensions.

Stout and Leckenby [1985] distinguish between what they call "progressive" types of emotional feelings. The first type of response is a "descriptive" or "non-affective" emotional reaction where the individual can recognize the feelings of the characters in an advertisement. The next two types of emotional feelings are termed "participator" emotions and include an "empathy" and a "meaningful" emotional response. An individual would experience empathy if that person feels the same emotion that a character in the advertisement feels. A meaningful emotional response would involve an interpretation of the event in the context of consumers' personal experiences and include an emotional response that is relevant personally, rather than a response that is simply a reflection of what is portrayed in the advertisement. For example, a meaningful response may occur when a person sees an event in the advertisement and recalls a similar event in his or her life. Stout and Leckenby do not elaborate, however, that the "meaningful" type of response can have different dimensions as well.

Batra and Ray [1985] identify three different types of feelings from verbal protocol data. Their first type

is termed "SEVA" for feelings of Surgency, Elation, Vigor, and Activation as a result of upbeat feelings from music, humor, and other elements of the advertisement. They defined the second type of feelings as "deactivation" and refers to soothing, relaxing, and pleasant feelings. The third feeling is defined as "social affection" and refers to the advertisement being warm or touching. It is interesting to note that the "SEVA" and the "deactivation" categories that Batra and Ray define seem to correspond to the "arousal" and "pleasure" categories defined in the PAD typology. Batra and Ray use a respondent's emotional feelings as one of a set of multiple measures of Aad in a causal model.

Measuring Emotional Response

The difficulties in measuring emotional response is most likely the factor which has precluded additional research in this area. In addition to considering the type of emotional response an individual is experiencing, it is necessary to also measure the direction and intensity of the response. It can be argued that since emotional response contains a physiological component [Pultchik 1980; Rust and Henderson 1985], measures of emotional response should be physiological in nature. Yet others who have worked with physiological measures have indicated that the procedures can only indicate intensity of response, and cannot reveal the type or direction of

the response [Watson and Gatchel 1979]. Additionally, psychologists debate whether any unique emotion can be represented by a unique combination of physiological responses (see Arnold [1960] and Duffy [1962] for different viewpoints and Izard [1965] for a discussion). From a practical standpoint, physiological measures are expensive and difficult to administer and have low reliability. Ray and Batra [1983] advise researchers to proceed with caution in using physiological measures of affective response and call for the development and testing of verbal report methods.

A number of verbal report scales have been developed to measure emotional response. The psychology literature contains a large number of scales which have been designed to measure specific dimensions of emotion; for example, aggression, anxiety, depression, and happiness scales [see Russell and Mehrabian 1977 and Plutchik 1980 for an extensive list of scales]. These scales could be useful for researchers interested in a particular type of emotional response to an advertisement. A more general verbal report scale is given by Mehrabian and Russell [1974, Appendix B] which measures the PAD emotional reactions. The scale includes six semantic differential items for each of the three dimensions.

In an early attempt to consider emotional response to advertisements, Wells [1964] developed what he called the Emotional Quotient (EQ) scale. An examination of the

twelve items that make up the scale seems to indicate that the EQ scale measures positive feelings and liking of the advertisement. Schlinger [1979] reported the results of a different scale, called the Viewer Response Profile (VRP), which was designed by Leo Burnett U.S.A. to evaluate affective reactions to advertisements. The VRP represents seven affective dimensions of entertainment, confusion, relevant news, brand reinforcement, empathy, familiarity, and alienation. Stout and Leckenby [1985] used the empathy dimension of the VRP to assess the emotional impact of television commercials. They compared traditional measures of advertising effectiveness such as brand recall and commercial liking with the emotional empathy dimension of the VRP. They found that emotional response could differentiate between three commercials where the traditional measures could not. However, in comparing the VRP empathy dimension with respondents' retrospective verbatim responses, they conclude that the VRP is limited in that it only considers one type and intensity of emotional feelings. When using the VRP, researchers should be aware that other types of emotional feelings may not be measured.

The adaptation of cognitive response types of measures to include respondent feelings is a method which has been used to measure emotional response. Batra and Ray [1983] describe their attempt at developing and refining a procedure to collect and code emotional

reactions toward advertisements. They found that the verbal protocol method which generated the most "feeling" responses began with a general set of instructions followed by an example and a practice trial of recording the cognitive responses. The respondents were asked the key question of "What thoughts and feelings came to mind while you watched that commercial?" This question was followed by semantic differential questions of affective response to assess the intensity and obtain any additional affective reactions. Batra and Ray [1985] subsequently applied a slight modification of this methodology. The semantic differential scale at the end of the thought listing task was dropped and the coding scheme was modified to include the "SEVA", "Deactivation," and "Social Affection" feeling categories discussed earlier.

Stout and Leckenby [1984, 1985] also use a form of verbal protocol data to evaluate emotional response. In their first study, subjects were exposed to a television commercial and afterwards were asked two questions. The questions were: "Now, I'd like you to tell me what happened to you as you were looking at the commercial. What thoughts or ideas went through your mind, and what feelings did you have?" and "In your own words, please describe what went on and what was said in the commercial" [Stout and Leckenby, 1984, p. 42]. Professional interviewers then recorded the subjects' responses verbatim and asked for "anything else?" when the subject finished.

These responses were categorized into the Energizing/ Hedonic Tone/State Anticipation emotional responses discussed earlier. Stout and Leckenby [1985] also used this procedure, except the responses were categorized into Descriptive/Empathy/Meaningful emotional reaction categories.

The modified cognitive response/verbal protocol type of measurement has an advantage over the verbal scales since the subjects' responses are "natural" and not affected by the presentation of a scale. However, disadvantages exist and include the inability to obtain an internal consistency estimate for the measure. Also, respondents with neutral feelings will probably not mention the response, and it is possible that these neutral feelings may occur for a feeling type that the researcher is particularly interested. Most importantly, the method only considers type and direction of the emotional response and cannot assess intensity.

Abelson, Kinder, Peters, and Fiske [1982] developed a scale to measure affective feelings toward politicians. They included a list of twelve affective words (e.g., angry, proud, disgusted) and simply asked subjects to respond to the question "Has _____ ever made you feel _____?" where the politician's name and the affective word were inserted in the blanks. Two factors, positive affect and negative affect, were found.

Allen and Madden [1985a] fashioned their scale after the Abelson et al. [1982] work and produced a scale to measure individuals' positive and negative affective feelings toward advertisements. After evaluating a number of different scale items they found that positive affect could best be measured with the items "happy," "cheerful," and "pleased" on a six-point scale with end points of "very much so" and "not at all." They found negative affect could best be measured with the items "insulted," "angry," and "repulsed."

Two very different measures of emotional response have been used to test emotional reactions to television commercials. Friestad and Thorson [1985a, 1985b] used a dial-turning procedure to evaluate the direction and intensity of emotional responses. Subjects were instructed to continuously turn a dial in one direction to indicate positive feelings and in the other direction to indicate negative feelings during a television commercial. This procedure has the advantage of measuring direction (which way was the dial turned) and intensity (how far was the dial turned) of the emotional response throughout the commercial and while the subject is experiencing the emotion. However, a major limitation of the method is that it cannot distinguish between the different types of emotion (e.g., Pleasure, Arousal, and Dominance). Aaker, Stayman, and Hagerty [1986] developed what they call "The Warmth Monitor." A subject continuously moves a pencil to

the right or left down a page to indicate feelings of warmth during a television commercial. Again, this method can only consider one type of emotional feeling response. An additional concern with both the dial-turning procedure and the warmth monitor is that the subject must be instructed how to use the instrument before viewing the commercial and is thereby alerted to the intent of the research. This can represent a limitation when the researcher is interested in responses that occur naturally when the subject is exposed to the advertisement.

Effects of Emotion in Advertising

The earlier research on affect in advertising considered differences in "emotional, intellectual, and rational appeals" [Preston 1968], "factual versus evaluative content" [Hirschman 1980], "attribute-based versus end-benefit oriented advertising" [Lautman and Percy 1984], and "thinking versus feeling appeals" [Golden and Johnson 1983]. Since emotion is multidimensional in nature, any further study of emotion in advertising would benefit by considering the type of emotion present in the advertisement. For example, Holbrook and O'Shaughnessy [1984] give suggestions of when one of the PAD dimensions may be more effective than another.

Two articles provide explanations of the benefits of generating emotional responses through advertising. Ray and Batra [1983] give four reasons why what they refer to

as "affective advertising" may be more effective advertising. To begin, affective advertising may generate greater attention since an individual's feelings act as a screen in selecting incoming information. A favorable or an unfavorable feeling evoked by an advertisement can allow the message to pass through the screen. Next, an affective reaction may increase the amount of processing or thought the individual gives to the advertisement after it has caught that individual's attention. Third, since judgments are influenced by a person's affective state, a positively evaluated affective advertisement may lead to more positive judgments. Finally, affective advertising seems to be better remembered. There exists the most empirical support for the assertion of increased memory for emotional advertisements. Three separate studies have found increased memory for emotional advertising appeals [Choi and Thorson 1983; Friestad and Thorson 1985a; Friestad and Thorson 1985b]. Choi and Thorson [1983] found that memory was stronger for emotional television commercials than for factual or factual-emotional balanced commercials. Friestad and Thorson [1985b] show that the content of the information in memory is different for emotional and non-emotional commericals. Long term memory for emotional commercials was also demonstrated to be higher by Friestad and Thorson [1985a]. Approximately one month after exposure to various commercials within a television program, subjects were asked to recall the

advertisements that they had viewed. The mean number of emotional messages recalled was significantly higher than the mean number of neutral messages recalled by the subjects.

Mizerski, White, and Hunt [1984] provide a discussion of how emotion can be effectively used in advertising. They describe how emotion can be used to create a positive image or attitude toward a brand through a classical conditioning pairing of the brand with an emotional cue. They also discuss how emotions can be used to increase the communication effectiveness of an advertisement by generating increased attention.

Empirical research of affective responses to advertising has typically focused only on Aad and brand attitude as responses. One study, however, has considered consumers' feelings after being exposed to an advertisement as a response separate from Aad. Allen and Madden [1985a] empirically evaluated responses to humorous and serious radio commercials for a new milk product. They found that the positive feelings (which they called "positive affect") that subjects had after listening to the humorous radio commercial had a small, yet significant, effect on the subjects' attitude toward trying the product.

Research Directions

The research literature on the effects of emotional advertising appeals is limited and leaves room for

additional exploratory work. Ray and Batra [1983] and Mizerski, White, and Hunt [1984] provide theoretical explanations for possible effects and provide direction for empirical study. The effects of emotion on attention, memory, and product judgments such as brand attitude and purchase intentions all need investigation.

Measurement of emotional feelings is an important area for continuing research. Scales should be tested for their construct validity in measuring emotional feelings in advertising situations. Also, the incremental value of using physiological measures in addition to verbal report scales should be determined. Holbrook and O'Shaughnessy [1984] report that only one study has compared the two types of measures, and a very high correlation was found for verbal scales and a physiological measure of electrodermal response across advertisements. Since physiological measures are expensive and difficult to administer and evaluate, verbal report scales which can provide equivalent information are very desirable.

Attitude Toward the Advertisement

The empirical and theoretical work addressing the Aad construct has developed considerably in a short period of time. The literature on the topic is discussed below from two perspectives. First, the findings of the experimental literature are reviewed. Next, a consideration of some

theoretical explanations for the empirical findings is given. This literature is also summarized in Tables 1 and 2.

Empirical Literature

The first published study which examined the attitude toward the advertisement construct appears to be Messmer's [1979] work. A summary of this study is shown in Table 1. Messmer's primary interest was in determining the effects of repetition and prior brand attitude on an individual's attitude toward a television advertisement. A brand attitude measure for each subject was obtained prior to the laboratory exposure of the test ads for a brand of beer. A randomized block design was used where a low, medium, or high brand attitude score represented the first blocking factor. The second factor consisted of the repetition sequence that the group of subjects were exposed to. Either zero, one, three, or six repetitions of the same beer advertisement were viewed by the subjects during a 30-minute documentary program. Through an ANCOVA analysis, Messmer found that Aad was greatest after one exposure and slightly lower for the three and six exposure levels. In addition, prior Ab was found to mediate the exposure effects in that the greatest amount of attitude change was found for those with initial unfavorable brand attitudes. Messmer notes that a campaign designed to

Table 1

Literature Review: Attitude Toward the Advertisement

Author(s) & Purpose	Methodology	Findings	Contribution	Weaknesses/ Shortcomings
Messmer 1979, Determine effect of repetition and prior brand attitude on attitude toward a TV advertisement.	Randomized block design. Brand attitude score (L,M,H) x exposure (0,1,3, or 6 exposures to the same beer ad during 30 minute documentary.	Aad greatest at 1 exposure, slightly lower for 3 & 6 exposures. Initial favorable Ab influences a favorable Aad (ANCOVA).	First published empirical work measuring Aad.	
Mitchell & Olson 1981, Determine if Aad is a mediator of the effects of advertising on Ab in addition to the Fishbein "beliefs mediate Ab" model.	4x4 Latin square, ad type (1 verbal claim & 3 image ads) x repetition (2,4,6,8 exposures) 35mm slides of ads for facial tissue.	Significant effects in ANCOVA & regression of Aad on Ab, Aact, and PI. Both beliefs and Aad mediate brand attitude formation.	Discussed conceptual meaning of Aad construct. Empirically found Aad effects.	Experimental design limitations.

Table 1 (cont'd)

Shimp & Yokum 1982, Consider relationship among expectations, taste-perceptions, and repeat-purchase behavior for different product formulations and advertising claims.	Lab vending machine "purchases" of 4 colas over eleven purchase occasions and 6 advertisement exposure occasions.	Aad influences product evaluations and repeat-purchase behavior.	Considered effect of competitive advertising.	
Gelb & Pickett 1983, Examine effects of Aad on Ab, credibility & persuasiveness of the ad, and PI. Also considered effects of humor on Aad.	Mailed ads for Stop Smoking kits and a questionnaire. One half received a humorous ad.	Aad significantly related to the 4 effectiveness measures independent of perceived humor in the ad.	Considered a specific appeal.	Single item scale for Aad.

Table 1 (cont'd)

Mitchell 1983, Raise a number of issues regarding visual & emotional ads & present results of 3 experiments.	Experiment 1: 2 ads with positive photos, 2 ads with negative photos.	Experiment 1: Aad significantly lower for negatively evaluated photos. Aad did not decrease after 2 weeks. Aad has significant effect on Ab in both photo conditions.	Considered components of the ads and how they affected Aad. Presented a conceptual model of the process.	Print ads shown out of context as slides.
	Experiment 2: copy only ad & positive, neutral & negative photos in ads; each ad type used for 4 products.	Experiment 2: Aad differs when same photo is used for different products.		
	Experiment 3: verbal & visual ads in 4 processing conditions.	Experiment 3: no difference in Aad for processing conditions. Apic has stronger effect on Aad than the number of positive or negative ad statements given by the subjects.		

Table 1 (cont'd)

Mitchell 1986, Discover effect of affective photos and verbal components of ads on Aad and Ab.	Subjects shown ads twice on slides and asked to decide if they would purchase the product. Positive, neutral, and negative photos for four different products.	Photos affect Aad & Ab but not attribute beliefs. Aad also affects Ab for ads with no photograph.	Additional empirical findings of effect of Aad on Ab and effects of visual/verbal components on Aad.	Print ads shown out of context as slides.
Moore & Hutchinson 1983, Examine delay effect of Aad on Ab.	Brand test (knowledge & brand consideration for 80 magazine ads on slides), ad test (ad recognition & Aad measures), Brand test 2, and either 2 or 7 days later, a third Brand test.	Significant linear relationship for change in brand consideration and Aad, although after 7 days, both positively & negatively evaluated ads had higher change in brand consideration than neutral ads.	Considered delay effects.	Single item scale used to measure Aad. Print ads shown out of context as slides.

Table 1 (cont'd)

Lutz, MacKenzie, & Belch 1983, Find potential moderating variables of the Aad->Ab relationship. Hypothesize that the effect of Aad on Ab Will be stronger for peripheral rather than central processing.	Ad for fictitious brand included in TV program in lab setting.	LISREL analysis, Peripheral processing: Aad had strong effect on Ab; Cb had no effect on Ab. Central processing: Aad & Cb both have significant effect on Ab although Aad effect much stronger.	Provided a discussion of a large number of possible causal antecedents of Aad.	
MacKenzie & Lutz 1983 Test four competing theories/models of Aad process.	Advertising pretesting of Ford TV commercials.	LISREL analysis showed Model 1 best fit the data (see Figure 1).	Empirical test of competing theories.	
Gardner 1985, Examine causal effects of Aad & brand beliefs on Ab under different processing "sets" (brand evaluation: processing directed at evaluating the brand; non-brand: "enjoyment or evaluation of the ad for its own sake."	Subjects given a booklet with ads for hypothetical brands & instructions on how to "process" the ads.	Effect of Aad on Ab equivalent for both processing sets.	Empirical analysis of processing effects.	Ads not in natural exposure context.

Table 1 (cont'd)

MacKenzie, Lutz, & Belch 1986, Test four alternative structural models.	Two experiments: developmental & validation. Experiment 1: Fictitious brand; 1 hr. TV show; 1 sided/2 sided, comparative/non, 1,3,or 5 times. Experiment 2: Same fictitious brand, 1,3,5 exposures; all 1 sided comparative; TV embedded, TV non-embedded, radio nonembedded.	Support for Model 2 (see Figure 1).	Empirical test of alternate models.	Effects of experimental design factors not reported.

achieve a large attitude change from a consumer with a very negative initial attitude may not be economically sound.

Mitchell and Olson [1981] interpreted Fishbein's work on attitude theory [see Fishbein and Ajzen 1975] as supporting the position that "only beliefs mediate brand attitude" and set out to discover if this position could in fact be supported. The experiment consisted of a 4x4 Latin square design. The first factor consisted of the print advertisement type for fictitious "brands" (the letters I, J, L, and R) of facial tissue. One experimental ad was designed to provide an explicit verbal claim of softness, a second contained a picture of a kitten (an implicit softness claim), the third ad contained a picture of a sunset designed to be positively evaluated, and the fourth ad contained a picture of an abstract painting which was assumed to have a neutral evaluation. The second experimental factor was the number of repetitions for each advertisement. Slides of each of the four advertisements were shown for ten seconds each and the advertisements were repeated either two, four, six, or eight times with each group of student subjects viewing twenty advertisements in total for the four different "brands." A questionnaire was then given to the subjects to measure attribute belief strength (bi) and attribute evaluations (ei), brand attitude, attitude toward the act of purchasing/using the brand (Aact), and intentions to

purchase the brand. These variables represent the standard Fishbein and Ajzen [1975] cognitive element measures. In addition, Aad and attitude toward the picture in the advertisement (Apic) were measured. Through ANCOVA and regression analyses, Mitchell and Olson found that beliefs are not the only mediators of brand attitude formation. Aad was found to have significant effects on Ab, Aact, and purchase intentions beyond the predictions of the belief and evaluations measures. Additionally, Apic was found to predict Ab; yet this effect was found only when Aad was not included in the analysis. Mitchell and Olson proposed that the Aad construct is conceptually and empirically stronger than the Apic construct and that Aad may even include the picture evaluation effects of Apic. However, Lautman and Percy [1984] have criticized this study on methodological grounds. Since a Latin square design was used, the respondents were exposed to all four advertisements, each containing a claim of brand softness. While Mitchell and Olson investigated the problem of a confounding effect when a verbal claim of softness preceded the kitten picture, Lautman and Percy's criticism stems from the problem of beliefs being developed by comparing the alternative brands seen in the four advertisements rather than developing beliefs from an individual advertisement.

Attitude toward the advertisement was also considered in an experiment examining consumers' psychophysical

judgments [Shimp and Yokum 1982]. The purpose of the experiment was to consider the relationship among consumers' product expectations, taste-perceptions, and repeat purchase behavior for different product (cola) formulations and advertising claims. A laboratory was set up where the subjects could make vending machine "purchases" of four different colas over eleven purchase occasions. Only two of the four fictitious brands were available at the beginning of the experiment. During the fourth and eighth purchase occasions the third and fourth cola brands were introduced. The subjects were exposed to magazine and/or radio advertisements for the various brands during the third through tenth purchase occasions. A regression analysis illustrated that Aad had a positive significant influence on product evaluations and repeat-purchase behavior. Unique features of the Shimp and Yokum experiment are that the subjects were exposed to advertising for competitive brands, and the treatment and dependent measures were considered over multiple purchase occasions.

Gelb and Pickett [1983] examined the effects of Aad on Ab, credibility and persuasiveness of the advertisement, and purchase intentions. They also considered the effects of humor in the advertisement on Aad. Advertisements for Stop-Smoking kits were mailed along with a questionnaire to 2,400 subjects. One half of the subjects received a humorous advertisement. An analysis of the

twenty percent of the questionnaires returned indicated that Aad was significantly related to the four effectiveness measures independent of the level of humor the individual perceived in the advertisement.

Mitchell [1983] presents the results of three experiments which consider the effects of visual and emotional advertising. The first experiment had print advertisements in which two ads contained positively evaluated photographs and two contained negatively evaluated photographs. The photographs were pretested and were determined to generate either positive or negative feelings. Aad was found to be significantly lower for the photographs which generated the negative feelings. Additionally, Aad did not decrease significantly after two weeks, and Aad was found to significantly affect Ab in both photo conditions.

A second experiment used a Latin square design where four groups of subjects viewed four types of print advertisements for four different products. The advertisements differed in the photographs used: positive, neutral, and negative photographs were each used in an advertisement, and one copy-only advertisement was also created. The experiment revealed that Aad can differ when the same photograph is used for different products. This finding indicates that Aad is developed from a reaction to the advertisement as a whole, including the product class, and not as a reaction to just the photograph.

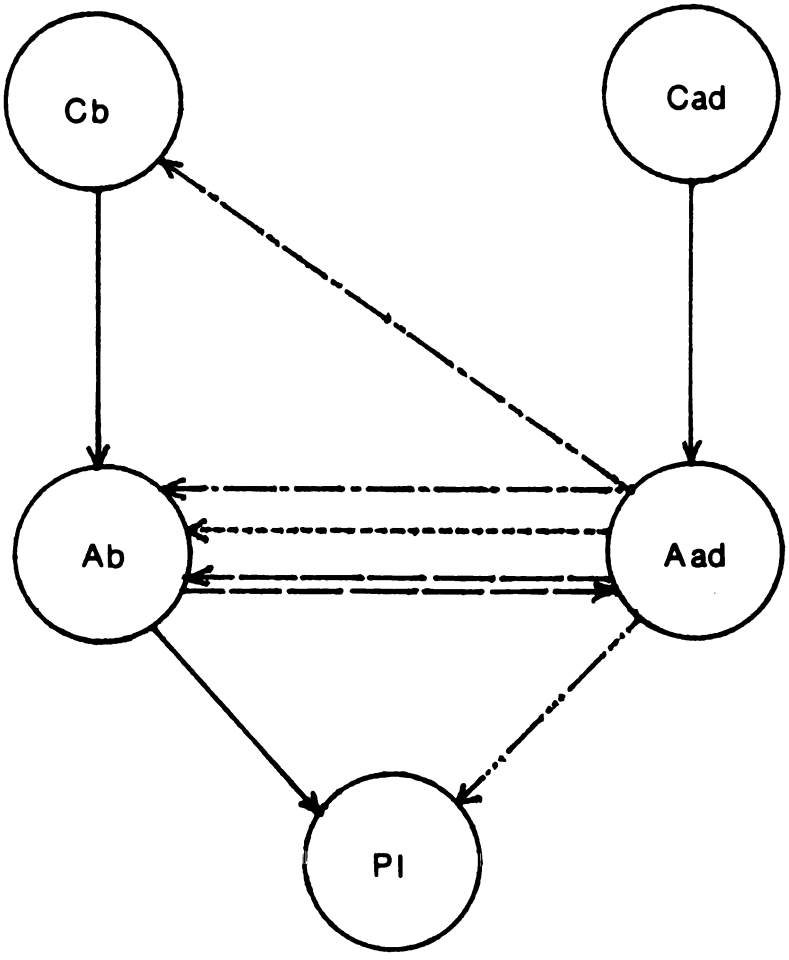
A third experiment was designed to evaluate the effects of visual and verbal advertisements in four different processing conditions. Four ads were primarily verbal and four were primarily visual and included positively evaluated photographs. The processing conditions required subjects to either (1) examine the advertisements and evaluate the product, (2) answer questions about the structure and layout of the advertisements, (3) perform a distraction task while viewing the advertisements and evaluating the product, and (4) count backward by three while viewing the advertisements and evaluating the product (to block verbal processing of the information provided in the advertisement). No difference in Aad was found for the different processing conditions. In addition, the number of positive or negative statements about the advertisement given by the subjects while they examined the ads were computed. It was found that Apic had a stronger effect on Aad than the effect of the number of positive or negative statements had on Aad.

In a later study, Mitchell [1986] again set out to discover the effects of positive, neutral, and negative photographs on Aad and Ab. He found that the type of photograph used affected both Aad and Ab, and that Aad also affects Ab even when a photograph is not used in the advertisement.

Moore and Hutchinson [1983] have examined the delay effect of Aad on Ab. Subjects were first given a brand

test which measured knowledge and the likelihood of considering the brand for purchase for 80 brands. The subjects were then exposed to 80 magazine advertisements (shown as slides) for the 80 brands. An ad test measuring advertisement recognition and Aad for each of the 80 advertisements was given. This ad test was followed by a second brand test. Either two or seven days later, the subjects completed a third brand test. A significant linear relationship between change in brand consideration and Aad was found; although after seven days, both the positively and negatively evaluated advertisements had a higher change in brand consideration than ads which received a neutral evaluation.

Up to this point, the literature has consisted of ANOVA and regression analyses of the effects of Aad on various dependent measures. A limitation of these studies is that the effects of Aad on the dependent variables are considered separately. In a series of experiments, Lutz, MacKenzie, and Belch [Lutz, MacKenzie and Belch 1983; MacKenzie and Lutz 1983; MacKenzie, Lutz, and Belch 1986] have significantly advanced the literature by considering variables simultaneously and hypothesizing the causal relations among them. This sequence of studies is detailed below and in Table 1. Four alternative causal models were specified in their first study [Lutz, MacKenzie, and Belch 1983] as illustrated in Figure 1. Figure 1 illustrates four alternate models which were



Key:

Model 1
Model 2
Model 3
Model 4

Figure 1. Alternate Specifications of the Mediating Role of Aad

Source: Lutz, MacKenzie, and Belch [1983]

specified to explain the mediating role of Aad on brand attitudes and purchase intentions. All of the models include the relationships specified by solid lines. Model 1 hypothesizes an effect from Aad to Ab only. Model 2 posits that Aad will affect both Ab and Cb (brand cognitions). Model 3 illustrates mutual causation between Aad and Ab. Model 4 hypothesizes that Aad and Ab will have independent effects on purchase intentions. A focal question in the first Lutz, MacKenzie, and Belch experiment was whether the causal processes would be different if the level of processing used by individuals when viewing an advertisement differed. Specifically, Petty and Cacioppo's [1981] conceptualization of two basic routes to attitude change, central and peripheral, was used. Persuasion through a central route is hypothesized to be the result of active processing of the message by the consumer. Peripheral persuasion reflects attitude change due to consumer processing of the characteristics of the message itself. Lutz, MacKenzie, and Belch hypothesized that the effect of Aad on Ab would be stronger for peripheral rather than central processing. In a central processing context the processing is directed toward the message, and the message thoughts (or cognitions about the brand) should have a strong influence on the brand attitude. In a peripheral processing situation, it is assumed that the consumer does not actively process

the message; therefore, the Cb (brand cognitions) to Ab link should not exist.

Lutz, MacKenzie, and Belch tested their processing hypotheses in a laboratory setting by embedding a commercial for a fictitious brand in a one-hour television program. The type of processing used by the respondents was evaluated by answers to questions about their product knowledge and the importance of the product class. The sample was split into four groups based on the medians of these two measures. It was assumed that those in the high knowledge/high importance group processed the advertisement centrally, and those in the low knowledge/low importance group processed the advertisement peripherally. A separate LISREL analysis for these two groups illustrated that in the peripheral processing situation, Aad had a strong effect on Ab, and cognitions about the brand (Cb) had no effect on Ab; both relationships consistent with the hypotheses. However, in the central processing situation, both Aad and Cb were found to have significant effects on Ab. This is contrary to the hypothesis that only a Cb to Ab relationship would exist. While the measures used to evaluate processing type in this experiment were somewhat weak, the experiment does illustrate that Aad can have significant causal effects in any processing situation.

As part of a study examining the problems encountered when using very large sample sizes, MacKenzie and Lutz

[1983] again tested the four competing theories/models of the Aad process shown in Figure 1. A test commercial for the Ford Motor Company was included with other commercials in a 30-minute television program. LISREL analysis showed that Model 1 best fit the data. This model includes effects of Aad on Ab and is consistent with what past studies have found.

MacKenzie, Lutz, and Belch [1986] again tested the four alternative structural models. The data from two different experiments was used to test the fit of the alternative models. The first experiment included a commercial for a fictitious brand in a one-hour television show. A 2x2x3 between subjects design was used where the design factors included a one-sided or a two-sided, comparative or a non-comparative advertisement repeated one, three, or five times during the television program. The second experiment was a 3x3 between subjects design for the same fictitious brand. The experimental factors were the number of exposures (one, three, or five) and the advertisement exposure mode (television embedded, television nonembedded, and radio nonembedded). Since the measurement scales used in both experiments were identical, the first experiment was treated as a development sample and the second as a validation sample. This time however, a LISREL analysis indicated support for Model 2. However, Model 1 and Model 2 differ only in one link, the Aad -> Cb link. It is possible that the different

results for the two studies could be due to sampling error. The effects of the experimental design factors were not given in this study.

Gardner [1985a] has also considered the causal effects of Aad for different processing conditions. The purpose of her study was to examine the causal effects of Aad and "Fishbein-type" brand beliefs on Ab under different processing "sets." Two "sets" were defined as "brand evaluation," where processing is directed at evaluating the advertised brand, and "non-brand evaluation," where the processing is directed at an enjoyment of the advertisement itself. Subjects were given a booklet with two advertisements for hypothetical brands and instructions on how to "process" the ads. A causal analysis found that the effect of Aad on Ab is equivalent for both of the processing sets. This finding is consistent with that of Lutz, MacKenzie, and Belch [1983] where Aad was found to have a significant causal effect on Ab regardless of the processing context.

Batra and Ray [1985] examine the effect of Aad on what they call attribute-sensitive brand attitudes (pleasant and nice ratings of the brand) and execution-sensitive brand attitudes (usefulness and importance ratings of the brand). They found that Aad had a significant effect on both brand attitude constructs. However, their measures for Aad included ad liking, ad emotion, and the net valence of "feeling" statements given

during cognitive response listing. It is possible that what they actually found was that emotional feelings have an effect on brand attitude.

Gresham and Shimp [1985] exposed subjects to fifteen different television advertisements. Five advertisements were pretested as generating positive affect, five tested as generating neutral affect, and five tested as generating negative affect. Each subject was exposed to one advertisement from each affect category. Gresham and Shimp hypothesized that Aad would predict Ab for the positive and negative affect advertisements but not the neutral ads. They found, however, that Aad was a significant independent predictor of brand attitude for only one of the five positive affect advertisements, for only two of the negative affect advertisements, and also for two of the neutral affect advertisements. They interpret the lack of strong support for the Aad -> Ab relationship to be due to the use of mature brands in the television commercials. Subjects would have prior familiarity and attitudes toward the brands used and this may have mediated the relationship.

Madden, Dillon, and Twible [1984] and Madden, Debevec, and Twible [1985] present empirical analyses of the convergent and discriminant validity of the Aad and Ab constructs. Both studies use three methods (affect, semantic differential, and likert scales) to measure Aad and Ab. A third construct, attitude toward purchasing, is

included in the Madden, Debevec, and Twible [1985] study. The first study concludes that Aad and Ab lack discriminant validity when subjects are presented with a non-humorous radio commercial. The second study uses a television commercial as the stimulus and proposes that the relationship between Aad and Ab is not significant when method variance is controlled.

The lack of discriminant validity between constructs is a serious problem in any empirical analysis and, unfortunately, is a factor which many researchers typically do not consider. Yet looking at the two validity studies discussed above from a different perspective can yield conclusions different from those given by the authors. First, one could argue that the affect scale used to measure "attitude" is really a measure of "emotional feelings" and should not have been included as an alternative measure of Aad and Ab. A second issue relates to the data analysis procedures that were used. There are some limitations in using LISREL to evaluate a multitrait-multimethod assessment of construct validity which can lead to conclusions that may differ from those given by the classic Campbell and Fiske [1959] assessment. These two issues are discussed in detail in Appendix A.

To summarize the empirical literature, Table 2 illustrates that many researchers have found relationships between Aad and Ab. However, the issue of discriminant

Table 2

Theoretical Explanations for Aad Relationships

Relationship	Tested by:	Is Relationship Supported?	Theoretical Hypothesis which may Explain the Relationship
Aad -> Ab	Mitchell & Olson, 1981	yes	Classical Conditioning or
	Gelb & Pickett, 1983	yes	"Affective Conditioning"
	Mitchell, 1983	yes	
	Mitchell, 1986	yes	Mood Position
	Moore & Hutchinson, 1983	yes	
	Lutz, MacKenzie, & Belch, 1983	yes	
	MacKenzie & Lutz, 1983	yes	
	Gardner, 1985	yes	
	MacKenzie, Lutz, & Belch, 1986	yes	
	Batra and Ray, 1985	yes	
	Gresham & Shimp, 1985	marginal	
	Madden, Dillon, & Twible, 1984	?	
	Madden, Debevec, & Twible, 1984	?	
Aad increases over time	Messmer, 1979	no	Zajonc's "Mere Exposure Hypothesis"
	Mitchell & Olson, 1981	no	
	Burke & Edell	no	Berlyne's "Two-Factor Theory"
Aad -> Ab, Ab -> Aad	MacKenzie, Lutz, & Belch, 1986	no	Balance Theory
	MacKenzie and Lutz, 1983	no	
Aad -> Cb, Aad -> Ab	MacKenzie, Lutz, & Belch, 1986	yes	Cognitive Response
Aad -> PI, Ab -> PI	MacKenzie, Lutz, & Belch, 1986	no	Howard's Two attitudinal constructs
	MacKenzie & Lutz, 1983	no	
Aad -> Ab, strength decreases over time	Moore & Hutchinson, 1983	marginal	Familiarity-based "sleeper" hypothesis

Key:
Aad: attitude toward the advertisement
Ab: attitude toward the brand
Cb: cognitions about the brand
PI: purchase intentions

validity between the measures of the constructs is not yet resolved.

Theoretical Explanations

Given the empirical finding of a number of relationships between the Aad construct and other constructs, a question likely to be asked is "why do these relationships exist?" Different theoretical hypotheses can be found in the literature. These hypotheses are discussed here and are summarized in Table 2.

As can be seen in Table 2, ten of the thirteen studies considering Aad and Ab support the relationship where Aad has an influence on Ab, while another found only marginal support and two found no support when the measures had discriminant validity. Different theoretical hypotheses have been put forth to explain these relationships. Shimp [1981] gives a classical conditioning explanation where Aad represents the unconditioned stimulus and Ab represents the conditioned stimulus. The affect generated from the exposure to an advertisement would then transfer itself to the brand. Allen and Madden [1985b] have reviewed the conditioning literature and have labeled this particular form of conditioning as "affective-conditioning." While their affective-conditioning explanation is no different than Shimp's classical conditioning explanation, they give this label to differentiate the process from other conditioning

processes which involve physiological or evaluative responses as the conditioned response.

Allen and Madden [1985b] suggest a competing hypothesis to the affective-conditioning explanation. They discuss the literature on mood which "holds that feelings do not transfer automatically and directly between stimuli, but rather influence judgments and behavior by prompting and biasing cognitive activity" [p. 312]. Therefore, if an individual experiences feelings as the result of an advertisement, the mood position hypothesis posits that the feeling state will affect the coding and retrieval of brand related information and will influence any judgments, evaluations, and behavior related to the product [see Gardner 1985b for a review of the mood literature]. This mood position could be logically extended to evaluations about the advertisement as well (i.e., mood or feelings affect Aad). However, the question of how Aad affects Ab is still left unanswered.

Two studies considered the change in Aad over time. Zajonc [1968] has hypothesized that attitude toward a stimulus can be increased simply through repeated exposures. This "mere exposure hypothesis" is not supported through the empirical data. An additional explanation is the "two-factor theory" presented by Berlyne [1970]. Berlyne hypothesizes that when affect is positive to start, positive habituation will result in increasing affect up to a satiation point. After this

point, the repetition becomes tedious and affect will begin to decrease. Additional research with careful measures over the repetition period would be required to determine which of these hypotheses actually predict the change in Aad over time.

Model 3 in Figure 1 illustrates mutual causation between Aad and Ab. Edell and Burke [1984] posit that this relationship can be explained through balance theory [Heider 1946]. This theory predicts that there must be a balance between the consumer, the advertisement, and the brand. A balance would occur when the relationship between all three pairs (the consumer and the advertisement, the consumer and the brand, and the advertisement and the brand) is positive or when the relationship between one pair is positive and the other two are negative. Since the relationship between the advertisement and the brand is always positive, the consumer must either like both the advertisement and the brand, or dislike them both [Edell and Burke 1984]. The balance theory hypothesis, however, is not an explanation of mutual causation. In addition, empirical evidence for this hypothesis is not available as MacKenzie and Lutz [1983] and MacKenzie, Lutz, and Belch [1986] have found more support for alternate models.

Model 2 in Figure 1 hypothesizes both a direct and an indirect causal flow from Aad to Ab. The indirect flow through brand cognitions to brand attitude is based on the

idea that affective reactions to a message source will affect consumers' acceptance of the content of the message. Therefore, the cognitions, or thoughts, about a brand will depend on how the consumer feels about the advertisement itself. MacKenzie, Lutz, and Belch [1986] found support for this causal flow although MacKenzie and Lutz [1983] did not.

An independent influence of Aad and Ab on purchase intentions is hypothesized in Model 4 in Figure 1. MacKenzie, Lutz, and Belch [1986] apply Howard's hypothesis of two attitudinal constructs to the Aad context [Howard 1977]. Howard hypothesized a "brand concept" construct which essentially represents the consumer's attitude toward the brand and its attributes. A second construct, "impersonal attitude," represents the salient aspects of the purchase situation which are not properties of the brand. In this case, they hypothesize that Aad would be part of the impersonal attitude construct since an advertisement represents part of the information used in making a purchase decision. Howard hypothesized that the two constructs would exert independent influences on purchase intentions. This hypothesis has not found empirical support.

The strength of the relationship between Aad and Ab has been hypothesized to decrease over time after the advertisement has been viewed. Moore and Hutchinson [1983] explain this relationship through a

Familiarity-based "sleeper" Hypothesis. This hypothesis begins with the assertion that the direct influence of Aad on Ab will decay while the increase in brand familiarity as a result of viewing the ads will begin to elicit affective reactions, which will in turn lead to increased positive attitude toward the brand. This hypothesis states that it is not Aad that influences Ab over time, rather it is brand familiarity that influences Ab. Moore and Hutchinson found only marginal support for this hypothesis.

Finally, a number of causal antecedents of the Aad construct have been hypothesized by Lutz, MacKenzie, and Belch [1983] and have been elaborated upon by Lutz [1985]. Five major causal antecedents were hypothesized (ad credibility, ad perceptions, attitude toward advertiser, attitude toward advertising, and mood), each with additional causal considerations. The model has yet to be tested with respect to the Aad construct.

Research Directions

The first step in any further research using the Aad construct should be to consider measurement issues. Aad has been operationalized in many different ways in the literature as illustrated in Table 3. These measures range from like-dislike types of scales which parallel the traditional measures of the affective brand attitude

Table 3

Empirical Measures of Aad

Author(s)	Measure
Messmer (1979)	"Overall attitude toward (brand name) beer ad (not the beer itself--just the ad)" "The degree to which I like (dislike) (brand name) beer ads (again, not the beer, just the commercials)"
Mitchell and Olson (1981), Mitchell (1983), Gardner (1985a)	Mean of four evaluative items: good-bad like-dislike irritating-not irritating interesting-uninteresting
Gelb and Pickett (1983)	"I dislike the ad" Strongly disagree to Strongly agree
Moore and Hutchinson (1983)	Ad affect = positive or negative emotional reaction; measured by: positive, somewhat positive, neutral somewhat negative, negative
Lutz, MacKenzie and Belch (1983), ML (1983), MLB (1986)	"Overall reaction to the commercial" favorable-unfavorable interesting-boring
Gresham and Shimp (1985)	Mean on: soothing, warmhearted, sorry, sad, affectionate, happy, elated
Batra and Ray (1985)	Ad liking, Ad emotion, and net valence of "feeling" statements given during cognitive response thought listing
Allen and Madden (1985a)	sum of responses on 6 point scale for: good-bad refined-vulgar interesting-boring artful-artless tasteful-tasteless

construct [Messmer 1979, Gelb and Pickett 1983] to scales which include feeling statements such as soothing, warmhearted, and happy [Gresham and Shimp 1985; Batra and Ray 1985] which seem to reflect an affective response other than attitude. Certainly the basis for such varied measures of Aad comes from the lack of consistent terminology for different types of affective responses. It is likely that some of the relationships between Aad and Ab that have been found in the literature may actually be the relationship between some other affective response (such as mood or emotion) and Ab. In addition, an attempt should be made to evaluate the construct validity of the different measures in future studies.

Given better measures, the next step is to determine whether Aad has any effect on Ab. It is possible that the type of product or some situational characteristic can affect the relationship. For example, it is more likely that Aad will influence Ab when a brand is new and the individual has no prior knowledge about it, or when the brand is part of a product category with only minor differences among brands. Gresham and Shimp [1985] argue that further study of classical conditioning effects should be studied using emotion-evoking television commercials for new brands with which subjects have no prior familiarity.

Lutz, MacKenzie, and Belch [1983] report different causal effects when advertising processing conditions

differed. Additionally, various authors have suggested a number of product-, person-, and media-specific conditions which future research should address. These include the interest in the product class [Lutz 1985; Aaker and Bruzzone 1985], level of involvement [Edell and Burke 1984], and different purchase deliberation goals [Mitchell and Olson 1981] on the part of the consumer. These variables would have an impact on the attention and type of processing that an advertisement would receive from the consumer. Prior brand preference [Lutz 1985] and previous brand knowledge [Mitchell and Olson 1981] are variables which have received little consideration in the literature. There is also a lack of consideration for situations when consumers have a negative initial attitude toward the product. Characteristics of the advertising exposure environment such as the type of medium [Lutz 1985], characteristics of the program [Messmer 1979; Lutz 1985], and the effects of competitive advertising [Shimp and Yokum 1982; Messmer 1979] should also be investigated. The effects of repetition have been examined, although most of the experiments have manipulated repetition levels to a somewhat unrealistic number during one single television program. Considering the effects of repetition over natural time intervals would provide more accurate estimations [Mitchell and Olson 1981]. Finally, the type of appeal used in the advertising can have a moderating effect on attitude formation and change. Gelb and Pickett

[1983] examined humorous appeals and found no significant effects of perceived humor in the advertisement while Allen and Madden [1985a] found significant effects of humor on the subjects' attitude to try a new brand. In addition, although the effects were not described, MacKenzie, Lutz, and Belch [1986] considered comparative versus non-comparative appeals. Certainly there is room to consider the effects of other types of advertising appeals such as fear, guilt, informational, or emotional appeals. Mitchell and Olson [1981] note that "the Aad score might be expected to have a greater mediation effect on brand attitudes for advertisements that arouse more intensive evaluative or affective reactions" [p. 328]. They also suggest considering the effects of verbal and visual content in advertisements.

There are still many other directions which future research can take. One consideration could be the form of the relationship between the Aad and Ab constructs. As discussed above, the empirical literature supports a linear relationship (as Aad increases positively so does Ab) although one study found a curvilinear relationship (where Ab decreases as the responses elicited by advertisements move from negative to neutral and Ab then increases as responses to the advertisements move from neutral to positive). Aaker and Bruzzone [1985] provide three explanations for the existence of a curvilinear relationship. It is possible that, in some situations, a

negatively evaluated advertisement could attract attention without transferring the negative response to the brand. Also, the attention could lead to brand familiarity, and the familiarity could eventually lead to brand liking, an effect found by Moore and Hutchinson [1983]. Finally, it is proposed that an advertisement which a consumer dislikes may distract that individual's attention from the message content and inhibit counterarguing, which could in turn increase the ad's persuasive ability. Further research could be directed at identifying situations in which the form of the relationship can be predicted. A start in this direction has been taken by Aaker and Bruzzone [1985] in their analysis of what advertising elements can cause a consumer to view an advertisement as irritating. Others have considered the implications of irritating ads as well [Greyser 1973; Bartos 1981].

Lutz [1985] provides considerable research direction for determining which variables precede and can cause changes in Aad. These variables include ad credibility, attitude toward the advertiser, media clutter, program or editorial content, and mood among others. Again, the effects of these causal antecedents can vary according to the situation or the appeal used. Lutz notes that each advertising exposure situation must be analyzed individually to determine the appropriate moderating influences. A final research issue which needs to be addressed is how the Aad antecedents and effects vary with repeated

exposure. This study is important because, as Lutz [1985] notes, "Aad, in comparison with brand attitudes or attitudes toward advertising in general, is seen as being more transitory and less likely to exert strong influences over an extended period of time" [p. 46]. In addition, knowledge of how fast Aad and the Aad -> Ab relationship develop and decay has implications for media scheduling and for message strategy to protect against message wearout.

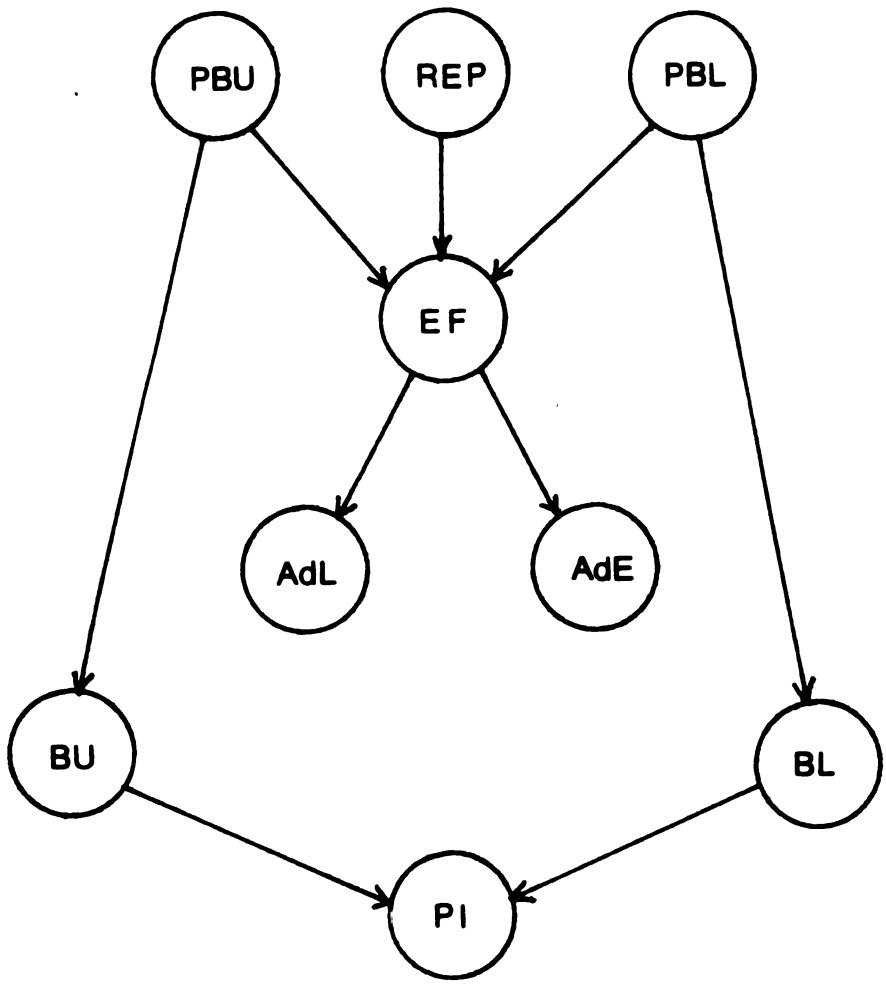
In summary, future research considering the Aad construct must first start with valid measures. The next step is to determine when and if the Aad -> Ab relationship occurs and what changes occur with repeated advertisement exposure.

Hypotheses

Given the above discussion of affective responses to advertising, a set of hypotheses can be generated. These hypotheses are presented in the form of a causal model and are shown in Figures 2 and 3.

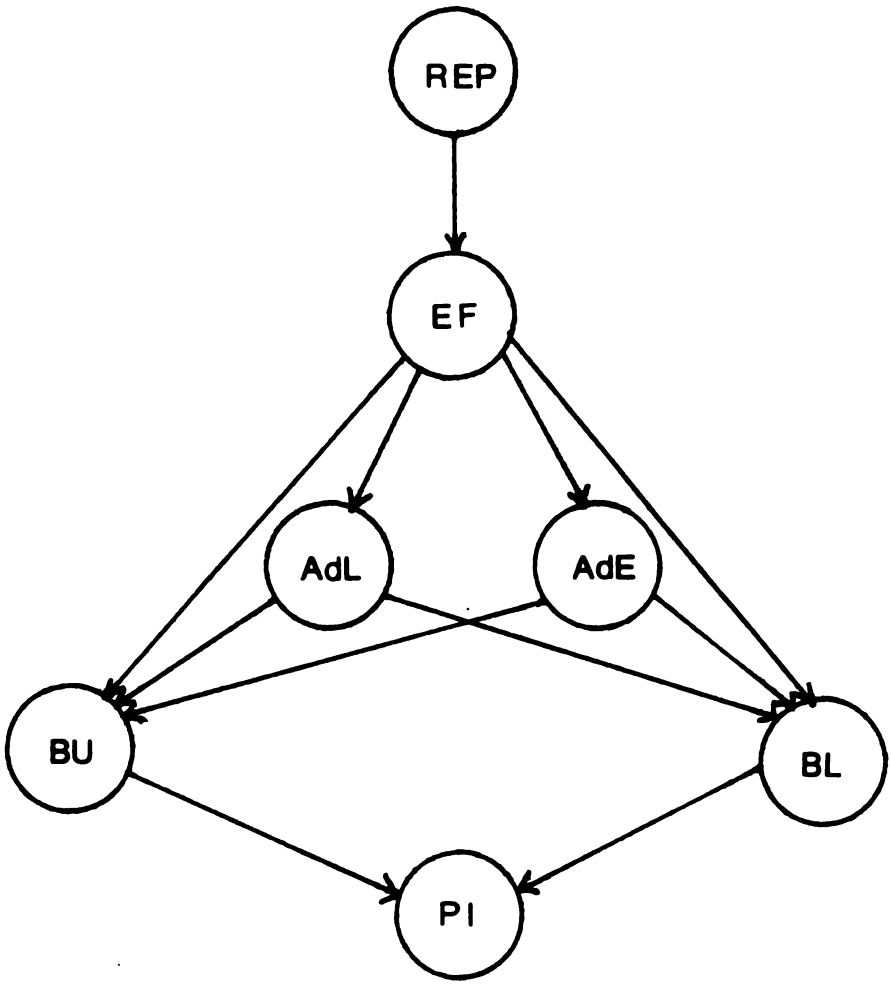
Constructs

Emotional feelings (EF) are included in the model as a single construct, yet it is likely that the construct is multidimensional. An analysis to determine the dimensions will be based on both the discussion earlier in this



Key:
- PBU = prior brand utility
- REP = number of repetitions
- PBL = prior brand liking
- EF = emotional feelings
- AdL = advertisement liking
- AdE = advertisement evaluation
- BU = brand utility
- BL = brand liking
- PI = purchase intentions

Figure 2. Hypothesized Relationships for Familiar Brands



Key:
REP = number of repetitions
EF = emotional feelings
AdL = advertisement liking
AdE = advertisement evaluation
BU = brand utility
BL = brand liking
PI = purchase intentions

Figure 3. Hypothesized Relationships for Unfamiliar Brands

chapter and on an analysis of the data after it is collected.

Aad has been operationalized in different ways in the literature. Table 3 illustrates that the measures range from feeling statements [Gresham and Shimp 1985] to overall liking statements [Gelb and Pickett 1983; Messmer 1979] to evaluative statements [Mitchell and Olson 1981; Gardner 1985a]. Shimp [1981], in his introduction of the Aad construct, posits that there are both cognitive and emotional aspects to the construct. Edell and Burke [1984] also argue for a measure of the "overall evaluation of the ad" in addition to the typical affective measures of sign (positive/negative) and intensity (strong/weak). By examining Table 3, it appears that some researchers have been using cognitive or evaluative measures of Aad and some have been using affective measures for the construct.

This study considers both an evaluative and a liking response as different types of Aad responses. The first response will be called "Ad Evaluation" (AdE) and will represent a cognitive process. The second response will be called "Ad Liking" (AdL) and represents an overall affective liking of the advertisement.

Brand attitude has also been operationalized in different ways in the literature with both cognitive and affective measures being found. Here the subjects will be asked for an overall cognitive evaluation of the value of

the brand. This will be termed "Brand Utility" (BU). An overall affective reaction to the brand will be examined through the construct "Brand Liking" (BL). "Prior Brand Utility" (PBU) and "Prior Brand Liking" (PBL) represent the subjects' cognitive and affective responses before exposure to the advertisement. "Brand Utility" and "Brand Liking" are the responses after exposure to the advertisement. "Purchase Intentions" (PI) represents the subjects' behavioral intentions to purchase the product at some point in the future.

Hypothesized Relationships

The hypothesized relationships are illustrated in Figures 2 and 3 in addition to Table 4. Emotional feelings are hypothesized as having causal effects on both the cognitive and affective Ab measures. Allen and Madden [1985a] found that positive affective feelings had a significant effect on attitude to try a new brand. The findings of Gresham and Shimp [1985] and Batra and Ray [1985] also implicitly support the effect of emotional feelings on Ab since their measures of Aad seem to reflect emotional feelings more than attitude.

The emotional feelings are also hypothesized as having causal effects on the cognitive and affective Aad measures. At an intuitive level, it would seem likely that if an individual experiences positive emotional feelings from viewing an advertisement, the feelings would

Table 4

Hypothesized Relationships

Hypothesized Relationship		Justification	Relevant Literature
EF -> BL, BU		Affective Conditioning vs. Mood Position	Gresham & Shimp 1985 Batra & Ray 1985 Allen & Madden 1985a
EF -> AdL, AdE	Links strengthen with repetition		
Aad -> BL, BU			See Table 2
Aad -> BL, BU,	Mediated by brand familiarity	The ad is the only information available for unfamiliar brands	
BU -> PI, BL -> PI vs. BU -> BL -> PI		Attitude Theory	Batra & Ray 1985 Allen & Madden 1985a Lutz, MacKenzie, Belch Studies
As involvement increases: BU -> PI increases, BL -> PI decreases, and Aad -> Ab decreases		Low involvement decision making, Central vs. Peripheral processing	Batra & Ray 1985 Lutz, MacKenzie, & Belch 1983

lead to a positive Aad. The relationship between emotional feelings, Aad, and Ab can be theoretically explained through an affect-conditioning hypothesis [Allen and Madden 1985b] where affect (emotional feeling) is transferred to the evaluation of the object (the advertisement and the brand). The process could also be explained by the mood position that feelings influence evaluation and judgment [Gardner 1985b]. Mood and emotional feelings are both constructs which represent feeling states. The primary distinction between the two is that emotional feelings are a reaction to a specific object while mood is a more general state. Regardless of how the subject gets into the feeling state, the effects of the feeling state may be the same.

Consistent with the literature, the Aad measures are hypothesized to have a causal influence on the Ab measures. It is also hypothesized that brand familiarity will mediate the Aad -> Ab relationship. If a person is very familiar with a brand, seeing an advertisement which the person evaluates positively or likes should not have a strong effect their brand attitude since the attitude is already well formed based on past experience. In the situation where the brand is unfamiliar to the person, a positive evaluation or liking for an advertisement could act as information which may be used in developing a brand attitude.

The relationship of brand attitude influencing purchase intentions is well known [Ajzen and Fishbein 1977]. Figures 2 and 3 illustrates the positive relationships expected between Brand Utility, Brand Liking, and Purchase Intentions. Empirical support has been found for similar constructs in the literature. Batra and Ray [1985] found support for the independent causal influence of what they call attribute-sensitive brand attitudes (a cognitive measure) and execution-sensitive brand attitudes (an affective measure) on purchase intentions. Allen and Madden [1985a] also found a positive relationship between positive brand cognition and attitude toward trial of a product. An alternative hypothesis where Brand Utility causes Brand Liking is given based on the findings that brand cognitions cause brand attitude [Lutz, MacKenzie, and Belch 1983; MacKenzie and Lutz 1983; MacKenzie, Lutz, and Belch 1986]. Prior Brand Utility and Prior Brand Liking are hypothesized to have strong positive relationships with Post Brand Utility and Post Brand Liking.

Additional Effects

It is well known that the process of attitude change occurs differently in low involvement situations than in high involvement situations [Sherif and Hovland 1961; Krugman 1965; Smith and Swinyard 1982]. Lutz, MacKenzie, and Belch [1983] incorporated the effects of involvement

into their analysis of the effects of Aad on Ab. They divided their sample into two involvement groups. It was hypothesized that the low involvement group would exhibit a strong influence of Aad on an affective Ab measure and a weak influence of brand cognitions on Ab (peripheral processing). The high involvement group should exhibit opposite effects (central processing). The causal model was estimated separately for these two subgroups and standardized parameter estimates were compared. The hypothesized relationships held for the peripheral processing group, although in the central processing group, the Aad -> Ab effect was still dominant over the brand cognitions -> Ab effect. The authors give several possible explanations for this finding, although they do not mention the possibility that the brand attitude model that they implicitly assume (cognitions cause affect) may not be appropriate.

Batra and Ray [1985] are the only other researchers to measure and evaluate the moderating effects of involvement in their analysis of the effects of Aad. Unstandardized path coefficients for their causal model were computed on two involvement subgroups and were compared. In the low involvement case, of the path coefficients causing purchase intentions, an affective Ab measure had the strongest effect, and in the high involvement case, a cognitive Ab measure had the strongest effect. These relationships are consistent with

involvement theory of how consumer decision making occurs in low involvement situations.

Including involvement in any study of brand attitudes and purchase intentions is important because of the known moderating effects of the construct. Consistent with the two studies discussed above, involvement is hypothesized as having the following effects on the causal relationships. First, as the level of involvement increases, the effect of Brand Liking on purchase intentions (PI) should decrease and the effect of Brand Utility on PI should increase. If the alternate model where Brand Utility causes Brand Liking has a better fit to the data than the relationships shown in Figures 2 and 3, it is hypothesized that the Brand Utility -> Brand Liking relationship will be stronger for individuals with higher levels of involvement. Also, if the Aad -> Ab relationship exists, the effect of Aad on both Ab constructs should be greater in low involvement situations.

An additional variable which needs to be considered for its effect on advertising response is message repetition. The number of times that an individual has seen an advertisement will have an effect on the levels of that person's responses. Most advertising experiments examine this effect by exposing the subject to various levels of repetition within the time span of a single television program [Belch 1981; Belch 1982; Belch and Belch 1984]. The mean levels of response for each

exposure group are then compared. Typically, the response reaches its peak level at some level and then declines and levels off, a phenomenon called "wearout" [Appel 1971; Axelrod 1980; Calder and Sternthal 1980].

The effects of repeated exposure to an advertisement can also be considered in a causal model. Different levels of advertising repetition have been shown to have different effects on both Aad and Ab [Burke and Edell 1986; Calder and Sternthal 1980; Messmer 1979]. The affect-conditioning hypothesis states that unconditioned feelings will transfer to some stimulus; in this case the stimuli would be the advertisement and the brand. Allen and Madden [1985b] note that

> "(r)epetition is typically treated as a means for strengthening conditioning effects . . .; conversely, there is nothing in the mood literature to suggest that a series of affective experiences, distributed over time, should intensify the influence of feeling states on judgments and behavior" [p. 313].

Given this discussion, it is likely that examining affective responses to repeated advertisement exposure will provide some insight into a theoretical explanation. Therefore, the two competing hypotheses for the effects of repeated advertisement exposure are (1) the affective-conditioning hypothesis that repetition will strengthen the link between Emotional Feelings and the Ab measures

and the link between Aad and the Ab measures, and (2) the mood position that the links between the constructs will not strengthen with repeated exposure.

In summary, the specific relationships to be tested are:

1) Emotional feelings will influence ad liking, ad evaluation, post brand liking, and post brand utility.

2) The Aad measures will significantly affect the Ab measures only when subjects are unfamiliar with the brand.

3) The Ab measures will have independent effects on purchase intentions.

4) As involvement increases, the effect of brand liking on purchase intentions will decrease, the effect of brand utility on purchase intentions will increase, and the effect of Aad on Ab will decrease.

5) The affective-conditioning hypotheses that repeated exposure will strengthen the links versus the mood position hypothesis that repetition will not strengthen the links between Emotional Feelings and Ab and between Aad and Ab.

CHAPTER THREE

METHODOLOGY

Experimental Design

The hypotheses for this study have been specified in the form of a causal model and it is essential that enough variability be present in the measures to adequately estimate the causal parameters. Specifying an experimental design with different levels for what the researcher believes to be the "critical" factors is one way to insure this variability. Therefore, a 2 x 2 x 3 factorial experimental design was used in this study. The factors included the type of emotional appeal ("heartwarming" vs. "sexually suggestive"), brand familiarity (familiar vs. unfamiliar), and the number of advertisement repetitions (one, two, or three). It was believed that most subjects would respond to the "heartwarming" advertisements in a positive direction; therefore, a type of emotional appeal which might generate a negative response was desirable to assure some variance in responses. A "sexually suggestive" emotional appeal was selected as one which may be able to elicit positive responses from some individuals and negative responses from those who find the advertisement offensive.

While the advertisements were classified a priori into the appeal and familiarity categories, it should be

noted that this classification does not imply that every subject exposed to the "heartwarming" advertisement would experience the same "heartwarming" response and similarly, that every subject exposed to a "familiar brand" would actually be familiar with the product. Therefore, the emotional appeal and brand familiarity factors were not examined in the traditional ANOVA sense of comparing the mean responses for the different cells. Instead, the emotional feeling response and the brand familiarity response were measured for each individual on multi-item scales and the effects of these variables were examined in the causal model. Again, the purpose of using this experimental design was simply to insure enough variability in responses to allow for the estimation of the causal parameters.

Stimuli

The experimental stimuli included four different television advertisements which utilized the two different emotional advertising appeals for familiar and unfamiliar brands. The advertisements were selected by viewing over 700 commercials from videotapes of Clio award winners, Critics' Choice International nominations, and tapes made available by various advertising agencies. The commercials were selected with several criteria in mind. First, the commercials had to be promoting a product rather than a service; and the product needed to be one

which the student subjects might consider for purchase. Next, since the effects of repeated commercial exposure will be examined, the commercials needed to be ones which the subjects have not seen before. Using foreign commercials could solve the problem of prior subject exposure, although commercials were excluded from further consideration when it was obvious that the commercials were not produced domestically (for example, when the actors had a detectable foreign accent). Excluding "obviously foreign" commercials was done to insure that the subjects would not devote increased attention to the test advertisements. In addition, the commercials had to fit into the two emotional appeal and brand familiarity categories.

The commercials selected were for Christie Brown Crisp 'N Chewy cookies in the "heartwarming/unfamiliar" category, Lois blue jeans in the "suggestive/unfamiliar" category, Pepsi cola in the "heartwarming/familiar" category, and Lee blue jeans in the "suggestive/familiar" category. The Christie Brown cookie commercial shows children eating the cookies in a soft, cozy home setting with their puppy and goldfish nearby. The background music is a guitar composition with lyrics of how the cookies give a feeling of "home." The Lois and Lee blue jean commercials show both male and female models wearing the jeans and include sexually suggestive moves and situations. The Lois commercial was also used by Madden,

Debevec, and Twible [1985] in their assessment of alternative measurement methods of Aad. The Pepsi commercial shows Lionel Richie (a popular song writer and singer) leaving a concert, he pauses to autograph a paper cup embossed with the Pepsi logo for a little girl, and then boards a small airplane which takes him home to surprise his grandmother. The background music includes lyrics of the importance of personal relationships and how people should take time out for others.

Marketing and Advertising faculty and students acted as "judges" and independently confirmed that the commercials elicited the appropriate "heartwarming" or "sexual" emotional response. The seven "judges" were shown the commercials and asked to describe their feelings toward the commercial. The Pepsi and Mr. Christie commercials were described as "touching," "sentimental," "sweet," or "warm." The Lee and Lois commercials were described as "sexually suggestive," "offensive," or "containing explicit sex appeals."

A potential problem arose due to the difference in length of the four commercials. The Pepsi commercial was 60 seconds, the Lee and Mr. Christie commercials were 30 seconds, and the Lois commercial was 45 seconds in length. The Pepsi commercial could not be cut to 30 seconds and still maintain the same message, so the other three commercials were expanded to become 60 seconds in length. The commercials were professionally edited to repeat

several segments until the entire commercial became approximately 60 seconds in length. Even though sections of the commercials were repeated, the visual and audio flowed together. During debriefing after the experiment, all subjects indicated that they were not aware that this was not the original version of the commercial.

A limitation of this study arises, however, as the result of the nature of the test advertisements which were selected. It would be ideal to test for the effects of different types of emotional responses for familiar and unfamiliar brands in a single product category (also meeting the criteria of student purchase consideration and lack of previous advertisement exposure). However, given that over 700 commercials were considered, it seems extremely unlikely that commercials can be found to meet all the criteria given above in only one product category. While one could argue that test commercials could be developed to meet these criteria, the development of finished television commercials is beyond the resources of most academic researchers. Using a less than professional quality commercial or a storyboard to represent an emotional television advertisement could not be expected to give the same emotional reaction from viewers as a professionally produced commercial. Therefore, the limitation of using different product categories could not be avoided.

While the use of different product categories in this study should be presented as a limitation, the intent of this research should be kept in mind. This research is not designed to compare the effectiveness of "heartwarming" versus "suggestive" advertising appeals. Rather, it is to understand the process surrounding various types of affective responses to emotional advertising appeals. In addition, using different product categories allows for the consideration of how product class involvement might affect the processes. Given the intent of this research, the above limitation is a minor one.

The test commercials were embedded in a television program to simulate a somewhat more natural viewing environment. To eliminate any effects that emotions developed during the program might have on the commercials an attempt was made to find a television program that would be both interesting to students and would contain very little emotional content. In addition, it was hoped that the program would be unfamiliar to the subjects to avoid any bias which might result from prior attitudes toward the program. A convenience sample of sixty students were asked to respond how they felt, in general, about watching different types of television programs. The questions asked were: "I enjoy watching nature programs," "I enjoy watching game shows," and "I enjoy watching health information programs." Responses were collected on a five-point scale with the endpoints

"strongly agree" coded as "1" and "strongly disagree" coded as "5." The mean responses were 2.66 for nature programs, 2.68 for game shows, and 2.85 for health information programs. These means are not significantly different.

Since the three program categories were evaluated as equally enjoyable, several programs in each category were recorded from cable television stations and were subsequently evaluated by ten student judges with respect to the degree of emotional content that each contained. The program which was selected was a game show called "Chain Reaction" where contestants play a type of word association game. The host of the game is Bill Cullen, a well-known game show host. Two different episodes of the "Chain Reaction" program were evaluated. In the episode used in the experiment, the contestant who won the match did not show much enthusiasm over her win and she did not win the $10,000 bonus round.

The placement of the test commercials within the "Chain Reaction" program is illustrated in Table 5. The table indicates the timing of the program and commercials in minutes and seconds (e.g., 5:18 refers to 15 minutes, 18 seconds). Additional commercials were included in the program so that the test commercial would not be the only commercial the subject was exposed to. The Bufferin, Arm and Hammer, and Puritan Oil commercials were selected because they are informational in nature. Notice that

Table 5

Experimental Treatments

Sequence & Timing	One Repetition	Two Repetitions	Three Repetitions
Program			
5:18			
Commercial Break:	Bufferin 00:30	Bufferin 00:30	Bufferin 00:30
	Arm & Hammer 00:30	Arm & Hammer 00:30	Test Ad 00:60
Program			
3:06			
Commercial Break:	Puritan Oil 00:30	Test Ad 00:60	Test Ad 00:60
Program			
3:00			
Commercial Break:	Test Ad 00:60	Test Ad 00:60	Test Ad 00:60

each of the experimental conditions include the same number of commercial exposures during the program.

Experimental Procedure

Subjects were asked to complete a first questionnaire approximately two weeks before the experiment. This questionnaire measured product class involvement for soft drinks, cookies, and blue jeans, and prior brand attitudes and brand familiarity for Pepsi cola and Lee jeans. Each subject was asked for all of these measures even though the subject was only exposed to an advertisement for one of the brands. Other questions irrelevant to this study were also added to the first questionnaire to minimize any association of the first questionnaire with the television commericals which were seen during the experiment. The students completed the first questionnaire during the first week of classes of a new term and were told that the information collected would be used as examples later in the course (Consumer Behavior and Marketing Research courses). Several days later students were asked to sign up for one of twelve experimental sessions. On the day of the experiment, the subjects were asked to watch the program and were told that a local television station was considering airing the program and they will be asked to answer some questions when the program concludes. The second questionnaire included the measures for program liking, emotional feelings, Aad, Ab, and purchase

intentions. Both questionnaires were pretested by student subjects before the experiment to insure that the instructions were understood. The wording on two of the questions was changed based on the pretest results. All other questions were understood by the pretest subjects.

The experimental subjects were debriefed during the next class period after the experimental sessions. The debriefing included comments about the purpose of the experiment and a discussion of how market research firms often use a similar guise in testing advertisements.

Subjects

Students were used as subjects and were recruited from Consumer Behavior and Marketing Research courses and were given extra credit in the course for their participation. Two hundred two responses were collected to a first questionnaire distributed and completed during a class period the first week of class in a new term. The experimental sessions were conducted during three consecutive days approximately two weeks later. One hundred sixty-eight subjects participated in the experiment at that time. Since some of the cell sizes in the experimental design were low, students were told that they could participate in several additional sessions given a few days later. Data were collected from an additional 21 subjects. The experimental cell sizes were then each

reduced to fifteen subjects by eliminating nine questionnaires. The questionnaires eliminated were either completed incorrectly or were incomplete. An additional three questionnaires were eliminated by randomly selecting from those which completed the questionnaire in one of the later experimental sessions. The net result was fifteen subjects in each of twelve experimental sessions for a total of 180 subjects.

Manipulation Checks

The data necessary for several manipulation checks were collected in the second questionnaire. Questions were included to determine if subjects were indeed unfamiliar with the test commercial, the program, and the Lois and Mr. Christie brands (when appropriate). Subjects were also asked to give the number of times they saw the test commercial during the program to check the treatments of different repetition levels. In addition, the subjects were asked to list what they believed to be the purpose of the study.

Measurement

The constructs in the model and their operationalizations are given below. A copy of the questionnaire used to collect the data is included in Appendix C.

Emotional Feelings

Emotional feelings during the advertisements were measured with a scale similar to the one developed by Abelson et al. [1982] and the one used by Madden, Dillon, and Twible [1984], Madden, Debevec, and Twible [1985], and Allen and Madden [1985a]. The subjects were given a list of adjectives that completed the sentence "During the commercial did you feel _____." The adjectives used were: insulted, good, angry, happy, cheerful, irritated, warmhearted, pleased, repulsed, amused, stimulated, calm, shocked, and soothed. The subjects responded on a six-point scale with endpoints of "very much so" to "not at all."

Attitude Toward the Advertisement

The Ad evaluation construct was operationalized with the following items on a seven-point scale: interesting-boring, well made-poorly made, eye catching-dull, sensible-insulting, informative-empty, inventive-ordinary, and irritating-not irritating. This scale is similar to what others have used (see Table 3).

The Ad liking construct was measured with a seven point Likert scale with endpoints of Strongly Agree and Strongly Disagree. The subject was asked to respond to the statements: "I dislike the _____ commercial," "Overall, I enjoyed watching the _____ commercial," and "I am fond of the _____ commercial." The semantic

differential items of like very much-dislike very much, enjoyable-unenjoyable, and fond of-not fond of were also included.

Brand Attitude

Brand Utility was measured with the following items on a seven-point scale: useful-not useful, high quality-low quality, beneficial-harmful, valuable-worthless, wise-foolish, and important-unimportant. Brand Liking was measured in the same way as Ad Liking except the following statements were used: "I dislike (name of brand)," "Overall, I think I would enjoy using (name of brand)," and "I am very fond of (name of brand)." Also included were the semantic differential items of like very much-dislike very much, enjoyable-unenjoyable, and fond of-not fond of.

Purchase Intentions

Purchase intentions represents the likelihood that the respondent will purchase the brand in the future. This construct was operationalized with a three item semantic differential scale consisting of the items probable-improbable, likely-unlikely, and possible-impossible. This scale was used by Lutz, MacKenzie, and Belch [1983], MacKenzie and Lutz [1983], and MacKenzie, Lutz, and Belch [1986].

Involvement

Two studies of the effects of Aad examined the moderating effects of involvement; although both studies operationalized the construct in different ways. Lutz, MacKenzie, and Belch [1983] considered involvement to be the motivation to process message information and operationalized the construct as a 7-point item of how important the respondent perceived the purchase of the product category to be. Also included in the analysis was a measure of how knowledgeable the respondent was about the product class. This measure was used to determine the respondent's ability to process the message information. They then divided their sample into consumers low in both motivation and ability and consumers high in both areas.

Batra and Ray [1985] consider two types of involvement. The first type, product class involvement, is defined as "the care with which a brand choice is made" [p. 19] and refers to motivation on the part of the consumer. A second type of involvement, called message response involvement, is defined conceptually as the depth of processing of a particular message. The message response involvement, as defined, includes the antecedents of motivation, ability, and opportunity. Motivation refers to the level of product class involvement, ability refers to the consumers' product experiences and knowledge about the differences between brands with respect to their attributes, and opportunity refers to the likelihood of

exposure to the media the message is communicated in. Batra and Ray do not explicitly measure product class involvement; rather, they operationalize message response involvement as the number of cognitive responses after the advertisement exposure which "deal with the brand attribute assertions in the ad, for reasons of motivation, ability, or opportunity" [pp. 20-21]. The sample was split post-hoc into two groups: no support or counter argumentation (low involvement) and some support or counter argumentation given (high involvement). The validity of this operationalization can be debated on several grounds, especially the arbitrary cutoff point between the low and high involvement groups. In addition, this measure of message response involvement would not be appropriate for advertisements which do not include brand attribute assertions. Given the limited number of brand attribute statements made in emotional advertising appeals, the measure is not appropriate for this study.

This research considers the effects of product class involvement using a scale developed by Zaichkowsky [1985]. This scale, the Personal Involvement Inventory (PII), has been tested for its construct validity across product categories. The scale is given in Appendix B.

Brand Familiarity

Most brand familiarity scales in the literature are comprised of only one item. For example, Moore and

Hutchinson [1985] used a seven-point scale with the levels of: no familiarity; brand name only; brand name and vague impression of product class; brand name and product class only; brand name, product class, and low specific knowledge; brand name, product class, and moderate specific knowledge; brand name, product class, and high specific knowledge.

A multi-item scale of brand familiarity is desirable to enable the researcher to obtain a reliability estimate. The following items were developed for this research: "I have never heard of _____," "I have heard of _____ but I really don't know much about it," "I know a lot about _____," "I am more familiar with _____ than other brands of _____," "I use _____ frequently." The subjects were also asked the questions: "When you think of (name of product category), what is the FIRST brand which comes to mind?" and "What are all the different brands of (name of product category) that you can think of?"

Data Analysis

The data collected in this research were analyzed in two steps. First, the measurement model was evaluated. The purpose of this step is to assess the degree of measurement error in the observed responses. After the measurement model was evaluated, the second step was a least squares estimation of the structural parameters

using PACKAGE [Hunter, Gerbing, Cohen, and Nicol 1980]. A least squares estimation is superior when sample size is small since maximum likelihood estimation has been shown to be unstable at small sample sizes [Fornell and Larcker 1981].

In addition, the two-step procedure has been shown to be superior to the common practice of using LISREL [Joreskog and Sorbom 1981] to evaluate the measurement and structural models simultaneously in cases when the measurement model is less than perfectly specified [Anderson and Gerbing 1982; Burt 1976; Danes and Mann 1983; Gerbing and Hunter 1980, 1981]. The most important advantage of using a two-step procedure, or "limited information" approach, over LISREL's "full information" approach is related to the problem of "interpretational confounding." Burt [1976] gives examples to show that "(i)nterpretational confounding occurs when an individual assumes that an unobserved variable is assigned empirical meaning in terms of epistemic criteria when in fact it is assigned empirical meaning in terms of structural criteria" [p. 155]. In other words, interpretational confounding can exist when the unobserved variable or construct is based not only on correlations between indicators of that construct (as specified by the measurement model, or "epistemic criteria"), but is based also on correlations between the construct and other constructs in the model ("structural criteria"). Burt

notes that in a full information estimation process the construct will be defined

> "in terms of both epistemic and structural criteria but in some unspecified, flexible ratio of the two criteria . . . (and) (d)epending on the observed variance-covariance matrix S, some unobserved variables will be based entirely on epistemic criteria, others will be based entirely on structural criteria, while most will be a mixture of the two criteria" [p. 250].

As a result, the "empirical meaning" given to a construct could be very different from what the researcher had intended. In addition, when using a full information approach and the causal model does not fit the data, it is impossible to determine whether the problem lies in the measurement or the structural model. Bagozzi [1980] also notes that a two-step procedure "keeps the interpretation of theoretical variables constant in the analysis and makes for a more accurate estimation of the relationships between the theoretical variables" [p. 155]. Since some of the measures in this research have not been fully validated (e.g., brand familiarity, emotional feelings, involvement), efforts to eliminate interpretational confounding are critical.

An additional advantage to using a limited information approach has been illustrated by Gerbing and Hunter [1981]. They provide an empirical analysis in which

LISREL gave incorrect factor correlations when a correctly specified measurement model was used. The reason is that a full information approach will spread any misspecification error in the causal model over both the causal and measurement models. Therefore, any misspecification in the causal model will produce error in the estimated factor correlations. Since both theory and measurement in the area of affective responses to advertising are not well developed, a limited information analysis is most appropriate.

Measurement Model

A series of steps were undertaken to evaluate the measurement model. The first step, actually conducted before any data were collected, was to examine the content of the scale items designed to measure each construct. The remaining steps are statistical in nature and together provide an evaluation of the construct validity of the scales [Hunter and Gerbing 1982].

First, an exploratory factor analysis was performed to provide a general guideline for assessing the scale items designed to measure each construct. This analysis pointed out some scale items which did not load on the same factor as the other items in the proposed scales. In particular, not all of the brand familiarity items loaded on the same factor.

The next step in evaluating the measurement model included an assessment of the dimensionality of each of the scales. Two criteria must be met if the scale is unidimensional: internal and external consistency. Internal consistency is determined by examining the correlations between items in a scale and their correlations with the construct ("true score correlations" or "communalities"). This can easily be done through a confirmatory factor analysis. If a scale is unidimensional and the measurement model is linear, the correlation matrix for each scale will conform to one of two patterns. The first pattern is called a "flat" matrix where all scale items have equal communalities and correlations (within sampling error). A second pattern is acceptable when the items have different communalities: Spearman's hierarchial order. If the items are reordered from high to low communalities, the high correlations will be in the upper left-hand corner of the matrix and the low correlations will be in the lower right-hand corner [Hunter and Gerbing 1982].

The external consistency or "parallelism" of the items in a scale can also be determined by examining the correlation matrix from a confirmatory factor analysis.

> The general statement of parallelism is that the items in a unidimensional cluster have similar patterns of correlations with (1) items in other clusters or (2) other traits. In fact, the

> correlations for items of the same quality should be equal (to within sampling error) across all other variables. Differences in the correlations for two items in the same cluster should be directly proportional to differences in the reliability of those items [Hunter and Gerbing 1982, p. 279].

An additional way to illustrate the parallelism of scale items is with a "similarity coefficient" [Hunter 1973]. This similarity coefficient evaluates how proportional, or parallel, two items are by computing a coefficient based on the correlations of the two items with all items in different scales. When the similarity coefficient equals -1 or +1, the items are perfectly parallel.

The confirmatory factor analysis and similarity coefficient matrix were both evaluated several times, rearranging and deleting scale items where appropriate. Each of the scales are discussed in Chapter IV. In addition, the reliability of each scale is indicated by the value of coefficient alpha. It should be noted that coefficient alpha does not provide an estimate of the dimensionality of a scale. In fact, coefficient alpha will provide an unbiased reliability estimate only when the scale is unidimensional [Hunter and Gerbing 1982].

Structural Model

After the assessment and revision of the measurement model, the path coefficients were estimated with the ordinary least squares routine in PACKAGE. The test of fit of the models is an overall χ^2 test using the traditional alpha level of .10 [Bagozzi, Fornell, and Larcker 1981; Batra and Ray 1985; Burnkrant and Page 1982]. Alternate models which are "hierarchially related" or "nested" within each other can be compared further. Models are hierarchially related when one contains all of the same relationships as the other in addition to at least one unique relationship. Such models can be compared by examining the change in the χ^2 statistic when the additional link(s) are added. The difference in the χ^2 values are tested for significance with degrees of freedom equal to the difference in the degrees of freedom for the two models [Aaker and Bagozzi 1979; Fornell and Larcker 1981; Joreskog and Sorbom 1982].

Unfortunately, a statistical test for the significance level of beta weights computed from data corrected for attenuation is not available. Such a test would require the integral for the compound distribution made up of the distribution of the variables and the attenuation distribution. The test is theoretically possible; however, no one has yet attempted to work through the extensive mathematics. The confirmatory factor analysis with correction for attenuation used here has the benefit

of removing measurement error and providing much better estimation of "true" scores for the constructs [Nunnally 1978, p. 219]. As a result, the structural model is much more representative of the "true" relationships between the constructs. Clearly, computing the beta weights in any other way just to be able to use a significance test is inappropriate.

The moderating effects of involvement were considered by splitting the sample into high and low involvement groups and comparing path coefficients. The "importance" dimension found in the PII was used since it seemed to best correspond to the measures used by Lutz, MacKenzie, and Belch [1983] and Batra and Ray [1985].

CHAPTER FOUR

RESULTS

This chapter presents the results of the experiment and data analysis. Manipulation checks are presented first. The analysis of the measurement model is given next. The hypotheses and the structural analysis follow.

Manipulation Checks

When the experimental advertisements were selected, it was hoped that the subjects would be unfamiliar with the commercial. All subjects in the Lois and Mr. Christie experimental groups indicated that they had never seen the respective commercial before the experiment. Six subjects said that they had previously seen the Pepsi commercial and eleven subjects indicated a prior exposure to the Lee commercial. However, during debriefing subjects indicated that they had seen a similar Lee commercial using a few of the same scenes with different music. The experiment was also designed so that the subjects would be unfamiliar with the brands Lois and Mr. Christie. Toward the end of the second questionnaire subjects were asked the question "Have you ever heard of (Lois jeans/Mr. Christie cookies) before today?" In the Lois experimental group 41 subjects replied "no," two replied "yes," and two replied "not sure." For Mr. Christie the responses were: 43 "no," one "yes," and one "not sure."

In addition to the unfamiliar commercials and brands, the "Chain Reaction" program was selected in the hope that the subjects would have had either minimal or no prior exposure to the program. Eighty one percent of the subjects said that they had never seen the "Chain Reaction" program before the experiment. Of the respondents who indicated that they had seen the program before, the mean number of times the program had been seen was only 3.2. Given the limitation of using a program currently running on television, the conditions of minimal or no prior exposure were met.

Toward the end of the second questionnaire subjects were also asked "How many times did you see the _____ commercial during the 'Chain Reaction' program you just watched?" Table 6 compares the actual number of repetitions determined by the experimental condition with the number of repetitions reported by the subjects. Just slightly over three percent, a satisfactory percentage, were incorrectly classified.

The last question on the second questionnaire asked the subjects to describe what they believed to be the purpose of the study. Only four percent of the subjects listed the true intent of the experiment (to determine if feeling during the commercial affected feelings or attitude toward the brand). Sixteen percent of the subjects described the purpose to be related to determining the effectiveness of television commercials and/or

Table 6

Manipulation Check

	Actual Number of Repetitions											
	Lee			Pepsi			Lois			Mr. Christie		
	1	2	3	1	2	3	1	2	3	1	2	3
Number of repetitions reported by the subject												
Blank	1	0	0	1	1	0	1	0	0	0	0	0
1	13	1	0	14	0	0	14	0	0	14	0	0
2	1	14	0	0	14	0	0	15	2	1	15	0
3	0	0	14	0	0	15	0	0	13	0	0	15
4	0	0	1	0	0	0	0	0	0	0	0	0

whether the commercial makes you want to buy the product. Eighty percent felt that the purpose was related to determining segmentation decisions for the "Chain Reaction" program and what types of commercials should be shown during the program. Together, all of these manipulation checks indicate that the experimental conditions were adequately met.

Measurement Model

The measurement model was evaluated prior to estimation of the path coefficients. The details of the analysis for each of the scales are presented below.

Emotional Feelings

The fourteen items of the Emotional Feelings (EF) scale broke out into two (highly correlated) clusters; Positive EF and Negative EF. This is consistent with what Abelson et al. [1982] and Allen and Madden [1985a] have found. The items included in the Positive EF scale were: good, happy, cheerful, warmhearted, pleased, and soothed. The similarity coefficients ranged from .96 to 1.0 and the coefficient alpha value was .95. The items included in the Negative EF scale were: insulted, angry, irritated, and repulsed. The similarity coefficients ranged from .97 to .98 and the coefficient alpha was .91.

Once the inappropriate items were eliminated from the Positive and Negative EF scales, the two were combined to

form an overall EF scale. One reason why the scale breaks down into two clusters is that it does not sufficiently allow for those subjects who feel neither positive nor negative. Consider the following example. Suppose a subject is asked to respond "yes" or "no" to two statements: "I am happy" and "I am sad." If the subject is indeed happy, he or she will respond "yes" to the first question and "no" to the second. If "yes" is given a code of "1" and "no" is given a code of "0," the subject will have codes of 1 and 0. A second subject who is sad would have codes of 0 and 1. A third subject who is neither happy nor sad will have codes of 0 and 0. By subtracting the second code from the first, subject one would have a score of 1, subject two would have a score of -1 and subject three would have a code of 0. We would now have a single scale that accurately represents the three conditions. The EF scale was developed in a similar way. The codes for the six Positive EF items and the codes for the four Negative EF items were separately summed. The sum of the Negative EF items was then subtracted from the sum of the Positive EF items. The result was a single scale representing the entire range of positive, neutral, and negative feelings.

Brand Attitude

The Prior Brand Liking (Prior BL), Brand Liking (BL), and Advertisement Liking (AdL) constructs were all

measured with the same three Likert and same three Semantic Differential items. A Multitrait-Multimethod Matrix was analyzed to determine if method variance was present [Campbell and Fiske 1959] and is shown in Table 7.

The matrix in Table 7 is arranged by trait and is analyzed using the procedure described in Appendix A. Comparing the average of the diagonal values within each trait with the off-diagonal values gives an estimate of the percentage of variance due to methods. For the diagonals,

[(91+87)+(-03-12)+(39+25)]/6 = 37.83

and for the off-diagonals,

[(86+87)+(-05-10)+(31+32)]/6 = 36.83.

This analysis illustrates that one percent of the variance is due to methods (37.83-36.83=1). Since the method variance was minimal, the analysis of the scale items continued. The final Prior BL scale included all six items specified earlier; similarity coefficients ranged from .98 to 1.0 and the coefficient alpha for the scale was .96. The final BL scale also included the same six items with similarity coefficients from .97 to 1.0 and a coefficient alpha of .94.

The Prior Brand Utility (PBU) and Brand Utility (BU) constructs were operationalized with the items useful/useless, beneficial/not beneficial, valuable/worthless, and important/unimportant. The item wise/foolish item did

Table 7

Multitrait-Multimethod Matrix

	PBLSD	PBLL	BLSD	BLL	AdLSD	AdLL
PBLSD	1.00	.94	.91	.86	-.03	-.10
PBLL	.94	1.00	.87	.87	-.05	-.12
BLSD	.91	.87	1.00	.92	.39	.32
BLL	.86	.87	.92	1.00	.32	.25
AdLSD	-.03	-.05	.39	.31	1.00	.99
AdLL	-.10	-.12	.32	.25	.99	1.00

Note: Last letter in each code refers to the type of scale. SD represents semantic differential. L represents likert. The first letters refers to the construct. PBL represents prior brand liking. BL represents brand liking after exposure to the advertisement. AdL represents advertisement liking.

not fit statistically into the PBU scale and, to keep a conceptual match, was omitted from the BU scale as well. Similarity coefficients were from .96 to .99 for both scales and coefficient alpha was .92 for the PBU scale and .94 for the BU scale.

Attitude Toward the Advertisement

Aad was originally specified as having two components: Ad Liking (AdL) and Ad Evaluation (AdE). The final AdL scale included the six Semantic Differential and Likert items in addition to the items good/bad and favorable/unfavorable which were found to statistically fit into the scale. Similarity coefficients were either .99 or 1.0 and coefficient alpha was .98.

The seven remaining items initially specified in the AdE scale did not form one unidimensional scale. Two dimensions were found. The first was labeled "Ad Evaluation" and included the items well made/poorly made, insulting/not insulting, informative/empty, and irritating/not irritating. The similarity coefficients ranged from .93 to .98. The second dimension, labeled "Ad Interest," included the items inventive/ordinary, interesting/boring, and eye catching/dull with similarity coefficients of .93 to .99. The values for coefficient alpha were .85 and .89 respectively. This empirical finding of different dimensions for the Aad construct should be noted since many researchers have used many of

these same items as measures of one construct (see Table 3). In addition it seems to support the positions of Shimp [1981] and Edell and Burke [1984] that both affective and evaluative dimensions underly the construct.

The AdL and the AdE components were originally hypothesized to be conceputally distinct based on the discussions by Shimp [1981] and Edell and Burke [1984] that there are both cognitive and affective dimensions to the Aad construct. However, after correction for attenuation, the AdL and the first AdE scales had a correlation of greater than 1.0. In addition, the two scales were parallel in that they had similar correlations with other constructs. For this empirical reason, they were combined to form one Aad scale. Unfortunately, it is impossible to tell without further research if the lack of discriminant validity between the AdL and AdE dimensions of Aad is a theoretical or a measurement problem.

Purchase Intentions

The similarity coefficients for the three Purchase Intentions (PI) measures (probable/improbable, likely/ unlikely, and possible/impossible) were all 1.0 and the scale had a coefficient alpha of .97.

Involvement

The Involvement scale as specified by Zaichkowsky [1985] did not satisfy the conditions of

unidimensionality. This finding is in conflict with Zaichkowsky's conclusion that the scale is unidimensional. However, Zaichkowsky used an exploratory factor analysis with a varimax rotation to evaluate dimensionality. Hunter and Gerbing [1982] discuss why an exploratory factor analysis will not provide an assessment of dimensionality. The primary reason is that the exploratory factor analysis "underfactors" and groups all correlated scale items into one single factor.

Further inspection of the PII uncovered three dimensions. The first dimension, labeled "Utility" contained the items: valuable/worthless, significant/insignificant, useful/useless, needed/not needed, fundamental/trivial, vital/superfluous, and essential/nonessential. Similarity coefficients ranged from .93 to .99 and coefficient alpha was .94. The second dimension was labeled "Importance" and included the items: means a lot to me/means nothing to me, relevant/irrelevant, interested/uninterested, important/unimportant, of concern to me/of no concern, matters to me/doesn't matter, wanted/unwanted, and desirable/undesirable. Coefficient alpha was .95 and the similarity coefficients ranged from .92 to .99. The third dimension, "Interest," included: exciting/unexciting, interesting/boring, and fascinating/mundane. Coefficient alpha was .90 and the similarity coefficients were .95, .97, and

.99. The item appealing/unappealing did not fit statistically into any one of the three dimensions.

Brand Familiarity

Only three items were retained in the Brand Familiarity scale. These items were: "I am more familiar with _____ than other brands of _____," "I use _____ frequently," and the question "When you think of _____ what is the FIRST brand that comes to mind?" This last item was scored dichotomously with a value of one if the brand mentioned was Pepsi or Lee to indicate "top of mind" awareness for the brands of interest. In addition, this question was asked prior to the other familiarity questions. The properties of this scale were not as high as the others, yet they were still within acceptable levels. The similarity coefficients were from .75 to .95 and a value of .73 was obtained for coefficient alpha.

Structural Model

Examining the correlations for each of the four brands separately revealed the presence of interaction effects. Table 8 shows the correlations between the measures of the constructs, corrected for attenuation, for each of the four different advertisements. Notice that the correlations for Lee jeans on the Aad and EF measures with PBU, PBL, BU, BL, and PI all have the opposite sign than the other three commercials. This finding could be

Table 8

Correlations Between Constructs

	REP	PBU	PBL	RF	Aad	BU	BL	PI
REP	100							
PBU	--, -- -16,-26	100						
PBL	--, -- -02,-28	--, -- 81, 91	100					
RF	-24, 19 -37,-09	--, -- 29,-33	--, -- 14,-25	100				
Aad	-03, 23 -16, 09	--, -- 22,-42	--, -- 14,-38	83, 81 78, 90	100			
BU	-07,-06 -25,-08	--, -- 90, 88	--, -- 82, 73	49, 38 22,-14	58, 38 11,-14	100		
BL	-07,-04 -04,-10	--, -- 71, 76	--, -- 91, 93	60, 45 13,-18	64, 37 16,-25	78, 85 87, 73	100	
PI	-14,-06 -08,-11	--, -- 59, 68	--, -- 81, 86	38, 35 08,-23	41, 28 11,-31	75, 71 76, 59	72, 78 93, 94	100

Note: Decimals are omitted.
--,-- PBU and PBL do not exist for Mr. Christie and Lois

Upper left corner = Mr. Christie, Upper right corner = Lois
Lower left corner = Pepsi, Lower right corner = Lee

explained as follows. The Pepsi commercial was generally well liked and those with positive prior attitudes toward Pepsi were more likely to respond favorably to the commercial. However, the Lee commercial was disliked by those who had a positive prior attitude toward Lee. This may have been due to the fact that the sexually suggestive nature of the Lee commercial was not consistent with the brand image that Lee jeans has traditionally held. While the reaction toward the Lois commercial was even less favorable than for Lee, the positive correlations between Ab and Aad are the result of the subjects' lack of any prior attitude or image for Lois jeans.

As a result of the interactions in the data, it was necessary to evaluate the structural model for each commercial separately. If the data for each brand was combined into one large data set, the positive relationships for some of the brands would offset the negative relationships for the others. The interactions would pull the correlations closer to zero and would obscure both the positive and negative relationships that actually exist. However, examining the path model for each brand individually provides additional insight into how the causal processes compare in different "situations."

The structural models that best fit the data for each of the four commercials are shown in Figures 4 through 7. The brand familiarity measures were not used since the

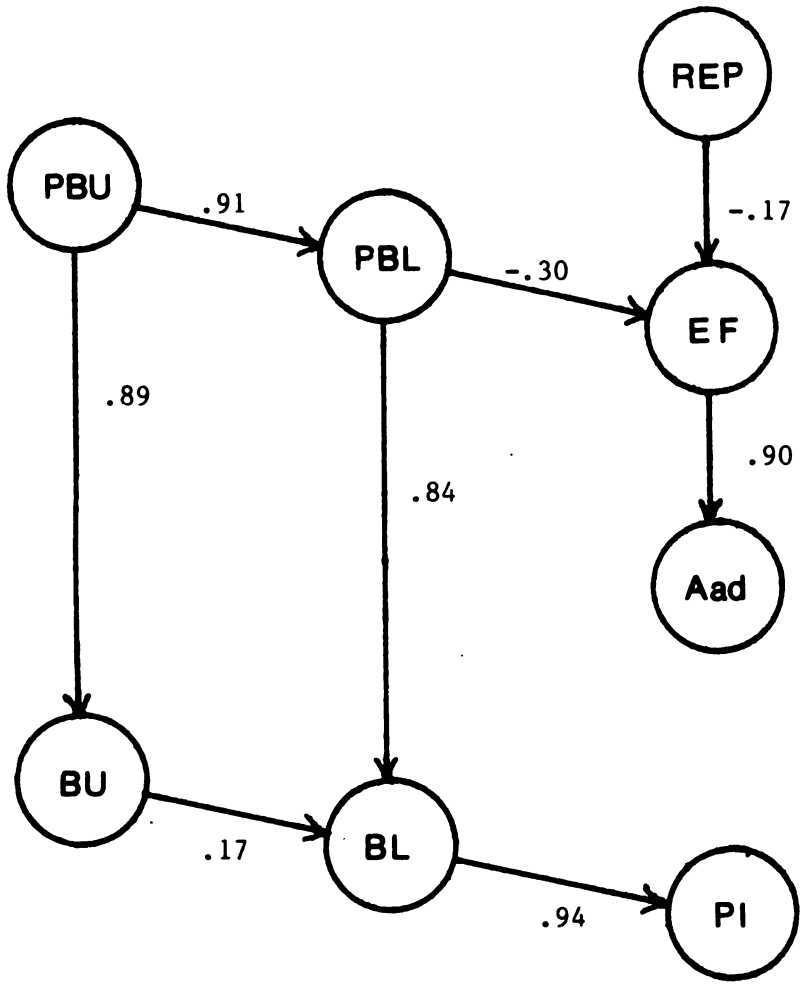


Figure 4. Lee Path Model

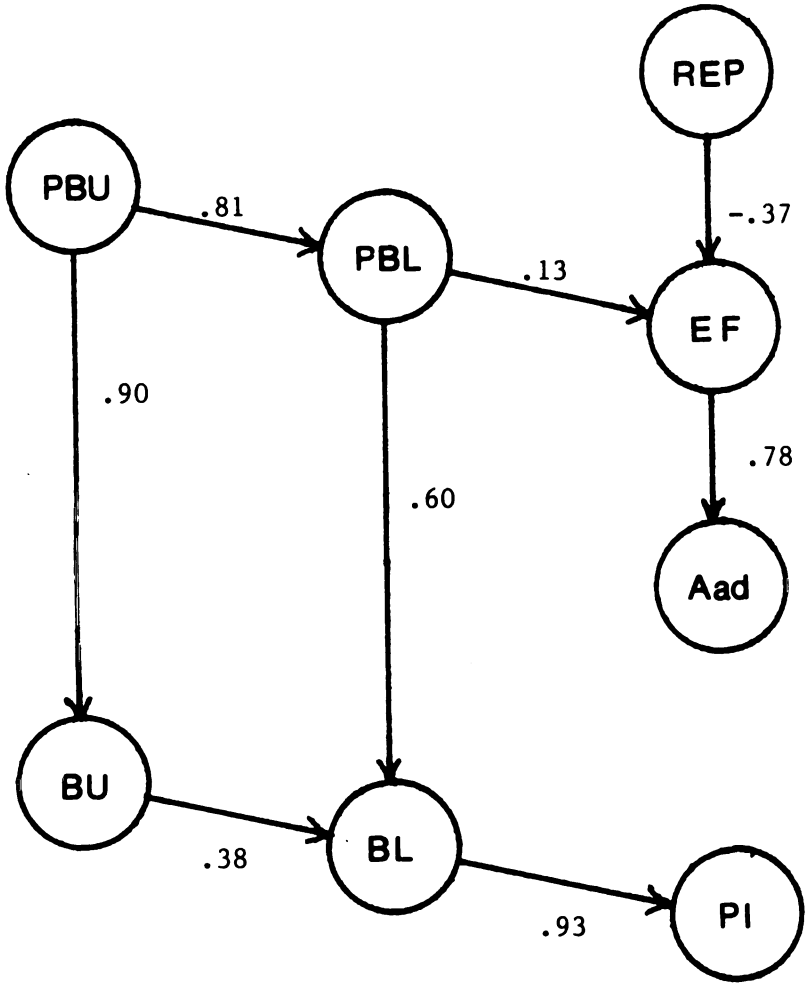


Figure 5. Pepsi Path Model

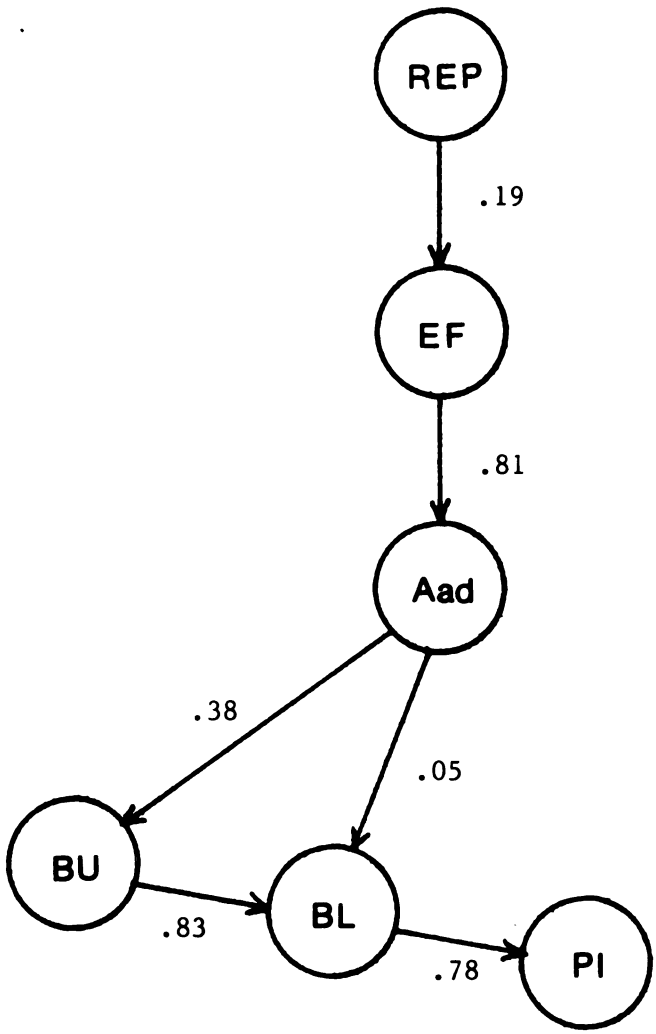


Figure 6. Lois Path Model

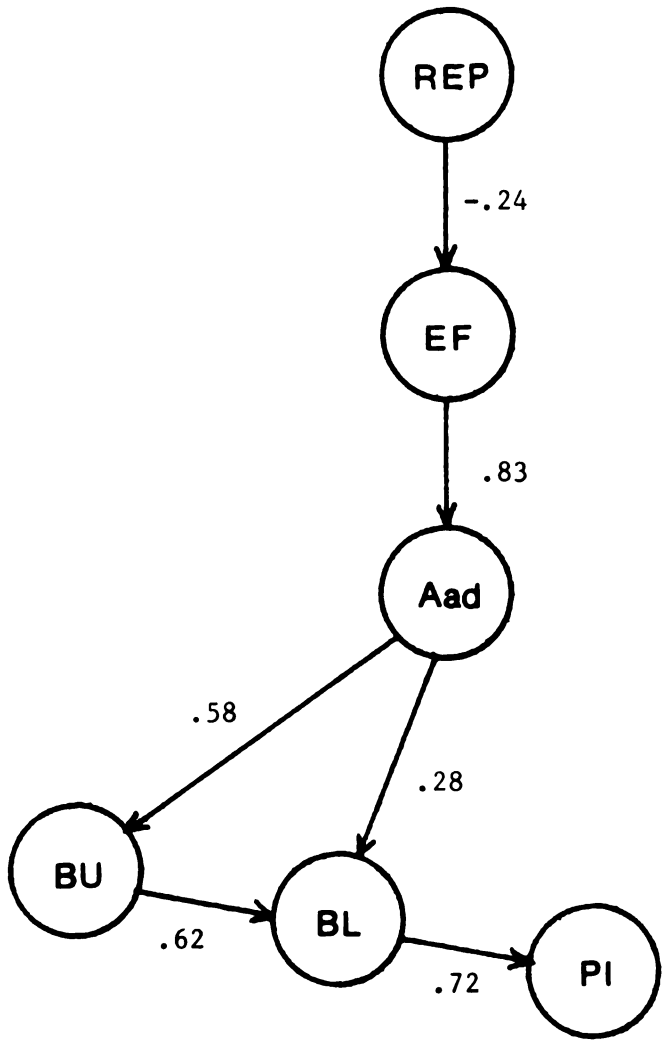


Figure 7. Mr. Christie Path Model

commercials are now split into familiar (Lee and Pepsi) and unfamiliar (Lois and Mr. Christie) brands.

It was hypothesized that emotional feelings would influence ad liking, ad evaluation, post brand liking, and post brand utility. Recall that the ad liking and ad evaluation scales did not have discriminant validity and were combined to form an overall Aad scale. In all four models, emotional feelings had a very strong positive effect on Aad. Because of this strong correlation, only the effects of Aad on brand liking and brand utility were estimated in the causal model. This was to avoid unstable beta weights due to multicollinearity concerns if both Aad and emotional feelings were used as predictors. However, the effects of emotional feelings on brand liking and utility do filter through the Aad response. In addition, the third Aad dimension (Ad Interest) did not fit statistically into any of the four models.

It was also hypothesized that Aad would have a significant effect on the Ab measures only when subjects are unfamiliar with the brand. Table 9 provides data on the fit of the two different models for each of the four brands to test this hypothesis. In the first model, the paths between Aad and Brand Utility and Aad and Brand Liking were excluded. The second model includes these paths. The difference in fit of the two models for each of the four brands is given in Table 10.

Table 9

Fit of Structural Models

Model	Lee		Pepsi		Lois		Mr. Christie	
	df	χ^2	df	χ^2	df	χ^2	df	χ^2
No Aad links	20	7.44	20	3.35	11	17.73	11	32.90
	p>.90		p>.90		p=.09		p<.01	
Aad -> BU, Aad -> BL	18	12.55	18	4.09	9	1.84	9	1.89
	p=.81		p>.90		p>.90		p>.90	

Table 10

Comparison of Fit of Alternate Models

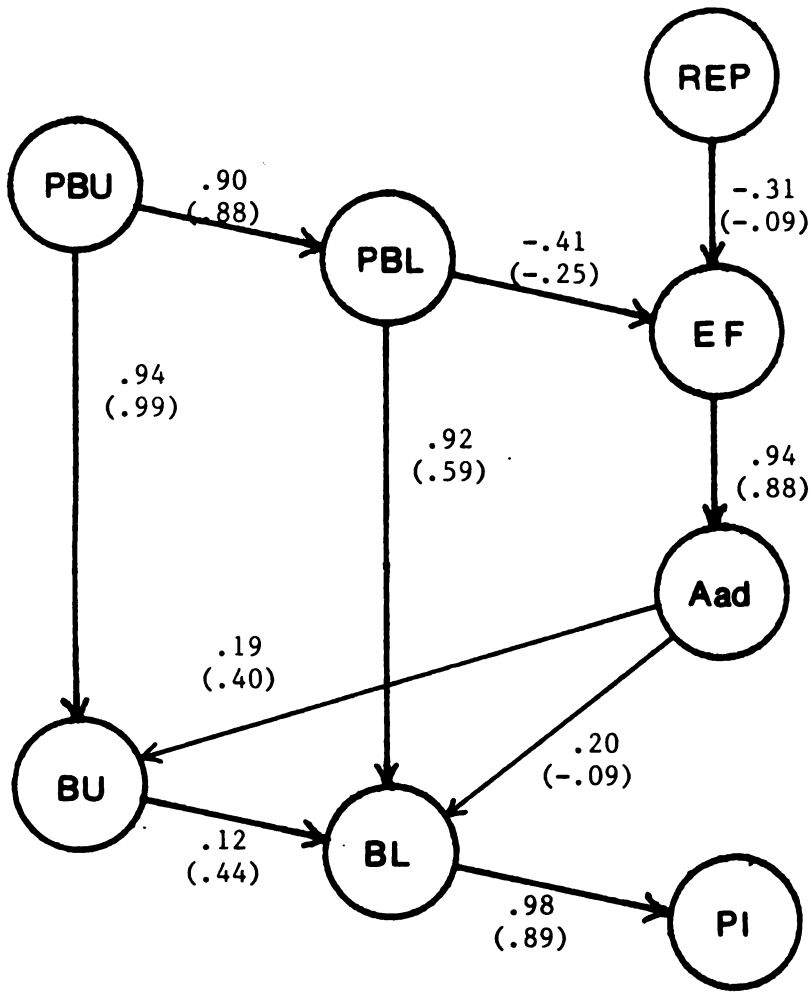
Lee		Pepsi		Lois		Mr. Christie	
df	$\Delta\chi^2$	df	$\Delta\chi^2$	df	$\Delta\chi^2$	df	$\Delta\chi^2$
2	5.11	2	.74	2	15.89	2	31.01
p=.08		p=.69		p<.01		p<.01	

The difference in the fit for the two models for Lee is significant and the model without the Aad links fits significantly better. While there is no statistically significant difference in fit of the models for Pepsi, the path coefficients for Aad -> BU and Aad -> BL are only -.09 and .04 respectively. While a statistical test for significance of these path coefficients is not available, it is easy to see that the values for the Aad links in the Pepsi model are not substantially different from zero. To contrast, the Lois and Mr. Christie models fit significantly better when the Aad links are included. In sum, the familiar brands have nonsignificant Aad -> BU and Aad -> BL paths while the same paths are significant for the unfamiliar brands. These findings lend support to the hypothesis that the Aad links will only be significant for unfamiliar brands.

The model as originally specified included independent effects of brand liking and brand utility on purchase intentions. Batra and Ray [1985] found this relationship using similar measures. The model that best fit the data however, illustrates a causal relationship from brand utility to brand liking. This is consistent with the findings of MacKenzie, Lutz, and Belch [1986] who found that cognitions about a brand caused an affective brand attitude response.

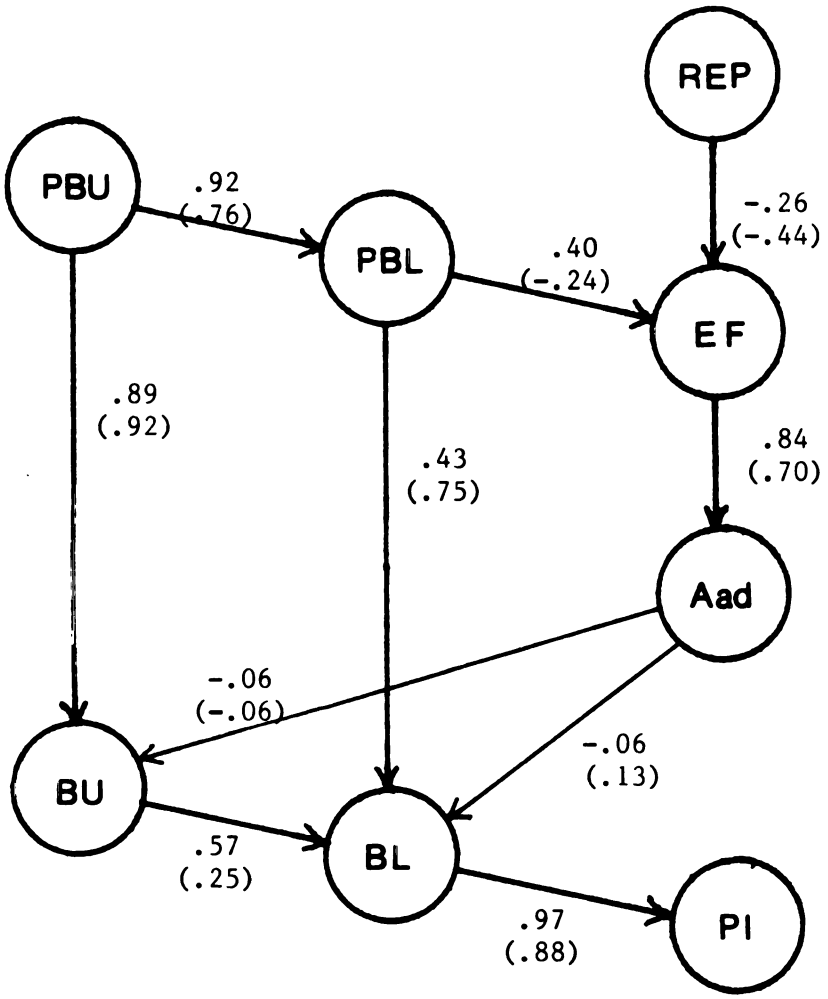
The tests of the moderating effects of involvement are illustrated in Figures 8 through 11. The fit of the models for the high and low involvement subgroups are given in Table 11. In contrast to the models for the total samples, the models for Lee and Pepsi did not fit significantly better when the Aad paths were excluded.

Since there is no significance test available to statistically determine if the path coefficients are different in the high and low involvement cases, a significance test to determine if uncorrected correlations are different from zero can be used as a rough estimate. With a sample size of 22 or 23 (45 subjects for each brand split into high and low involvement), an uncorrected correlation would have to be .39 or greater to be significantly different from zero. Using this number as a guide for the difference between the path coefficients in Figures 8 through 11, there is only one significant difference between the coefficients in the high vs. low involvement conditions for the four brands. The difference occurs in the link between prior brand liking and emotional feelings in the Pepsi model. For individuals who have a high involvement with soft drinks the relationship is positive (.40), and for individuals with a low involvement level the relationship is negative (-.24). It could be that individuals with a low level of involvement with soft drinks do not have strongly formed attitudes toward soft drink brands. Therefore, if the prior brand



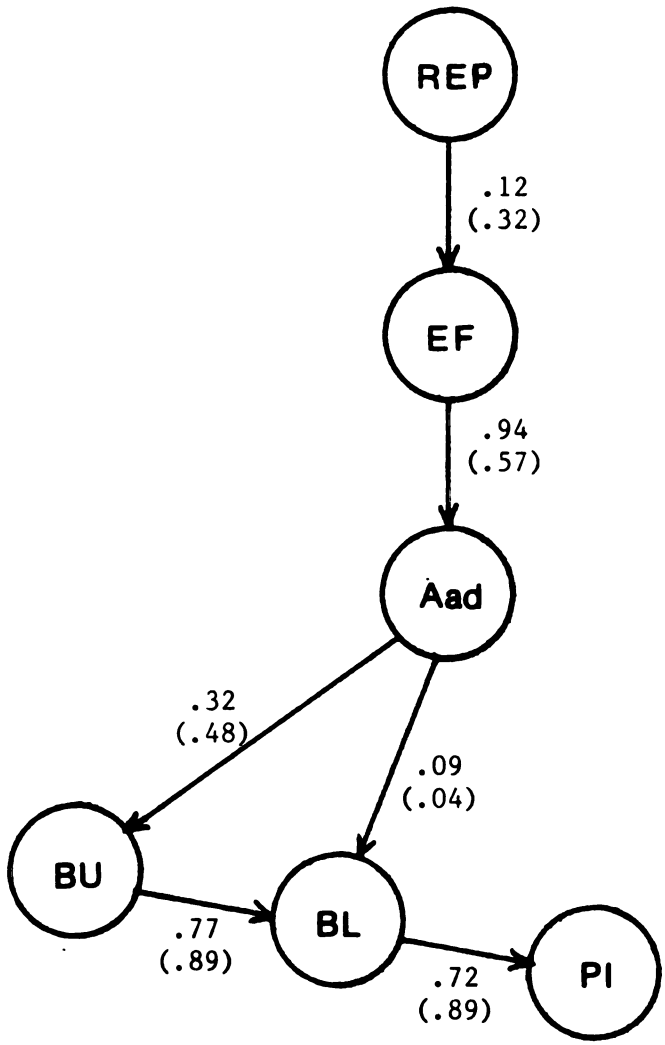
Key: Low involvement in parentheses

Figure 8. Lee Path Model for High and Low Involvement



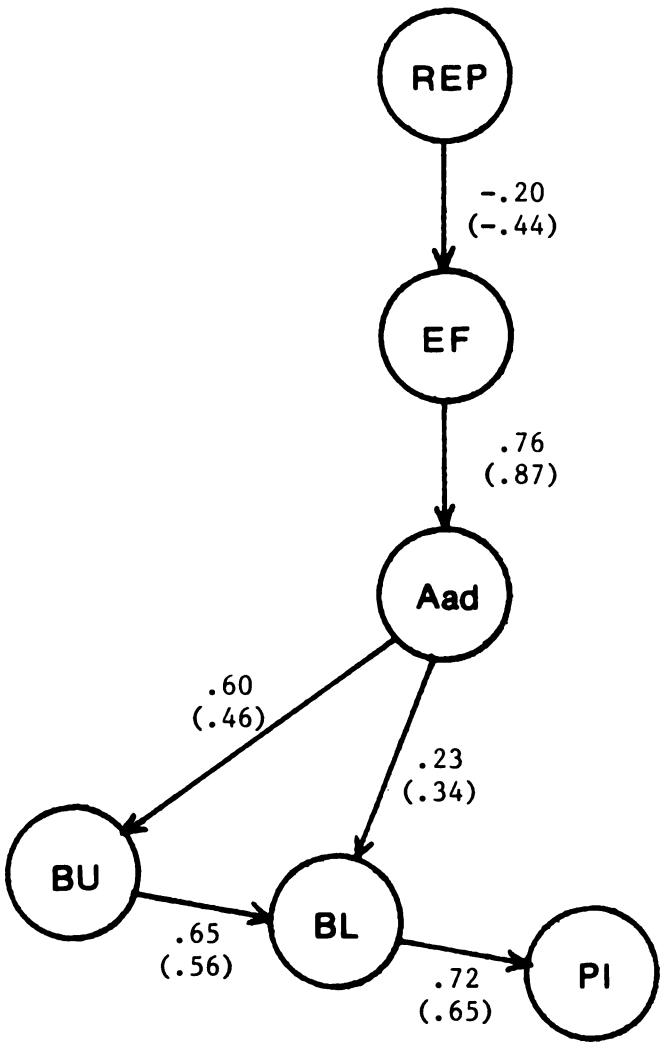
Key: Low involvement in parentheses

Figure 9. Pepsi Path Model for High and Low Involvement



Key: Low Involvement in parentheses

Figure 10. Lois Path Model for High and Low Involvement



Key: Low involvement in parentheses

Figure 11. Mr. Christie Path Model for High and Low Involvement

Table 11

Fit of Structural Models for High and Low Involvement

	Lee		Pepsi		Lois		Mr. Christie	
	df	χ^2	df	χ^2	df	χ^2	df	χ^2
High Involvement	18	6.48	18	3.68	9	0.74	9	1.95
	p>.90		p>.90		p>.90		p>.90	
Low Involvement	18	15.13	18	3.68	9	4.02	9	3.88
	p=.65		p>.90		p>.90		p>.90	

liking of Pepsi was neutral or slightly negative and the individual had a positive emotional reaction to the commercial, a negative path coefficient would result. The lack of significance for the difference between any other coefficients in the Pepsi model indicated that a positive emotional reaction to the commercial was not enough to significantly change attitudes after the commercial exposure.

Given the small subgroups for the high and low involvement conditions and, consequently, the large difference needed for significance between the coefficients, it is possible that the moderating effects of involvement could show up if the path coefficients are consistently higher or lower within the involvement conditions when compared across the four brands. The hypotheses stated moderating effects of involvement for the following relationships: BU -> PI, BL -> PI, Aad -> BU, and Aad -> BL. The path coefficients for these relationships in the high and low involvement conditions are shown in Table 12. Since BU was found to have an indirect effect on PI, BU -> BL is substituted for the BU -> PI relationship. Table 12 does not reveal patterns where the path coefficients for any of the relationships are consistently higher or lower in an involvement condition across the four brands. It appears that, overall, involvement does not have significant moderating effects.

Table 12

Path Coefficients for High and Low Involvement

Relationship	Lee	Pepsi	Lois	Mr. Christie
BU -> BL	.12 (.44)	.57 (.25)	.77 (.89)	.65 (.56)
BL -> PI	.98 (.89)	.97 (.88)	.72 (.89)	.72 (.65)
Aad -> BU	.19 (.40)	-.06 (-.06)	.32 (.48)	.60 (.46)
Aad -> BL	.20 (-.09)	-.06 (.13)	.09 (.04)	.23 (.34)

Note: Low involvement in parentheses

A test of the affective-conditioning hypothesis would indicate that the strength of the link between affect and brand attitude would increase as the number of advertisement exposures increases. Table 13 gives the correlations of the two affective constructs of emotional feelings and Aad with brand liking. Correlations which increase in absolute value as the number of repetitions increase would indicate support for the affective-conditioning hypothesis. None of the correlations in Table 13 fit an increasing pattern exactly, although the correlations for Lee are somewhat closer to the pattern. Since the sample had to be split further into the three repetition groups, these particular correlations have been calculated on only 15 observations. Therefore, it is difficult to make any conclusions other than to say that the affective-conditioning hypothesis does not appear to be supported.

Table 13

Correlations by Number of Repetitions

Number of Repetitions	Lee		Pepsi		Lois		Mr. Christie	
	BF/BL	Aad/BL	BF/BL	Aad/BL	BF/BL	Aad/BL	BF/BL	Aad/BL
1	-.07	.03	.20	.47	.81	.53	.54	.63
2	.03	-.10	.35	.18	.13	.49	.56	.68
3	-.45	-.53	-.13	-.16	.25	.32	.77	.36

CHAPTER V

DISCUSSION AND CONCLUSIONS

This chapter includes a discussion of the results and gives conclusions and suggestions for future research. The measurement model is discussed first and is followed by a discussion of the structural models. The structural models for the four brands are first evaluated with respect to the hypotheses presented in Chapter II. Next, comparisons are made between the four models. A discussion of limitations and managerial implications of the research follow.

Measurement Model

While an evaluation of the measurement model can be viewed as only a first step in a causal analysis, the measurement model evaluated here provides some very important implications independent of the causal model. First, it has been empirically demonstrated that a consumer's emotional feelings while viewing an advertisement are a different type of affective response than their attitude toward the advertisement. The scale looks very promising for continued use as a measure of emotional feelings as demonstrated by the tests of unidimensionality and reliability. An interesting issue, however, is whether the dimensions of positive and negative emotional feelings adequately describe all possible emotional

feeling responses to an advertisement. As discussed earlier, the literature has shown some support for the Pleasure/Arousal/Dominance dimensions of emotion. One could speculate that the emotional feeling scale used here may fit into the PAD dimensions. Consider the adjectives which comprise the positive dimension (good, happy, cheerful, warmhearted, pleased, soothed) and the negative dimension (insulted, angry, irritated, repulsed). These adjectives may in fact be representative of the positive and negative sides of the "Pleasure" dimension. The items which were not used in the emotional feelings scale were stimulated, amused, clam, and shocked. It seems likely that the stimulated and calm adjectives could easily fit into a dimension of "Arousal." Future research should dig further into the different types or dimensions of emotional feelings and should also consider which types of emotional feelings are most likely to be generated by an advertisement.

The Aad measures answer some questions and raise others. Mitchell [1986] addresses the question of whether the Aad effects found in the literature are an artificial finding which occurs only because Aad and brand attitudes are not distinct constructs. Mitchell concludes that the correlations between Aad and Ab of 0.60 and 0.70 found in his analysis indicate separate constructs. He also suggests that future research conduct additional tests using confirmatory factor analysis or illustrating that

the Aad -> Ab relationship holds in some situations and not in others. This research has completed both tests. First, the confirmatory factor analysis shows the constructs as distinct, and the simple correlations between Aad/BU and Aad/BL are lower (ranging from -.25 to .64 as shown in Table 6) than those found by Mitchell. In addition, the structural models in Figures 4 through 7 illustrate a significant Aad -> Ab relationship only in the situation when the brand in the advertisement is unfamiliar.

A second question which has been raised in the literature is whether there are both cognitive and affective dimensions to the Aad construct [Edell and Burke 1984; Shimp 1981]. This study uncovered three unidimensional scales from a number of Aad scale items. Comparing the items in each of the three scales with the scale items typically used to measure Aad (see Table 3) indicates that what some researchers think is a unidimensional scale might contain items from as many as three different dimensions of the construct. Any future research using the Aad construct should address this measurement issue. Valid measures consistent across the literature are a critical first step in assessing the relationship between Aad and other constructs.

Another scale, the Personal Involvement Inventory, was shown to have more than one dimension. The dimensions of "Utility," "Importance," and "Interest" were uncovered

in the data. Conceptually, these dimensions are distinct as well. Mandler [1982] notes that while a square coffee cup may be interesting to someone, the value or utility of a square coffee cup would be low. Similarly, while vegetables may be important to an individual's diet, they are often times not very interesting to the individual. Researchers using the PII as a measure of involvement should be aware that the scale is most likely not unidimensional.

While the brand familiarity scale was not used in the structural models it should be mentioned. The scale appeared to be unidimensional and had an acceptable coefficient alpha--yet it would benefit significantly from further development and testing. The literature needs a valid muliti-item scale for brand familiarity.

Structural Model

The discussion of the structural model will begin with a consideration of the hypotheses presented in Chapter II. Additional comparisons of the models for the four different brands will then be made.

Hypotheses

Results of the first hypothesis illustrate effects of emotional feelings on Aad. An important theoretical issue which arises is whether we should be concerned with both emotional feelings and Aad or if emotional feelings are

the only relevant advertising response. Allen and Madden [in press] raise the issue of whether Aad is a natural response to an advertisement. Emotional feelings may develop on the part of the viewer without any effort, yet an ad liking or evaluative response may only develop at the time the viewer is asked about the advertisement on a questionnaire. However, studies using cognitive response measures have found statements corresponding to both emotional feelings and Aad [Batra and Ray 1983; Swasy, Rethans, and Marks 1985]. These studies seems to indicate that both emotional feelings and Aad do occur naturally. However, one could again argue that the Aad response was developed at the time the subject was asked to list their thoughts.

If Aad is indeed a "natural" response, a second question is whether both the cognitive and affective dimensions occur. For example, an affective consumer response of a favorable or unfavorable liking for an advertisement seems more likely to occur naturally than a cognitive evaluation of the advertisement. Also, are ad evaluation and ad interest really dimensions of Aad? Is interest equivalent to the attention given to the advertisement? Will an individual who is interested in an advertisement have different emotional feelings than an individual who has less interest (i.e., would ad interest precede emotional feelings)? If affective-conditioning effects [Allen and Madden 1985b] do occur, is it our

emotional feelings or our liking of the ad that is paired with the brand? These are difficult research questions but ones which warrant attention.

The second hypothesis illustrates that Aad has a significant effect on the brand attitude measures only when the brand is unfamiliar to the individual. This finding is disturbing, however, because it would seem to imply that emotional advertisements are not very effective for familiar brands. A more satisfying speculation is that an emotional advertisement for a familiar brand has the task of either reinforcing a positive attitude or has the much greater task of changing an unfavorable attitude, rather than creating an attitude for an unfamiliar brand. When an individual responds positively to a commercial for a brand s/he has a positive attitude toward, the attitude might be reinforced and would not change. When a second individual has a positive response to the same commercial but had a negative prior brand attitude, it is unlikely that the one exposure to that commercial can produce a significant change in the attitude. As indicated by the data here, it will most likely take more than three exposures to produce an attitude change. The number of exposures necessary is a question which should interest both managers and academic researchers.

The structural model originally specified in the hypotheses (where brand utility and brand liking had independent effects on purchase intentions) did not fit

the data. The alternative model where brand utility causes brand liking which in turn causes purchase intentions was found to fit. This finding raises the question of why Batra and Ray [1985] found independent effects and why the "cognition causes affect" relationship has been found here and by others [Lutz, MacKenzie, and Belch 1983; MacKenzie and Lutz 1983; MacKenzie, Lutz, and Belch 1986]. Investigation could start by examining measurement differences and by comparing the models in various decision making "situations" for a possible explanation.

The final hypothesis considered the result of repeated exposure to the commercial. The structural models illustrate that repetition has a direct causal effect on emotional feelings. The direction of that effect, however, is not consistent among the four brands. Repeated advertisement exposure decreases emotional feelings for Lee, Pepsi, and Mr. Christie. This effect is not curvilinear as the wearout literature would suggest, although it is consistent with the findings of Burke and Edell [1986] and Messmer [1979] where their measures of Aad decreased with increased exposure. However, repetition of the Lois commercial led to more positive emotional feelings. A possible explanation is that the Lois commercial is very different from most commercials typically seen on network television. Due to the uniqueness of the advertisement the viewer may have been shocked or offended at the first exposure, but when the

commercial was seen two or three times, the viewer could have become accustomed to it and the negative response would no longer be as severe. One could speculate that at some point after three repetitions the emotional feelings would start to decrease and might nicely resemble a wearout curve.

Due to the necessity of splitting the sample into both brand and number of repetition categories, any conclusions about the support of the affective-conditioning or mood-position hypotheses would be suspect. Further research using larger sample sizes is warranted. In addition, repetition over different time intervals should be considered. Burke and Edell [1986] have shown that Aad decreased with repeated exposure, but after an eight-month period of no exposure to the advertisement, Aad returned to its original level. Further research could investigate different advertisement exposure intervals in an attempt to determine if a scheduling pattern can be found which would minimize any decreases in Aad and emotional feelings.

Additional Comparisons Among the Models

Perhaps the most important difference illustrated by a comparison of the four structural models is the significant effect of Aad on brand utility and brand liking only for the unfamiliar brands. Although the simple correlations for Aad/brand utility and Aad/brand liking

were nearly identical in each case (.58 and .64 for Mr. Christie and .38 and .37 for Lois), the path coefficients for Aad -> brand liking are lower than the Aad -> brand utility coefficients. This should not be interpreted to mean that Aad has a stronger effect on brand utility than brand liking. The path coefficients are lower due to the additional effect of brand utility on brand liking. Brand utility is simply a better predictor of brand liking than Aad. A similar result occurs in comparing the brand utility -> brand liking coefficients across models. The coefficient is lower for Lee and Pepsi. Again, this is the result of including prior brand liking as a predictor of brand liking. Prior brand liking should naturally predict brand liking better than brand utility.

Some of the literature has found a relationship between Aad and brand attitude for familiar brands [Batra and Ray 1985; Gresham and Shimp 1985]. An explanation for these findings is that the relationships between Aad and Ab that have been found might have been, in the language of path analysis, "spurious." A spurious relationship occurs when two variables have a common causal antecedent [Hunter and Gerbing 1982]. It was shown here that the prior brand attitude measures (PBU and PBL) acted as common antecedents to both Aad and the brand attitude measures taken after commercial exposure (BU and BL). Researchers may find a spurious relationship between Aad and Ab for familiar brands when the prior brand attitude

is not considered, and should therefore include prior Ab measures in any Aad study using familiar brands.

There are additional considerations regarding the Aad -> Ab effect for familiar brands. Figures 8 and 9 show the path models for the familiar brands Lee and Pepsi in high and low involvement situations. While the Aad -> Ab links for Pepsi are minimal, the links for Lee are somewhat higher; in particular, the relationship between Aad and BU for Lee (low involvement) is .40. Notice that this relationship occurs after controlling for the effect of prior brand utility. Future research can address what conditions will produce such an effect. The degree of familiarity an individual has with a brand should be considered. Gresham and Shimp [1985] found that Aad was a significant predictor of Ab for only six of fifteen brands currently available in the marketplace. It may be that the degree of brand familiarity in addition to prior brand attitude moderated the relationships they found. In this study, Lee had a slightly lower brand familiarity rating than Pepsi. This may partially explain the higher Aad -> Ab paths for the Lee versus Pepsi high/low involvement models. In addition to involvement, other factors which might effect the Aad -> Ab relationship for familiar brands include type of product, type of advertisement (magazine versus television, emotional versus non-emotional), or the number and timing of the advertisement repetitions.

A final comparison of interest among the models is the prior brand liking -> emotional feelings relationship. The effect is positive for all brands except Lee. Past research has uncovered only a positive relationship [Messmer 1979]. An experimental design evaluating combinations of positive and negative prior brand attitude with positive and negative emotional feelings (in addition to higher repetition levels) may provide some guidelines for advertisers who desire to reinforce or change attitudes for familiar brands using emotional advertising appeals.

A related issue which should be of interest to both advertising managers and academic researchers is what factors make people respond positively or negatively to a given emotional advertisement. Certainly the characteristics of the advertisement are important. Aaker and Bruzzone [1985] have evaluated sources of irritation in advertising and similar studies could be undertaken to determine sources of pleasant feelings. There must be other factors, in addition to the characteristics of the advertisement, that affect the emotional feelings we experience during advertisement exposure. Some possible factors include prior brand attitude, demographic characteristics, personality, and mood. Future study including these additional consumer characteristics represents a promising and important research avenue.

Limitations of the Research

The first limitation of this study is the external validity of the laboratory experiment. Effects found in a laboratory experiment may not occur in the same way outside the laboratory. However, this study attempted to create a more realistic exposure environment than that found in other research. Specifically, the test commercials were embedded in a television program in contrast to studies which show only several commercials [Batra and Ray 1985; Gresham and Shimp 1985] or show magazine advertisements as slides [Mitchell 1983, 1986; Mitchell and Olson 1981; Moore and Hutchinson 1983]. In addition, the advertisements were actual commercials developed by advertising agencies and were professionally edited to fit into the television program. These test commercials are superior to the stimuli used in other studies where the advertisements were simply developed by the researchers [Gardner 1985; Mitchell and Olson 1981; MacKenzie, Lutz, and Belch 1986]. A final consideration is that the subjects were not told ahead of time that they would be asked to evaluate the commercials. This contrasts with studies that instruct subjects on how to "process" the advertisements [Gardner 1985] or that require subjects to practice with the data collection methods before the advertisement exposure [Batra and Ray 1985].

The convenience sample that was used is another limitation. While the test commercials are for products

that both male and female college students would consider for purchase, the sample is not representative of the population of that market segment. This is not a significant limitation, however, since the intent of the research is to understand the process of how emotional advertisements "work" and the research does not generalize to outside populations. An additional limitation is the small sizes of the repetition level and involvement subsamples. Using small sample sizes can be viewed as a conservative approach to testing hypotheses. However, verification of the findings of this study with larger subsamples is warranted.

The repetition levels used in this study are also a limitation. While two repetitions of a commercial within a single television program are occasionally seen, three repetitions of the same commercial is not realistic. However, other studies which consider the effects of repetition have used up to five or six repetitions within a single television program [MacKenzie, Lutz, and Belch 1986; Messmer 1979]. An alternate experimental design would be to obtain subjects' responses to the commercial at three different points in time. For example, subjects could be asked to view three different television programs (with the commercial embedded only once) on three different days. Responses could then be collected after each exposure for each individual. This design would have the advantage of tracking the effect of the repetitions on

each individual rather than considering repetition cross-sectionally. However, after the first experimental session in a longitudinal design, the subjects would know the task that will be required of them during the second and third sessions. The responses to the second and third exposures would no longer be as "natural" as the first exposure.

Managerial Implications

The finding in this study that has the most important implication for advertising managers is that Aad has a significant effect on Ab only for unfamiliar brands. This implies that managers who are introducing a new brand or who are promoting an unfamiliar brand to a new market segment should attempt to develop advertisements that consumers like since Aad will have an effect on the newly formed brand attitude.

The implications for managers using emotional advertisements for familiar brands are not so clear-cut. This study shows that Aad does not have a significant effect on brand attitude for familiar brands at repetition levels between one and three exposures. Will increasing the repetition level lead to a significant effect? Do emotional advertisements for familiar brands simply act as a "reminder" to the consumer? Does the Aad -> Ab effect depend on the degree of brand familiarity? Will these same results be found for different creative executions

and/or brands? Further study in this area is needed to provide guidelines for advertisers who wish to use emotional appeals for familiar brands. Further study is especially important since only two advertisements for familiar brands were tested and they are clearly not representative of all possible types of emotional appeals.

The emotional feelings scale used here can also be used by managers when copytesting emotional advertisements. The structural models show that the more positive the emotional feelings experienced during a commercial, the more the individual will like the advertisement. This scale and method for copytesting emotional advertisements is particularly useful since traditional copytesting procedures have been shown to be inadequate for differentiating the effectiveness of emotional advertisements [Stout and Leckenby 1985; Zielske 1982].

In addition, managers should consider that repetition of a commercial within a short time interval tends to decrease the emotional feelings that the viewer experiences. Additional study with different repetition intervals would be very useful for making media scheduling decisions.

Summary

This research provides both measurement and empirical contributions. It was demonstrated that emotional feelings and attitude toward the advertisement are

theoretically and empirically distinct constructs. The emotional feelings scale was shown to have high reliability and conform to dimensionality tests, yet it may not represent all possible types of emotional feelings. A number of scale items were evaluated as measures of Aad and it was shown that not all of the scale items statistically fit into one unidimensional scale. Researchers should consider that the scales they are using for Aad may not be unidimensional. The Personal Involvement Inventory was also found to be multidimensional. In addition, a brand familiarity scale was developed.

A number of relationships between the constructs were evaluated and discussed. In particular, emotional feelings during commercial exposure have a strong positive effect on Aad, and Aad has a significant effect on Ab only for unfamiliar brands. Additionally, prior brand attitudes affect the emotional feelings. In sum, this research answers some questions about the relationships between the different types of affective responses to emotional advertising appeals. Suggestions for future research are provided, however, for direction in answering the many questions which still remain.

APPENDICES

APPENDIX A

APPENDIX A

Limitations in Using LISREL to Evaluate Multitrait-Multimethod Matrices and a Reanalysis of a Previous Multitrait-Multimethod Assessment

Construct valid measures are desired by researchers in any empirical analysis. In their classic piece, Campbell and Fiske [1959] developed a procedure to assess the construct validity of measures through what they called a Multitrait-Multimethod (MTMM) matrix. This analysis requires a correlation matrix of alternate measures for more than one trait or construct. An inspection of such a matrix should reveal certain patterns among the correlations which determine the validity of the measures.

The Campbell and Fiske procedure has been criticized by other researchers on a number of grounds [Althauser 1974; Althauser and Heberlein 1970; Althauser, Heberlein, and Scott 1971; Alwin 1974]. The primary criticism is that the patterns in the matrix can only be properly evaluated when measures of the traits have the same reliability. As a result of this and other criticism, researchers have suggested an alternative procedure using a causal modeling framework [Althauser 1974; Althauser and

Heberlein 1970; Althauser, Heberlein, and Scott 1971; Alwin 1974; Kenny 1976; Werts and Linn 1970; Werts, Linn, and Joreskog 1971]. The analysis would specify each measure loading on both a trait factor and a method factor. The epistemic and structural coefficients would then be estimated and examined for certain patterns designed to assess the degree of convergent and discriminant validity [see Alwin 1974].

Several studies in the marketing literature have used LISREL to estimate the MTMM model parameters [Arora 1982; Bagozzi 1980; John and Reve 1982; Madden, Debevec, and Twible 1985; Slama and Tashchian 1983]. The major limitation to using LISREL to evaluate a MTMM matrix is the problem of interpretational confounding. As discussed in Chapter IV, a full information technique such as LISREL can assign an empirical meaning to latent variables which is different from the meaning that the researcher had intended. This problem of interpretational confounding occurs when one or both of the following conditions is present in the data: "(1) the indicants of the unobserved variable have low covariances among themselves, and (2) the covariances of the indicants of the unobserved variable with the indicants of other unobserved variables in the model are widely different" [Burt 1976, p. 10]. Notice that these two criteria correspond directly to the criteria discussed in Chapter IV for assessing the unidimensionality of a scale. Low covariances among

indicants of a construct indicates a lack of internal consistency and widely different covariances between items in one scale with items in other scales indicates a lack of parallelism. Unfortunately, a lack of internal consistency and parallelism is precisely what will occur in a MTMM analysis done in a causal framework. When all variance is due to the traits (i.e., no method variance), the indicants of the method factors will have low covariance among themselves and will also have widely different correlations with the traits. The opposite will occur when method variance is high. Therefore, regardless of whether method variance is present, the confounding effects will occur and will result in an inaccurate estimate of the parameters in the model. Consequently, the assessment of convergent and discriminant validity will also be inaccurate.

An alternate procedure [Hunter 1977] is to first examine the covariances of the indicators of the trait and method factors. The first step in this alternate procedure is to correct the correlations for attenuation to eliminate the problem of varying degrees of reliability in the measures. The next step is to reorganize the corrected correlations by trait where the alternate measures of the first trait are listed first, followed by the alternate measures of each remaining trait. The corrected correlations should also be reorganized by method where the measures of each trait by the first

method are listed first followed by the alternate measures for the traits by each remaining method. If the criteria of internal consistency and parallelism are met for the indicators of the trait factors and not the method factors, then the researcher can conclude that method variance is not present. If the opposite occurs, where the criteria are met for the method factors and not the trait factors, then the variance is due to methods. However, when the variance is not due entirely to trait or method factors and the pattern is not so clear-cut, it would be desirable to know what percentage of the variance is due to the method and trait factors as the LISREL assessment purports to provide. Comparing the correlations between traits measured with the same method (e.g., Trait A/Method 1 with Trait B/Method 1 and Trait A/Method2 with Trait B/Method 2) to the correlations between traits measured with different methods (e.g., Trait A/Method 1 with Trait B/Method 2 and Trait A/Method 2 with Trait B/Method 1) can provide such a percentage. An illustration of this procedure follows using a reanalysis of a previous MTMM assessment as an example.

Madden, Debevec, and Twible (MDT) [1985] assessed the discriminant validity of Aad, attitude toward the object/brand (Ao), and attitude toward purchasing/consuming the brand (Ap). They used an affect scale, a Likert scale, and a semantic differential scale as alternate methods. Their LISREL analysis revealed significant method variance

which accounted for most of the association between Aad and Ao. However, a reanalysis of the correlation matrix in their study leads to the conclusion that only a small amount of the variance between Aad and Ab is due to method variance.

A reanalysis of the MDT correlation matrix can be evaluated from both a theoretical and an analytic perspective. The affect scale MDT used as an alternate measure of Aad, Ao, and Ap is nearly identical to the one used in this study to measure emotional feelings (as discussed in Chapter IV). The confirmatory factor analysis discussed earlier in this dissertation illustrated that emotional feelings are a different type of affective response than attitude. Therefore, what was measured by MDT with the affect scale was most likely not the same construct that was measured with the Likert and semantic differential scales. For this reason, only the Likert and semantic differential scales are included in the reanalysis.

Tables A1 and A2 present the MDT correlation matrix ordered by trait and by method. The correlations were corrected for attenuation using the reliabilities given in the MDT article.

As can be seen in Tables A1 and A2, the criteria of internal consistency and parallelism are not strictly met by either the trait or the method factors, yet the trait factors are much closer to meeting the criteria than the

Table A1

Correlations Arranged by Trait

	Aad L	Aad SD	Ao L	Ao SD	Ap L	Ap SD
Aad L	1.00	1.00	.40	.37	.39	.25
Aad SD	1.00	1.00	.40	.47	.32	.26
Ao L	.40	.40	1.00	.93	.95	.63
Ao SD	.37	.47	.93	1.00	.75	.62
Ap L	.39	.32	.95	.75	1.00	.86
Ap SD	.25	.26	.63	.62	.86	1.00

Table A2

Correlations Arranged by Method

	Aad L	Ao L	Ap L	Aad SD	Ao SD	Ap SD
Aad L	1.00	.40	.39	1.00	.37	.25
Ao L	.40	1.00	.95	.40	.93	.63
Ap L	.39	.95	1.00	.32	.75	.86
Aad SD	1.00	.40	.32	1.00	.47	.26
Ao SD	.37	.93	.75	.47	1.00	.62
Ap SD	.25	.63	.86	.26	.62	1.00

method factors. Taking the correlations between traits measured by the same method (e.g., Aad L with Ao L and Aad SD with Ao SD) and comparing them to the correlations between traits measured by different methods (e.g., Aad L with Ao SD and Aad SD with Ao L) provides an estimate of the method variance. Using the appropriate correlations from the matrix arranged by trait gives the following:

[(40+47)+(39+26)+(95+62)]/6 = 51.5

[(37+40)+(25+32)+(63+75)]/6 = 45.3

therefore, 6.2% of the variance is method variance. Certainly this method variance is not high enough to account for the entire relationship between Aad and Ao. Consequently, this reanalysis illustrates that a relationship between Aad and Ao does exist.

APPENDIX B

APPENDIX B

Personal Involvement Inventory

Instructions:

The purpose of this part of the study is to measure a person's involvement or interest in various products they regularly purchase or have purchased in the past. To take this measure, we need you to judge various products against a series of descriptive scales according to how YOU perceive the product. Here is how you are to use these scales:

If you feel that the product that appears at the top of the page is very closely related to one end of the scale, you should place your check mark as follows:

Unimportant X : ___ : ___ : ___ : ___ : ___ : ___ Important

or

Unimportant ___ : ___ : ___ : ___ : ___ : ___ : X Important

If you feel that the product is quite closely related to one or the other end of the scale (but not extremely), you should place your check mark as follows:

Appealing ___ : X : ___ : ___ : ___ : ___ : ___ Unappealing

or

Appealing ___ : ___ : ___ : ___ : ___ : X : ___ Unappealing

If you feel that the product seems only slightly related (but not really neutral) to one end of the scale, you should place your check mark as follows:

Uninterested ___ : ___ : X : ___ : ___ : ___ : ___ Interested

or

Uninterested ___ : ___ : ___ : ___ : X : ___ : ___ Interested

Important:

1. Be sure that you check every scale for every product; do not omit any.
2. Never put more than one check mark on a single scale.

Make each item a separate and independent judgment. Work at a fairly high speed through this questionnaire. Do not worry or puzzle over individual items. It is your first impressions, the immediate feelings about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

Any Questions?

(name of product category)

important	___:___:___:___:___:___:___	unimportant
of no concern	___:___:___:___:___:___:___	of concern to me
irrelevant	___:___:___:___:___:___:___	relevant
means a lot to me	___:___:___:___:___:___:___	means nothing to me
useless	___:___:___:___:___:___:___	useful
valuable	___:___:___:___:___:___:___	worthless
trivial	___:___:___:___:___:___:___	fundamental
beneficial	___:___:___:___:___:___:___	not beneficial
matters to me	___:___:___:___:___:___:___	doesn't matter
uninterested	___:___:___:___:___:___:___	interested
significant	___:___:___:___:___:___:___	insignificant
vital	___:___:___:___:___:___:___	superfluous
boring	___:___:___:___:___:___:___	interesting
unexciting	___:___:___:___:___:___:___	exciting
appealing	___:___:___:___:___:___:___	unappealing
mundane	___:___:___:___:___:___:___	fascinating
essential	___:___:___:___:___:___:___	nonessential
undesirable	___:___:___:___:___:___:___	desirable
wanted	___:___:___:___:___:___:___	unwanted
not needed	___:___:___:___:___:___:___	needed

APPENDIX C

APPENDIX C

Questionnaire

The following is the questionnaire which was used to collect responses after the television program and test commercial exposure. The questionnaire was modified for each of the experimental sessions to include the appropriate brand name (Lee, Lois, Mr. Christie, or Pepsi). If the subjects saw the test commercial only once, the directions to recall thoughts or feelings "DURING the LAST time" the commercial was shown were also modified.

Name: _____

Student Number: _____

TELEVISION CONTENT EVALUATION STUDY

Thank you for joining us today. Your opinions are very important to us and we appreciate your assistance. This study will help us understand how people in different market segments react to television programming content. We hope that you will enjoy being a participant in this study and that you find it to be a good learning experience.

Don't forget to put your name and student number on the top of this page so that you will get credit for participating in this study.

Once your instructor has recorded that you have completed this project, this first page will be separated from the rest of the questionnaire. This will insure that your responses to these questions will remain anonymous.

Please do not talk to anyone during this session. We are interested in your opinions.

Before we begin to show you the television program, we have a few short questions. Please circle the number next to each question that best corresponds to the degree to which you agree or disagree with each statement.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Currently I am in a good mood.	1	2	3	4	5
2. As I answer these questions I feel very cheerful.	1	2	3	4	5
3. For some reason I am not very comfortable right now.	1	2	3	4	5
4. At this moment I feel "edgy" or irritable.	1	2	3	4	5

[1-6,8-9]

STOP

Do NOT turn the page until you have seen the program.

INSTRUCTIONS

1. Please read the instructions for each question carefully.
2. Make sure that you answer every question.
3. If you have any questions, please come up and ask me.
4. Please do not discuss this study with any other class members after you leave. Your instructor will explain this project during your next class period.

Below are some questions about the program "Chain Reaction." Please circle the number next to each question that best corresponds to the degree to which you agree or disagree with each statement.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I enjoyed watching "Chain Reaction"	1	2	3	4	5
The "Chain Reaction" program was well produced.	1	2	3	4	5
I dislike the program.	1	2	3	4	5
I found the program interesting.	1	2	3	4	5
My reaction to the program is unfavorable.	1	2	3	4	5
The program is dull.	1	2	3	4	5
I am fond of the program "Chain Reaction"	1	2	3	4	5

[10-16]

Please place a check mark closer to the adjective which best describes your feelings about <u>the likelihood that you would watch</u> "Chain Reaction" if it were on television in the afternoon.

probable ___:___:___:___:___:___:___ improbable

unlikely ___:___:___:___:___:___:___ likely

possible ___:___:___:___:___:___:___ impossible

[17-19]

Next, we have some questions about the MR. CHRISTIE cookie commercial. We are interested in your feelings about the commercial since how you feel during the commercials in the program could influence your feelings about the program. Please take a minute to try and recall what you were feeling during the LAST time you saw the MR. CHRISTIE cookie commercial.

Please indicate your feelings below by circling the response next to each adjective that best describes your feelings. Keep in mind that we are interested in the feelings you experienced DURING the LAST time you saw the MR. CHRISTIE commercial.

During the MR. CHRISTIE commercial did you feel:	Very much so					Not at all
Insulted	1	2	3	4	5	6
Good	1	2	3	4	5	6
Angry	1	2	3	4	5	6
Happy	1	2	3	4	5	6
Cheerful	1	2	3	4	5	6
Irritated	1	2	3	4	5	6
Warmhearted	1	2	3	4	5	6
Pleased	1	2	3	4	5	6
Repulsed	1	2	3	4	5	6
Amused	1	2	3	4	5	6
Stimulated	1	2	3	4	5	6
Calm	1	2	3	4	5	6
Shocked	1	2	3	4	5	6
Soothed	1	2	3	4	5	6

[20-33]

Now, turn your thoughts to the brand, MR. CHRISTIE, instead of the commercial.

We would like to ask you some questions about MR. CHRISTIE cookies since how you feel about the brands advertised in the program could influence your feelings about the program.

Please circle the number next to each question that best corresponds to the degree to which you agree or disagree with each statement.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I dislike MR. CHRISTIE cookies.	1	2	3	4	5
Overall, I think I would enjoy eating MR. CHRISTIE cookies.	1	2	3	4	5
I am very fond of MR. CHRISTIE cookies.	1	2	3	4	5

[34-36]

Please indicate on the scales below the likelihood that you will purchase MR. CHRISTIE cookies in the future.

impossible ___:___:___:___:___:___:___ possible

likely ___:___:___:___:___:___:___ unlikely

probable ___:___:___:___:___:___:___ improbable

The advertiser tried to increase your interest in purchasing MR. CHRISTIE cookies. Did he or she succeed?

Yes, very definitely ___:___:___:___:___:___:___ No, not at all

[37-40]

Please place a check mark closest to the end of the scale that best describes your opinion about MR. CHRISTIE cookies.

useful ___:___:___:___:___:___:___ useless

low quality ___:___:___:___:___:___:___ high quality

beneficial ___:___:___:___:___:___:___ not beneficial

wise ___:___:___:___:___:___:___ foolish

dislike very much ___:___:___:___:___:___:___ like very much

unimportant ___:___:___:___:___:___:___ important

enjoyable ___:___:___:___:___:___:___ unenjoyable

not fond of ___:___:___:___:___:___:___ fond of

valuable ___:___:___:___:___:___:___ worthless

[41-49]

Have you ever seen Bill Cullen (the "Chain Reaction" host) on any other game shows?

_____ no _____ yes _____not sure

Please indicate below your reaction to Bill Cullen:

dislike very much ___:___:___:___:___:___:___ like very much

funny ___:___:___:___:___:___:___ dull

enjoyable ___:___:___:___:___:___:___ unenjoyable

not fond of ___:___:___:___:___:___:___ fond of

[50-54]

Have you ever seen the "Chain Reaction" program before today?

_____ no _____ yes _____ not sure

At what time of day would you expect to see "Chain Reaction"?

_____ between 9:00 am and Noon

_____ between Noon and 5:00 pm

_____ between 5:00 pm and 11:00 pm

_____ after 11:00 pm

[55-56]

Next we would like to ask you a few additional questions about the MR. CHRISTIE commercial.

We would like your opinions about the MR. CHRISTIE commercial, not the product being advertised, because sometimes we can like or dislike a particular commercial without liking or disliking the product being advertised.

Thinking about the LAST time you saw the MR. CHRISTIE commercial, circle the appropriate response below:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I dislike the MR. CHRISTIE commercial.	1	2	3	4	5
Overall, I enjoyed watching the MR. CHRISTIE commercial.	1	2	3	4	5
I am fond of the MR. CHRISTIE commercial.	1	2	3	4	5

[57-59]

Please place a check mark on the scale closest to the phrase which best describes your overall reaction to the LAST time you saw the MR. CHRISTIE commercial.

well made ___:___:___:___:___:___:___ poorly made

dull ___:___:___:___:___:___:___ eye catching

enjoyable ___:___:___:___:___:___:___ unenjoyable

insulting ___:___:___:___:___:___:___ not insulting

not fond of ___:___:___:___:___:___:___ fond of

informative ___:___:___:___:___:___:___ empty

ordinary ___:___:___:___:___:___:___ inventive

dislike very much ___:___:___:___:___:___:___ like very much

interesting ___:___:___:___:___:___:___ boring

irritating ___:___:___:___:___:___:___ not irritating

good ___:___:___:___:___:___:___ bad

unfavorable ___:___:___:___:___:___:___ favorable

[60-71]

As part of the "Chain Reaction" program you saw a MR. CHRISTIE commercial. Have you ever seen that MR. CHRISTIE commercial before today?

___ no ___ yes

↳ If yes, approximately how many times have you seen the MR. CHRISTIE commercial before today?

_____ time(s)

[72,73-74]

Have you ever seen the "Chain Reaction" program before today?

___ no ___ yes

↳ If yes, approximately how many times have you seen the "Chain Reaction" program before today?

_____ time(s)

[75,76-77]

How many times did you see the MR. CHRISTIE commercial during the "Chain Reaction" program?

_____ time(s)

Have you ever heard of MR. CHRISTIE cookies before today?

___ no ___ yes ___ not sure

[78-79,80=4]

Please indicate in the blanks below any other commercials that you remember seeing during the "Chain Reaction" program and whether you like that commercial more or less than the MR. CHRISTIE commercial.

	Like more than the MR. CHRISTIE commercial				Like less than the MR. CHRISTIE commercial
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5

[4-6]

Please indicate on the scales below how often you watch the following types of television programs:

	Very Frequently				Very Seldom
Game shows	1	2	3	4	5
Westerns	1	2	3	4	5
Nature programs	1	2	3	4	5
Comedy shows	1	2	3	4	5
News programs	1	2	3	4	5

[7-11]

Approximately how many hours per day do you watch television during the week?

_____ hours per day

[12]

Please think back to the question when you were asked about your feelings during the MR. CHRISTIE commercial. We are interested in what you believe to be the cause of those feelings. You can indicate this on the scales below:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My feelings were a result of the commercial.	1	2	3	4	5
My feelings were a result of the MR. CHRISTIE product.	1	2	3	4	5
My feelings were a result of the mood I am in today.	1	2	3	4	5

Do you think that your feelings during the MR. CHRISTIE commercials affected your feelings about the program?

My feelings during the MR. CHRISTIE commercial had a strong effect on my feelings about the program. ___:___:___:___:___:___:___ My feelings during the MR. CHRISTIE commercial had no effect on my feelings about the program.

[13-16]

Finally, please answer the questions below. Your answers to these questions help us in making segmentation and promotional decisions.

What is your age? _____ years [17-18]

Are you: _____male _____ female

Are you a: _____ freshman

_____ sophomore

_____ junior

_____ senior

_____ graduate student

_____ other

[19-20,80=5]

Since this study has been designed to provide you with a learning experience, please indicate below your description of the purpose of this study.

Thank you very much for your cooperation in completing this questionnaire.

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