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MODERATING ROLES OF INVOLVEMENT IN INFORMATION PROCESSING ROUTES AND MESSAGE ACCEPTANCE FOR DIFFERING NUMBERS OF AD REPETITIONS

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ABSTRACT

MODERATING ROLES OF INVOLVEMENT IN INFORMATION PROCESSING ROUTES AND MESSAGE ACCEPTANCE FOR DIFFERING NUMBERS OF AD REPETITIONS

By

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The objectives of this dissertation were: 1) to investigate how consumers' involvement level moderates the information processing routes (cognitive processing route and affective processing route) across different levels of ad repetitions, and 2) to investigate how consumers' involvement level moderates the message acceptance (the result of information processing) across different levels of ad repetitions. To test hypotheses established for the objectives above, an experiment was conducted. An advertisement for a subcompact car was embedded in a TV show one, three, or five times using three video cassette tapes. Subjects' involvement level was manipulated as high or low level by providing different treatment scenarios. The findings were as follows.

First, it was found that consumers' brand attitudes are mediated by ad attitudes as well as brand cognition at any tested level of ad repetition. It was partially supported that consumers' brand attitudes are influenced by brand

beliefs when they are in the high involvement situation more than when in the low involvement situation, while consumers' brand attitudes are influenced by ad attitudes when they are in the low involvement situation more than in the high involvement situation. Second, it was found that as repetition level increased, low involvement consumers' brand attitudes become more favorable while high involvement consumers' brand attitudes become less favorable or did not change significantly. Finally, it was found that low involvement consumers' brand attitude formation is mediated by their ad-related responses across different repetition levels.

These findings provide theoretical contributions and have managerial implications. From a theoretical perspective, the findings confirmed the proposition, in the context of ad repetition, that consumers' involvement level moderates information processing routes. The proposition that involvement level moderates consumers' attention level was also confirmed. As managerial implications, the findings imply that depending on the characteristics of target market, different types of ads may be desirable (information oriented ads versus affect oriented ads). Repetition of the same commercial in a TV show may not be desirable for high involvement consumers.

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CHAPTER ONE

INTRODUCTION

The General Problem Area

The learning hierarchy in communication effects postulates that the change in individuals' cognitive structure leads to a change in attitude toward the brand and then to a change in purchase intention (cognition - affect - conation). Traditionally, researchers have used this high involvement cognitive information processing paradigm when investigating how consumers' attitudes and purchase intentions toward the brand are influenced by advertising.

However, the low involvement theory postulates that when individuals are in a low involvement situation, they do not have sufficient motivation to cognitively process the content of a message; therefore, the low involvement theory postulates that the memory of brand name or any other simple cue(s) of the brand would make the individuals have purchase intentions toward the brand without influencing attitudes (cognition - conation - affect). But in the low involvement hierarchy, the cognition is a simple memory of a brand name or of one or a few simple cue(s) of the brand, while in the learning hierarchy, the cognition is the individuals' beliefs about the brand along the attributes of the brand.

While the two hierarchies above postulate that either cognition-based attitude toward the object or cognition itself would lead to behavioral intention and behavior, a new perspective challenging (or supplementary to) these traditional cognition-based perspectives has been offered in the 1980's. Some psychological researchers have contended that attitudes toward an object can be formed without cognitively perceiving the object. In the consumer behavior context, it has been found that consumers' brand attitudes and purchase intentions can be influenced by attitude toward the advertisement itself. It has also been found that involvement level moderates the influence of ad attitudes on brand attitudes to some degree.

The effect of message repetition on the message acceptance has also been an important area in social psychology and consumer behavior research. The inverted-U relationship between repetition and message acceptance has theoretically been proposed and supported by several studies. However, there have also been some studies which do not support this proposition. Regarding the different effects of varied commercials versus repetition of one commercial, some studies have found that varied commercials are more effective than the simple repetition of one commercial.

After involvement theory was first introduced into advertising research and consumer behavior research in the mid-1960's, it has grown to be a major construct in helping

to understand consumer behavior. Since involvement level is believed to significantly moderate advertising effects, the involvement construct is employed as an important moderating variable of advertising effect in this dissertation.

The objectives of this dissertation are: 1) to investigate how involvement level moderates the information processing routes (cognitive processing route and affective processing route) across different levels of ad repetitions, and 2) to investigate how involvement level moderates the message acceptance (brand attitudes formation) across different levels of ad repetitions.

Research Issues

Three research issues are raised in relation to the objectives of this dissertation. The first issue is related to information processing routes. In a high involvement situation, since the individuals are very interested in the stimulus (the stimulus is very relevant to the individuals), the individuals are expected to give a great deal of attention to the message, and are likely to cognitively process the content of the message. Borrowing Petty and Cacioppo's (1981b) notion, encoding is conducted with a highly elaborate effort. In relation to issue involvement, Petty and Cacioppo (1979) found that the correlation between cognitive response measures and attitudes were considerably higher under the high issue involvement condition than under the low issue involvement condition (0.69 versus 0.29).

Hence, the cognitive processing of information is expected to be the major cause of the formation of brand attitudes in the high involvement situation. In a low involvement situation, since the individuals have little or no interest in the stimulus, individuals are expected to give little attention to the message, and are not likely to cognitively process the message content. Encoding would be conducted with a low-elaborate effort. In this case, the brand attitudes are less likely to be influenced by brand beliefs.

More recently, there is growing evidence that attitude toward the brand can be influenced not only by brand beliefs, but also by attitude toward the ad supporting the brand (Lutz, MacKenzie, and Belch 1983; MacKenzie, Lutz, and Belch 1986; Mitchell and Olson 1981). It has also been found that this phenomenon tends to appear more clearly in the case of low involvement than in the case of high cognitive involvement (Park and Young 1983, 1986). Gardner (1985) reports that brand beliefs are more significant mediators of brand attitudes under a brand set condition than under a nonbrand set condition. Therefore, it can be said that brand attitudes can be formed or changed even in the low involvement situation. This notion contradicts Krugman (1965) and Ray et al. (1973), that in the low involvement situation, brand attitudes cannot be formed or changed; instead, cognitions (memory of brand name, etc.) lead directly to conation. This apparent contradiction results from the fact that Krugman and Ray et al.

disregarded the possibility of the formation or change of individuals' brand attitudes from only their ad attitudes without sufficient brand knowledge and cognitions.

While some researchers attempted to assess the moderating role of involvement in the mediating effects of ad attitudes and brand beliefs on brand attitudes, few have attempted to assess this phenomenon in the context of advertising repetition. Therefore, the first issue is raised as follows.

Issue I. Will consumer involvement moderate the effects of brand-related beliefs and ad attitudes on brand attitudes for any number of ad repetitions?

The second issue concerns message acceptance. There have been several studies which supported the inverted-U relationship between the number of message exposures and message acceptance, following Berlyne's two factor theory (e.g., Cacioppo and Petty 1979/1980; Calder and Sternthal 1980; and Gorn and Goldberg 1980). In relation to different types of goods or commercials, Ray, Sawyer,and Strong (1971) reported that repetition continued to increase purchase intention in the case of low-price "convenience" goods ads or "non-grabber" ads, but not in the case of high-price "shopping" goods ads or "grabber" ads. More recently, Batra and Ray (1986) found that repetition led to relatively more gains in brand attitudes and purchase intentions when the ads were evoking a low number of cognitive responses compared to when the ads were evoking a high number of cognitive responses. Here, one may infer that low-price

convenience goods and non-grabber ads are likely to bring on a lower level of involvement, compared with high- price shopping goods and grabber ads. It is also expected that low involvement consumers would have less cognitive responses than high involvement consumers. Based on this reasoning, the second issue can be raised as follows.

Issue II. Will consumer involvement moderate brand attitudes formation for differing numbers of ad repetitions?

The third and last issue also concerns information processing routes. There have been several findings that cognitive responses mediate brand attitudes (Belch 1982, Olson, Toy, and Dover 1978, Toy 1982, Wright 1973). In addition, Cacioppo and Petty (1979, experiment 1 of 1980) and Calder and Sternthal (1980 - product B) found that the pattern of cognitive responses was quite consistent with that of attitude change over different levels of repetition. However, there also exists some research (Belch 1982, experiment 2 of Cacioppo and Petty 1980, Calder and Sternthal 1980 - product A) reporting that attitudes and cognitive responses were not perfectly parallel over different levels of repetition. While many researchers have found a mediating effect of cognitive responses on brand attitudes, Batra and Ray (1985) found that affective responses have strong mediating influences on brand attitudes. In this case, it is expected that affective responses influence brand attitudes through ad attitudes while cognitive responses influence brand attitudes through

brand cognitions (brand beliefs). If the relative strength of influence of brand cognition versus ad attitudes on brand attitudes varies with message recipients' involvement level, it may be true that the relative strength of influence of cognitive responses versus affective responses on brand attitudes varies with message recipients' involvement level. Therefore, it would appear that the pattern of change in the cognitive responses over repetition levels does not parallel the pattern of attitude change if consumers affectively processed the stimulus. If so, it is reasonable and desirable to consider all types of "spontaneous responses" including cognitive responses and affective responses for study of this area. Based on this reasoning, the last issue is raised as follows.

Issue III. Can the directional change in brand attitudes over different levels of repetition be better explained if the mediating role of whole "spontaneous responses" in brand attitudes formation are investigated instead of the mediating role of only cognitive responses?

Plan of the Dissertation

Chapter Two provides a review of the background literature for this study. Traditional information processing concepts will be discussed first. Then, the conceptualizations of the involvement construct will be reviewed. Next, the literature review will deal with the effects of ad attitudes and message repetition on brand attitudes and purchase intentions. This review of literature will be the basis for establishing hypotheses at

the end of Chapter Two. Chapter Three contains a description of the methodology to test the hypotheses. Chapter Four reports the results of data analyses, and Chapter Five follows with conclusions.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews literature concerning traditional information processing paradigm, involvement, effects of ad attitudes on brand attitudes, and effects of message repetition on brand attitudes. Finally, the research hypotheses of this dissertation are established in relation to the issues raised in Chapter One.

Information Processing Paradigm

Traditionally, it has been postulated that individuals' behavior following persuasive messages must be preceded by attitude formation and attitudes must be preceded by cognition. Under this postulation, a model of communication effects was proposed by McGuire (1968). In this model, an individual is to expend considerable cognitive effort in actively processing the content of the message and go through multiple stages before persuasion can occur. These stages are attention, comprehension, yielding, retention of message, and action.

McGuire (1978) later described this information processing paradigm as a stochastic process, and

hypothesized that for a given message, there is a probability that each stage would occur during exposure to the message. The probability that a given message would be successful depends on the probability that each stage would occur. This idea was applied to advertising to aid in understanding the development and evaluation of effective advertising campaigns.

Similarly, Percy and Rossiter (1980) have suggested that the successful processing of an advertising message requires three steps: attention, decoding, and encoding. Attention is the allocation of processing capacity to the stimulus. Decoding is an awareness, and/or comprehension of message content which follows attention. Encoding is the step in which the individual interprets the message content in his own way and forms an attitude toward the object in the message. Encoding is the step of yielding and retention in McGuire's information processing paradigm.

According to this information processing model, comprehension (decoding) is a necessary but not a sufficient condition for the communication to persuade the receiver. More important is how the receiver interprets the message content and assigns a personal meaning to it. This is the stage of yielding and retention (encoding). The yielding stage has been embraced by cognitive response theory (Greenwald 1968; Wright 1973) and the retention stage has been presented in terms of attitude formation and change (Fishbein 1963; Fishbein and Ajzen 1975; Lutz 1975).

Multi-attribute Models for Attitude Formation and Change

Theory about the relationship between attitude and behavior was developed prior to cognitive response theory. G. W. Allport (1935) proposed that "an attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." This definition portrayed an attitude primarily as a mental state which responds in a particular way, and its emphasis was on its behavioral implications. Krech and Crutchfield (1948) defined an attitude as enduring organization of motivational, emotional, perceptive, and cognitive processes with respect to some aspect of the individuals' world. This definition includes cognitive and emotional components for conceptualizing attitudes. Rokeach (1968) defined an attitude as a learned predisposition to respond to an object or class of objects in a preferential or evaluative manner. This definition conceptualized attitudes as having not only a behavioral component but also an affective and evaluative component.

Recently a more comprehensive conceptualization of the attitude construct seems to be prevalent. Freedman, Sears, and Carlsmith (1978) stated that "an attitude is an enduring system with a cognitive component, an affective component, and a behavioral tendency. The cognitive component consists of the beliefs that the individual has about the situation or object; the affective component consists of the emotional

feelings connected with the situation or object; and the behavioral tendency is what Allport (1935) referred to as the readiness to respond in a particular way" (p. 238). As reviewed so far, each of the traditional definitions of attitudes in social psychology contains a different conception of what an attitude is or emphasizes a somewhat different aspect of it.

How attitudes are formed or changed has been studied primarily under the name of "expectancy x value" or "multi-attribute" models in social psychology. The first work in this area seems to have been done by Rosenberg (1956). Fishbein (1963) also developed an attitude model (attitude toward the object). But, later, Fishbein came to realize that attitude toward the object itself (A_o) was a limited concept, and attitude toward engaging in behavior (A_{act}) was more important. Hence, Fishbein and Ajzen (1975) modified and extended the original A_o model into the Behavioral Intention (BI) model. This model uses the construct "behavioral intention", which occurs before "behavior". The model also contends that an individual's behavior is influenced not only by his attitude toward the act but also by social norms.

The introduction of the socio-psychological attitude model into marketing thought promoted a great deal of research and debate among scholars (Bass 1972; Bass and Talarzyk 1972; Cohen, Fishbein, and Ahtola 1972; Sheth 1972; Sheth and Talarzyk 1972). Since these studies are beyond

the scope of this dissertation, the review of these studies will not be made here. The article by Wilkie and Pessemier (1973) compares these studies, and is an excellent review for the use of multi-attribute models. Additionally, Ryan and Bonfield (1975) provided a good review of empirical tests of the Fishbein model which were made before 1975.

Multi-attribute models were developed to help explain and predict how individuals form or change an attitude toward an object when exposed to a persuasive communication. Reviews of research utilizing the Extended Fishbein Model (BI model) in both the social psychology (Ajzen and Fishbein 1973) and the consumer behavior literature (Ryan and Bonfield 1975) demonstrated that the model offers satisfactory predictive validity; i.e., it is possible to predict behavioral intentions and behavior with the BI model.

Using Fishbein's conceptualization of "attitude toward act", Lutz (1977) indicated that if the multiplicative summation of cognitive elements ($\Sigma\ B_i a_i$) can be viewed as an index of the cognitive structure underlying A-act, a change in an individual's belief about a brand attribute (B_i) or a change in an individual's evaluation of a brand attribute (a_i) should lead to a change in A-act. Lutz (1977) showed that cognitive elements are related to attitudes which, in turn, are causally related to Behavioral Intention, as indicated by arrows in the following schema: A single B_i or $a_i \rightarrow B_k a_k \rightarrow \Sigma\ B_i a_i \rightarrow A_{act} \rightarrow$ BI.

Cognitive and learning theories like those of Rosenberg and Fishbein have stressed beliefs and evaluation as necessary components of attitudes. As such, attitudes have been conceptualized by them as being based on beliefs toward attributes of an object (how good or bad the product is in terms of each attribute) and subjective judgment of each attribute (good or bad). In brief, multi-attribute models demonstrate how individuals' attitudes (affect) are formed by the mediating effects of cognitive elements.

Cognitive Response Theory

Cognitive structure models which attempt to explain and predict attitudes have their theoretical roots in cognitive learning theory, with primary emphasis on beliefs as the fundamental cognitive elements. The premise of these models is that individuals actively process information when exposed to a persuasive communication, resulting in attitude formation or attitude change. In this case, the individuals compare external information with an existing structure of beliefs and values, while being exposed to the persuasive communication. This is the premise of another area of research, namely, the mediating role of cognition for message acceptance (attitude formation and change).

Attitude research about direct thought processes during exposure appeared in the late 1960's under the name of cognitive response theory (Greenwald 1968). Cognitive response theory postulates that spontaneous and simultaneous

thoughts arising in consumers' minds while encoding incoming information mediate message acceptance. Cognitive response theory, originally developed in the field of communication research, was introduced into the field of marketing by Wright (1973) to study advertising effects.

Wright (1973) identified counterargument, source derogation, and support argument as distinct modes of response to the advertising stimulus. He showed that counterarguments are activated when incoming information is perceived to be discrepant from the individual's precommunication belief system. Derogation of the source appears when the source is viewed as biased. Finally, support arguments were meant as activated when incoming information is relatively consistent with the individual's precommunication beliefs. In this study, Wright (1973) found that (1) individuals relied heavily on their evaluative mental responses to message content to arrive at an attitudinal position after exposure, (2) counterarguments proved to be significantly stronger mediators of acceptance among subjects receiving the audio message treatment than among those receiving the print version, (3) support arguments and source derogations became important in modeling acceptance only when situational variables permitted extensive processing (print mode and high involvement condition), and (4) cognitive responses had a greater effect on attitudes than on behavioral intentions.

The major merit of the cognitive response model compared to the cognitive structure measure is that the cognitive response model makes it possible for each subject to determine his own salient attributes while the cognitive structure model forces each subject to use the attributes predetermined by the researcher. However, the cognitive response model has a weakness in that the method of data collection may force the subject to cognitively process the information and thus eliminate low involvement processing (Wright 1974; Ward 1974). To summarize the two cognitive models, the cognitive response model postulates that individuals' responses to the message rather than message content itself play a role in forming or changing attitudes. The cognitive structure model postulates that individuals' knowledge in the form of beliefs influenced by the persuasive message contents would form or change attitudes. A broad review of cognitive response literature is not attempted in this dissertation, however, an exhaustive review of this field has been provided by Roberts and Maccoby (1973) and Wright (1974).

As reviewed so far, the two streams of research monitoring communications effects (cognitive structure model and cognitive response model), which have focused on mediating cognitive variables as underlying explanations of communications effects, were developed separately. Yet, there have been attempts to combine both approaches to capitalize on the strengths of two approaches. For example,

Lutz and Swasy (1977) proposed a joint cognitive structure / cognitive response model, which basically represents a blend of the most recent cognitive structural model at that time (Fishbein and Ajzen 1975) and a common form of the cognitive response model (Wright 1973; 1974). Lutz and Swasy's combined cognitive structure / cognitive response model postulates that responses to persuasive communication can be seen as interacting with the formation of new beliefs or changes in pre-existing beliefs, to make an impact on cognitive structure and to lead to a post-communication attitude. They could not clarify, however, whether acceptance of message beliefs leads to or follows from cognitive responses (counterargument and support argument). In a similar vein, they pointed out that impact on cognitive structure may either precede or follow post-communication attitude.

Olson, Toy, and Dover (1978) hypothesized that cognitive responses to a persuasive message mediate the effects of the message on elements of cognitive structure. They studied the relationship between cognitive responses (counterargument and support argument as major interest) and cognitive structure elements ($\Sigma\ b_i e_i$, A_o, A_{act}, BI), and found that both counterarguments and support arguments are related to a wide range of cognitive variables including beliefs, attitudes, and purchase intentions. Like Lutz and Swasy (1977), they also could not specify the causal relationship between cognitive responses and cognitive

structure elements. They presumed that cognitive responses precede and thus influence the formation of cognitive structure elements.

Belch (1982) examined the effects of repeated exposure on cognitive response (counterargument, support argument, source derogation, and source bolstering) and message acceptance (A_{act} and BI). Two major findings were that (1) the repetition (one, three, or five exposures) does not significantly influence cognitive responses and message acceptance, and that (2) the strength of the relationship between cognitive responses and message acceptance measures does not significantly vary with levels of exposure. Other results of this study were that (1) the cognitive response models are significantly related to the message acceptance measures across all three exposure conditions, and (2) cognitive responses mediate post-message attitudes and purchase intentions.

The first attempt to specify the causal relationship between cognitive responses and cognitive structure elements was made by Toy (1982). He postulated that the impact of cognitive responses on postcommunication cognitive structure is quite clear when subjects have little or no knowledge concerning the communication object, since the individuals have no clearly formed beliefs concerning it. But this is not necessarily true when subjects have an existing belief structure about the object of the communication.

To monitor such an effect, Toy (1982) compared cognitive structure measures between preexposure and postexposure. He found significant changes between two cognitive structures. Since cognitive responses are expected to occur before postcommunication cognitive structure change, if the correlations between cognitive responses (especially support arguments or counterargument) and post- minus pre- communication measures of cognitive structure could be found, it would be the evidence of the mediating role of cognitive response for cognitive structure change. The correlations represented the relationship but the magnitude of the correlations was relatively low and only seven of the 48 correlations were significant ($p < .05$), concluding weak support the hypothesis. However, the mediating role of cognitive response on cognitive structure is generally accepted in consumer behavior research. Toy also found that the more discrepant the information, the more counterarguments and less support arguments were exhibited. Finally, it was reported that counterarguments were negatively correlated and support arguments positively correlated to beliefs, attitudes, and behavioral intentions.

Summary

In short, the cognitive response / cognitive structure approach has made it possible to study information processing in the perspective of process rather than status. This has shed light on new avenues for research which will

improve understanding of information processing. Part of this dissertation is related to the effects of brand cognitions (beliefs) on brand attitudes.

Conceptualizations of Involvement

As discussed so far, traditional information processing theory was based on the premise that cognitive processing of information and attitude formation or change should precede behavior. A major challenge to this perspective was initiated in the 1960's (Krugman 1965) and more theoretically supported in the 1970's (Ray et al. 1973; Rothschild and Ray 1974; Swinyard and Coney 1978). Krugman argued, in his much quoted article (1965), that TV viewers usually are not very much interested in advertising, thus do not cognitively process the information. However, over many repetitions, the messages eventually filter through cognitive structure.

But in this case, because no active information processing exists, product attributes would be neither salient nor differentiated. Instead, only the brand name or brand concept becomes more salient. Therefore, the cognition would fall short of brand attitude formation or change. The individual would behave based on brand saliency rather than affect (attitude) toward the brand. This perspective is called low involvement processing while the

traditional perspective is called high involvement processing.

Low involvement theory has challenged the supreme role of cognitive theory in our thinking. One of the issues in involvement theory has been conceptualization of the construct. The involvement construct is an important moderating variable in the present research, therefore, a review of definitions of this construct established in social-psychology and marketing literature follows.

Process Oriented Conceptualizations

In some definitions involvement is a process oriented construct, and in others it is a state oriented one. Krugman (1965, 1967), using a process approach, conceptualized involvement as the number of connections and/or personal references per minute, that an individual makes between the content of the message and his own life. Additionally, Krugman explicitly excluded the amount of attention, interest, or excitement in relation to the stimulus (state oriented conceptualization) in his conceptualization of involvement.

Krugman's definition assumes that involvement results from information processing and decision making. Thus, only cognitive information processing and extensive information search would cause high involvement. However, if a consumer is highly involved with purchase of a product and is an expert in that product category (well developed cognitive

structure exists), it is conceivable that this person will not engage in thoroughly cognitive information processing and extensive problem solving. Thus, "heightened cognitive processing should be considered a possible result of high involvement, not the cause of it" (Antil 1984, p.205). Some other researchers conceptualized the involvement construct as process related (e.g., Houston and Rothschild 1978; Ray et al. 1973; Petty and Cacioppo 1981).

State Oriented Conceptualizations

By contrast, some researchers defined involvement as a state rather than a process. Involvement as a state variable has its root in social psychology. Sherif and Cantril (1947) originally defined involvement as the degree to which an object or idea is centrally related to the value system of an individual. This construct was originally called ego involvement. Following Sherif and Cantril, Day (1970) defined involvement as "the general level of interest in the object or the centrality of the object to the person's ego-structure" (p. 45).

This state oriented conceptualization of involvement was further elaborated by Mitchell (1979). Mitchell stated that "involvement is an individual level, internal state variable that indicates the amount of arousal, interest or drive evoked by a particular stimulus or situation. Involvement, therefore, has two dimensions, intensity and direction. Intensity concerns the level of arousal,

interest or drive and direction concerns the evoking stimulus object and/or situation. In addition, the direction component may concern situations and stimulus objects at different levels of generality. Consequently, we may discuss involvement with respect to a product category, a particular brand and the purchase of a product for a particular reason" (p. 194).

Houston and Rothschild (1978) broke involvement into three types: situational involvement, enduring involvement, and response involvement. Situational involvement is related to the ability of a situation to elicit individual concern. In consumer behavior, two categories of stimuli were identified for situational involvement. First are product or service related variables such as cost (e.g. economic or time cost.), elapsed time of consumption, and the complexity of a product. The second category is social psychological stimuli such as the presence or absence of relevant others. Thus, the situational involvement is basically related to the inherent nature of a product.

Enduring involvement reflects the strength of the preexisting relationship between an individual and the given situation. In consumer behavior, prior experience with the situation (purchase experience and consumption experience) is expected to influence enduring involvement. Enduring involvement is also influenced by the individual's value system. This type of involvement is consistent with ego-involvement, developed by Sherif and his colleagues in

social judgment theory (Sherif and Hovland 1964). Response involvement was proposed to be influenced by situational involvement and enduring involvement. It refers to the complexity or extensiveness of the overall consumer information processing or decision process.

Thus, it can be said that situational involvement and enduring involvement are state oriented conceptualizations, and response involvement is a process oriented conceptualization. Later, Rothschild (1984) clarified this idea by stating that "involvement is a state of motivation, arousal or interest. This state exists in a process. It is driven by current external variables (the situation; the product; the communications) and past internal variables (enduring; ego; central values). Its consequences are types of searching, processing and decision making" (p. 217).

Importance

Several researchers conceptualized involvement as importance. The first introduction of purchase importance into comprehensive theoretical structure in consumer behavior was made by Howard and Sheth (1969). Later, Rothschild and Ray (1974) and Lastovicka and Gardner (1979) identified importance as one of two underlying components of involvement. Antil (1984) defined involvement as "the level of perceived personal importance and/or interest evoked by a stimulus within a specific situation" (P.204). Harrell (1986) defined involvement as "the perceived importance or

concern of a particular aspect of a person's world to that person" (p. 136).

Sometimes purchase importance has been confused with ego involvement, since purchase importance can be a result of ego involvement. However, other factors such as perceived risk can cause high purchase importance. For example, the purchase of automobile tires might not be ego involving; however, this purchase might be quite important due to functional risk (Muncy and Hunt, 1984).

Commitment

Some researchers used commitment in describing involvement. For example, Freedman (1964) defined involvement as commitment to a position or concern with a specific stand in an issue. This conceptualization was originated from Sherif and Cantril's (1947) self-identity. Thus, Sherif, Sherif, and Nebergall (1965) posited that ego involvement is the arousal of the individual's commitment to a position on the given issue. Sherif, Sherif, and Nebergall operationalized this concept of involvement by identifying a latitude of acceptance, a latitude of rejection, and a latitude of noncommitment. A highly involved individual would accept only a very few positions (brands) and also reject a number of positions (brands), since the person is committed to a definite opinion about the issue (a specific brand in that product category). A low involved individual would find more acceptable positions

or would have no opinion about the issue (Assael 1981, p. 94).

Robertson (1976) specifically defined commitment as the strength of the individual's belief system with regard to a product or brand. Lastovicka and Gardner (1979) used two components to measure involvement; importance and commitment. But it seems that they confused commitment with involvement. Commitment is a construct related to a particular position on an issue. Involvement is a construct related to the issue itself (i.e. a product category) rather than a particular position (i.e. a brand). Commitment may be another expression of brand loyalty in consumer behavior. Thus, it is thought that commitment is not synonym with, or a component of, involvement.

Summary

Involvement construct has been conceptualized as a process, state, importance, or commitment. Researchers have defined involvement in the way their own research can be conducted. The involvement construct is employed as an important moderating variable of advertising effects in this dissertation.

Effects of Attitude Toward Ad on Attitude Toward Brand

It was generally accepted that attitude toward an object would be influenced by only cognition toward the

object. Both the cognitive structure model and the cognitive response model have been developed on this premise. The effects of advertising in a consumer behavior context were also studied following this cognition-based information processing paradigm. A challenging perspective against this relationship between cognition and attitude was made by Zajonc in psychology. Zajonc (1980) and Zajonc and Markus (1982) have argued that affect (feeling) may arise even before cognition (thinking). Preference (liking one more than others) would involve cognitive and affective components. According to the traditional view, the affective component must be preceded by cognitive component. Zajonc and his colleagues have argued that under some circumstances, affective responses may be fairly independent of cognition.

Another alternative proposition to explain attitude formation without being based on beliefs about the object is the classical conditioning approach to attitude formation (Staats and Staats 1967). This approach posits that attitude toward an object (the conditioned stimulus) may be formed in a favorable way or unfavorable way by pairing the object with a positively or negatively evaluated stimulus (the unconditioned stimulus). This idea is related to the affect-referral as a choice heuristic in the consumer behavior context. When consumers have no favorable or unfavorable attitude about a brand, if the brand is advertised on TV in a very favorable ad environment (such as

a beautiful scenery, an attractive smile, pleasant music, etc.), the consumers may have a favorable attitude toward the brand without forming beliefs about the brand. The attitude toward the brand seems to be related to affective reactions to the executional elements of the advertisement.

Hence, more recently, information processing researchers in consumer behavior research have begun to consider the new construct "attitude toward advertisement" as a supplementary factor for brand beliefs to understand, explain, and predict attitudes toward brands, especially when they study the advertising effect on brand attitude formation and change. This section reviews the most important studies in this area.

One of the first studies in this area belongs to Mitchell and Olson (1981). Their proposition begins with questioning Fishbein's attitude theory that beliefs are the only mediator of attitude formation and change. If Fishbein's theory is correct, removing the effects of message on beliefs also would remove the significant message effect on attitude. They proposed, therefore, that if advertising content creates brand attitudes without parallel effects on brand beliefs, such results would constitute a strong disconfirmation of the beliefs - cause - attitudes proposition.

In their experiment, they showed subjects four experimental advertisements for facial tissues and measured cognitive element variables (b_i and e_i), attitude toward

each advertisement (A_{ad}), attitude toward each brand (A_o), attitude toward the act of purchasing and using each brand (A_{act}), and behavioral intention to purchase each brand (BI). They found that A_o and A_{act} can be explained by both belief structure ($\Sigma b_i e_i$) and A_{ad} much better than by $\Sigma b_i e_i$ alone (comparing R^2's). It was also found that A_{ad} can explain brand attitude better than $\Sigma b_i e_i$ (comparing beta coefficients). This finding was also supported by analysis of covariance. They concluded that contrary to Fishbein's attitude theory, the product attribute beliefs are not the sole mediator of attitude formation. Rather, attitude toward the advertisement also mediates advertising effects on brand attitude.

Petty and Cacioppo (1981b) proposed that there were two routes of attitude change with so-called the Elaboration Likelihood Model (ELM). The basic tenet of the ELM is that different methods of inducing attitude change depend on the degree of the elaboration likelihood of the communication situation (i.e., the probability of message- or issue-relevant thought occurring). When the elaboration likelihood is high, the central route to persuasion should be particularly effective, but when the elaboration likelihood is low, the peripheral route should be relatively more effective. In relation to involvement, the ELM suggests that when involvement level is high, the elaboration likelihood is expected to be high, and when involvement level is low, the elaboration likelihood is

expected to be low. Previous research in social psychology had supported that under high involvement conditions people appear to form their attitudes through the issue relevant arguments in the message (central route); under low involvement conditions, attitudes appear to be more affected by simple acceptance and rejection cues in the message than by arguments (peripheral route).

Petty, Cacioppo, and Schumann (1983) attempted to test this proposition in the context of consumer behavior. For the experiment, a total of 160 subjects were divided into 8 groups; 20 subjects were randomly assigned to each of the cells in a 2 (involvement: high or low) x 2 (argument quality: strong or weak) x 2 (endorser's status: celebrity or noncelebrity) factorial design. Here the argument quality was a proxi-variable for central cue and the endorser's status was a proxi-variable for peripheral cue.

After exposed to advertisements (booklets), subjects' purchase intentions and overall impression of the product were measured (But brand cognition was not measured). Summary of findings of this study were;

1. The nature of the product endorser had a significant impact on product attitudes only under low involvement, but not under high involvement.

2. The impact of argument quality on brand attitudes and purchase intentions was significantly greater under high than low involvement.

3. The correlation between brand attitudes and purchase intentions for low involvement subjects was 0.36; and for high involvement subjects it was 0.59.

In short, the results support the findings of social psychology that low involvement subjects are more likely to form their attitudes via the peripheral route, and high involvement subjects are more likely to form their attitudes via the central route.

Based on the Petty, Cacioppo, and Schumann's (1983) study, Lutz, MacKenzie, and Belch (1983) proposed that if attitude toward the ad (A_{ad}) and brand cognitions (C_b) are to influence attitude toward the brand (A_b), changes in A_b governed by C_b would be seen as a central route process, while the influence of A_{ad} on A_b would be seen as a peripheral process. Further, they proposed that recipients' level of motivation in relation to the communication and ability to process the information would relatively determine processing type between central and peripheral processing (a strong C_b - A_b relationship or a strong A_{ad} - A_b relationship).

An embedded TV advertisement (Shield toothpaste) was exposed to the subjects, and they were asked to list cognitive responses (C_b and C_{ad}). They were also asked to respond to the dependent measures (such as A_b and PI) pertaining to their evaluations of the commercial. Finally the subjects were asked to indicate (using 7-point scales) how knowledgeable they were about the product class and how important they perceived the purchase decision regarding toothpaste to be. A chi-square test of independence between knowledge and importance was rejected, implying that the

subjects who were very (or not very) knowledgeable about the product class were significantly more likely to perceive the product class as being very (or not very) important. So, among 4 groups (2 levels of knowledge x 2 levels of importance) only the high knowledge / high importance group and the low knowledge / low importance group were used in the analysis.

Using LISREL's maximum likelihood technique (Joreskog and Sorbom 1981), the parameter estimates for the model, which was constructed to find the relationship between variables (A_{ad}, C_b, A_b, etc.), were calculated. The findings only partly support the hypotheses. First, A_{ad} appeared to be a significant mediator of A_b in both high knowledge / high importance group and low knowledge / low importance group. As hypothesized in H1, A_{ad} appeared to dominate C_b in influencing A_b in the Low/Low group. However, contrary to H2, A_{ad} was also a stronger influence than C_b in the High/High group. Borrowing Petty and Cacioppo's (1981) expression, instead of a switch from peripheral to central processing in the High/High group, central processing emerged as a supplement to the still-dominant peripheral processing mode.

Several possible explanations for this unexpected pattern of findings in High/High group were suggested. But more significant ones are as follows.

First, subjects would not cognitively process the given message, since toothpaste is generally low important product.

> Second, placing subjects in an ad pretesting situation may set them for a particular mode of processing. Since this is non-brand set experiment, subjects probably would not cognitively process the given message. (This issue will be addressed in more detail in the review of MacKenzie and Lutz (1983))

However, supporting the unexpected finding, it was suspected that "A_{ad} may be the relatively influential mediating variable, in reality. Generating an attitude toward a commercial may be a more natural and less effortful response than attempting to encode, evaluate and possibly argue against specific brand data (cf., Krugman 1965; Zajonc 1980). Given this possibility, it may well be that A_{ad} is generally an important mediator of A_{ad} and not just an artifact of the experimental context" (p. 536-537).

As reviewed so far, there has been growing evidence that attitude toward the ad as well as brand cognition influences attitude toward the brand. MacKenzie and Lutz (1983) consider other possible causal relationships among attitude toward the ad (A_{ad}), brand cognitions (C_b), attitude toward the brand (A_b), and purchase intention, and proposes four competing models. All models are couched within a general hierarchy-of-effects framework, with cognition preceding affect which in turn precedes conation (i.e., intention). Specifically, Model 1 posits a direct one-way causal flow from A_{ad} to A_b, which was empirically tested and supported by Mitchell and Olson (1981) and Shimp (1981). Model 2 specifies the causal flow from A_{ad} to C_b as well as the causal flow from A_{ad} to A_b. Model 3 specifies,

based on the balance theory, the causal flow from A_b to A_{ad} as well as the causal flow from A_{ad} to A_b. Model 4 assumes no causal relationship between A_{ad} and A_b, instead, it posits that A_{ad} directly influences purchase intention.

Data collected for TV commercial pretesting for automobiles, were analyzed to test the four competing models. Both Ad Cognitions (C_{ad}) and Brand Cognitions (C_b) were assessed via the cognitive response question, and A_{ad}, A_b, and intention (I_b) were each measured by multiple rating scales. It was found, using a goodness of fit index, that all four of the theoretical models are significantly better than the common paths model. Among the three models with 31 degrees of freedom (model 1, 2, and 4), model 1 emerged as the best model, and was then compared with model 3, which has 30 degrees of freedom. The difference in chi-square value of 5 was not significant, thus leading to the conclusion that the addition of the path $A_b \rightarrow A_{ad}$ did not significantly improve the fit. The conclusions drawn from the analyses were:

1. All four of the proposed theoretical models are significantly better explanations of the data than the null model, the factor structure only model or the common paths model.

2. Model 1 is superior to the other models because it fits the data better than Models 2 or 4 and just as well as, and more parsimoniously than, Model 3.

3. All of the relationships that are hypothesized to be non-zero by Model 1 are in fact significantly different from zero. All of the relationships that are hypothesized to be zero are in fact zero, with the exception of the relationship between C_b and I_b. (p. 73)

One arguable feature pointed out in this research was whether or not A_{ad} might have been particularly efficacious in that research due to the heightened salience of the commercial in the pretest context. If so, the mediating effect of A_{ad} in a pretest setting may virtually disappear in actual exposure situations due to the relatively diminished prominence in the market stimulus array. Investigation of the potentially differing role of A_{ad} in pretest and natural exposure situations was suggested as an important research issue.

Mackenzie and Lutz's (1983) study comparing the competing four models was replicated by MacKenzie, Lutz, and Belch (1986), using a different ad. This time a TV advertisement for a hypothetical new brand of toothpaste (Shield) was used. Scales employed to measure the variables were similar to the previous ones. The four models were compared in a similar way with the way of the previous study. It was found that the DMH model (Model 2 in the previous study) appeared to fit the data significantly better than any other model. This finding is different from the finding of previous research, in which ATH model (Model 1) appeared to be superior to the other models. This conclusion was further strengthened by cross-validation procedures using different data collected in experiment 2, which essentially duplicated the model comparisons performed on the data of the experiment 1. Beyond that the DMH model was superior to other three models, the authors also found

that the DMH model appeared to represent accurately the true relationships among 12 variables in an absolute sense.

Park and Young (1983) proposed that the degree of involvement is not sufficient as a moderating variable in studying the effect of advertising, and it might be more appropriate to consider the types of involvement based on the motives. Specifically, one may be highly involved in a commercial because the emphasized brand's functional performance is appealing to utilitarian motive, or because emotionally or aesthetically presented commercial appeals to one's value-expressive motive. They proposed that utilitarian motives lead to cognitive involvement whereas value-expressive motives lead to affective involvement.

Based on this idea, Park and Young (1983) hypothesized that type and level of involvement would moderate the degree of mediation of two mediating variables as follows.

1. In the case of the cognitive involvement condition, attribute-based message content influences significantly the overall brand attitude;

2. In the case of the affective involvement condition, neither attribute-based message content nor attitude toward the commercial significantly influences the overall brand attitude.

3. In the case of the low involvement condition, attitude toward the commercial significantly influences the overall brand attitude.

Sixty women subjects were divided into three groups, and three conditions of involvement (cognitive, affective, and low)

were manipulated for each group. After being exposed to a TV commercial for a new brand of hair shampoo, subjects' attitudes toward the brand and attitudes toward the commercial were measured using the 7-point scale. Subjects' cognitive responses and cognitive structure variables (B_i and a_i) were also measured. The results obtained from correlation coefficient and multiple regression methods supported hypotheses 1 and 3. In the case of the affective involvement, the correlation between the attitude toward commercial and overall brand attitude appeared significant ($p < .05$). This result contradicts hypothesis 2. But when adjusted R^2 was used to test hypothesis 2, the subjects in this condition did not appear to form their brand attitude either in a manner suggested by the traditional analytical model (cognition-based) or by their affect toward the commercial. This result appears to be consistent with hypothesis 2.

Park and Young's (1983) study is extended into their later report (park and Young 1986). In this report, they consider not only the effect of different type of involvement but also the effect of music on brand attitude formation. The summary of hypotheses to specify the effects of involvement and music on brand attitude formation were:

> First, cognitive involvement condition would lead to stronger effect of brand cognition (than A_{ad}) on A_b.
>
> Second, affective involvement and low involvement conditions would lead to stronger effect of A_{ad} (than brand cognition) on A_b.

Third, music would reduce the effect of brand cognition in cognitive involvement situation, and magnify the effect of A_{ad} in affective and low involvement situations.

Fourth, existence of music would make the subjects in the cognitively involvement condition have less favorable brand attitudes and behavioral intentions, and the subjects in the affective and low involvement conditions have more favorable brand attitudes and behavioral intentions.

As shown, the content of the second hypothesis (particularly, affective involvement) is different from the content of hypothesis 2 in the earlier report. It is thought that Park and Young (1986) changed their position based on their previous finding (See Park and Young 1983). Using correlation and multiple regression methods, the results of analysis provide support for the first and second hypotheses, but not the third hypothesis. In short, type and level of involvement appeared to significantly moderate the effect of A_{ad} and brand cognition on brand attitude (e.g., A_{ad} was found to be especially important in brand attitude formation in low involvement), but background music did not. For a plausible explanation for insignificant effect of music as a moderating variable, it was suggested that there could have been a low degree of integration of the background music into the central image promoted in the commercial (But this type of explanation would always defend the authors' original viewpoint).

In relation to the fourth hypothesis, background music appeared to interfere with the cognitively involved subjects' information processing. For subjects in the low

involvement group the effect of music appeared to work favorably for subjects' brand attitude formation and behavioral intentions. For the subjects in the affective involvement group the effect was not clear.

Based on the prior studies, Gardner (1985) proposed that the degree of mediation of A_{ad} and brand related beliefs may depend on two different processing "sets" - brand evaluation and nonbrand evaluation. To see the effects of set, an experiment was conducted. Subjects were randomly assigned to brand or nonbrand set conditions, and each subject was given either a style evaluation booklet (nonbrand set) or a brand evaluation booklet (brand set) depending on set condition. Each booklet contains one ad for each of two products (tennis balls and cooking oil). Unfamiliar brand names were used to eliminate the influence of prior brand knowledge, preferences, and usage experience. Dependent variables included elements of cognitive structure (b_i and e_i), attitude toward the brand (A_o), and attitude toward the advertisement (A_{ad}).

The structural model showed that all hypotheses were supported. More specifically findings indicate:

1. A_{ad} and brand-related beliefs are related positively to attitude toward the advertised brand under both brand and nonbrand set conditions.
2. Brand-related beliefs are more significant mediators of brand attitude under a brand set condition than under a nonbrand set condition.
3. A_{ad} mediates brand attitude to an approximately equal extent under brand and nonbrand set conditions (p. 197).

Brand attitudes formed under a nonbrand set appeared to be influenced by both A_{ad} and brand-related beliefs. The observed effect of A_{ad} was consistent with the results of studies which used nonbrand sets to examine A_{ad} (e.g., Lutz, Mackenzie, and Belch 1983; Mackenzie and Lutz 1983; Mitchell and Olson 1981; Moore and Hutchinson 1983; Park and Young 1983 - low involvement condition) and contextual aspects of advertisements which may be associated with A_{ad} (e.g., Gorn 1982; Petty, Cacioppo, and Schumann 1983). The findings also suggest that brand attitudes formed under a brand set are based on both brand-related beliefs and A_{ad}. The greater impact of brand-related beliefs under a brand set than under a nonbrand set is consistent with findings of prior studies (e.g., Gorn 1982; Park and Young 1983 - cognitive involvement condition; Petty, Cacioppo, and Schumann 1983). The observed effects A_{ad} are most directly comparable with those reported by Lutz, MacKenzie, and Belch (1983).

Based on Petty, Cacioppo, and schumann (1983)'s proposition for two different routes of attitude change, i.e. central route and peripheral route, Batra and Ray (1985) proposed that the central source would lead to cognitive responses, and the peripheral source would lead to affective responses toward the advertisement. They postulated that brand attitudes consist of two different components; attribute-based utilitarian attitude component (utilitarian affect) and ad execution-based hedonic

component (hedonic affect). Based on this postulation it was hypothesized that the utilitarian affect would be resulted from cognitve responses, and the hedonic affect should be created by classical conditioning of affect from ad executions, from ad frequency, etc., and would mostly be resulted from affective responses. In relation to involvement, they proposed that the ad execution-based hedonic component should be the major contributor to purchase intentions of consumers in the low involvement situations. In the high involvement situations, on the other hand, the major contributor to purchase intentions would be the attribute-based utilitarian attitude component.

One hundred twenty respondents were asked to write cognitive and affective responses to an experimental commercial. Then, respondents answered questions on product category involvement; category knowledgeability; brand familiarity; brand attitudes; brand purchase intentions; and prior brand usage. After these questions, respondents were shown the commercials once again, each ad exposure being followed by scales rating the ad on emotional impact, liking for the ad, how informative the ad was, and the degree to which their attention had been on the product claims or the execution while they watched the ad. Approximately one week later, respondents were contacted by telephone, and again asked to rate their attitudes to the test brands on the two attitudinal components.

Their findings obtained from correlation coefficient and LISREL-V were:

1. The affective responses represent strong mediating influences on brand attitudes.

2. Affective responses influence the two attitudinal components differently. However, the components in question turn out to be the opposite of those expected; i.e., affective responses turn out to influence utilitarian component more than hedonic component.

3. In the high involvement sample, while the ad execution sensitive attitudinal component has a non-significant relationship with purchase intentions, the attribute sensitive component has a highly significant path coefficient. In the low involvement sample, the relationships are reversed (but are not so significant as in high involvement).

Summary

To summarize, several studies have found that brand attitudes can be influenced by ad attitudes as well as brand-related beliefs. In addition, it was reported that the effect of ad attitudes tends to be stronger in the low involvement situation than in the high involvement situation. It was also found that the affective responses as well as cognitive responses mediate the brand attitudes. The literature review in this section will be the basis for establishing hypotheses.

Effects of Message Repetition on Message Acceptance

Another area of study in relation to advertising and message acceptance is the effects of message repetition on

cognition, attitude, and behavioral intention. Many studies have supported the inverted-U relationship between "exposure frequency" and "the formation of favorable attitude and behavioral intention." More specifically, it has often been found that message acceptance increases to a certain level of exposure, then decreases.

Berlyne's (1970) two factor theory has often been cited as a theoretical explanation for this curvilinear relationship. That is, (a) a positive habituation effect (i.e., a reduction in uncertainty or conflict) would dominate at the moderate levels of repetition, and (b) a tedium effect would dominate at the high levels of repetition. Another theoretical explanation of this relationship was made in terms of active information processing (Calder and Sternthal 1980). According to this view, message recipients rehearse two kinds of thoughts during exposures to a message: "message-related thoughts" and "own thoughts." The information processing theory postulates that with the initial exposures to a message, thoughts tend to be message-related, resulting in more favorable attitude formation; however, at high levels of repetition, the own thoughts would dominate, resulting in less favorable attitude toward the product.

Classical conditioning effects can be also employed to explain the phenomenon that message acceptance increases to a certain level of exposure. Presenting a commercial once might not be enough for the conditioned stimulus to elicit a

conditioned response. Instead, presenting a commercial containing a conditioned stimulus (e.g. a soft drink) and an unconditioned stimulus (e.g. jingle) several times would lead to a conditioned response (a change in preference). In short, repetition is considered a means for strengthening conditioning effects (McSweeney and Bierley 1984). Beyond the repetition effects on attitudes and behavioral intentions, several other issues were raised in the previous research as follows:

1) Do the total thoughts increase, as the number of exposures increases?

2) How does the number of support arguments and counterarguments change, as the number of exposures increase?

3) Does the pattern of attitude change parallel the pattern of cognitive response?

4) Can the tedium effect resulting from excessive repetition be forestalled by different executions of ads (instead of identical ads)?

5) How do involvement and motivation/ability moderate the repetition effects?

6) Is the advertising recall influenced by repetition?

This sections reviews the literature in the area related to above issues of message repetition effects.

One of the earlier studies in this area was made by Grass and Wallace (1969). Their basic purpose was to see if the wearout effect of repetition (inverted-U relationship) found from experiments would appear similarly in real-world advertising campaign. Ten repetition conditions (six exposures for each) of TV commercials were employed, and the repetition effects were studied over one year. Five

conditions involved different commercials (same theme but differed in executions), and the other five were repetition of identical commercials. From the survey data, the wearout effect was generally found. It was also found, however, as the number of commercials in a campaign increases (in other words, using varied commercials), the rate of wearout at any given exposure frequency decreases.

Ray, Sawyer, and Strong (1971) report several findings of laboratory and field studies. In one laboratory study of repetition effects for convenience goods and shopping goods, they found that repetition effects vary from convenience goods to shopping goods. For the convenience goods, repetition produced strong positive effects for both advertising recall and purchase intention. For shopping goods, repetition effect was leveled at five and six exposures for advertising recall and was insignificant for purchase intention. They also report that repetition increased purchase intention for nongrabber ads, but did not increase purchase intention for grabber ads. Here, grabber ads were defined as "different enough in format to attract attention and accomplish the bulk of the potential communication in a single exposure" (p. 18). In short, it was found that repetition effects vary with different types of ads or goods advertised.

McCullough and Ostrom (1974) conducted an experimental study to see how attitudes can be changed in a situation where highly similar communications were used. Several

magazine ads which were previously published were employed. Two groups of 25 subjects viewed either five magazine ads of a product, Yardley After Shave, or five magazine ads of solicited contributions to the United Service Organization. The contents of five advertisements for each product were basically the same, but were phrased in different ways and/or appeared in different orders. After subjects of each group viewed the ads of either product, they wrote down their thoughts (cognitive responses). As predicted, the results were that 1) the overall mean cognitive response score was positively related to the number of ads viewed; and 2) there was a tendency that positive responses increased while negative responses decreased as the number of exposures increased (up to four or five exposures).

Mitchell and Olson (1977) attempted to take an attitudinal, information processing approach that focuses on the intervening cognitive factors mediating changes in attitudes and behavioral intentions. Following the cognitive structure model (Fishbein and Ajzen 1975), they attempted to assess the effect of advertising repetition on the elements of cognitive structure, including B_i, e_i, A_o, A_{act}, and BI. Two major hypotheses were suggested: 1) continued pairing of an attribute and a brand through advertising repetition should increase the strength of the belief that the brand possesses that attribute; 2) repeated exposure to a stimulus would lead to an increase an individual's favorable attitude toward the stimulus. The

experiment consisted of 77 student subjects who were then divided into 4 groups. Each subject was exposed to 4 different types of visual ads of facial tissue (three non-verbal, image ads and one simple, verbal claim ad), each for a different brand. Each ad was shown to each subject either 2, 4, 6, or 8 times (a 4 x 4 Latin Square design). Thus, each subject was presented with 20 advertising exposures, for four different ads. Subjects were told, before exposed to the ads, that they would see the ads for four brands of facial tissue several times and asked to evaluate the four ads (high ad involvement situation / brand set). After being exposed to ads, the subjects responded to the scales measuring B_i, e_i, A_o, A_{act}, and BI.

The findings from Analysis of Variance were: 1) significant main effects of Advertisement Type / Content were obtained for each of the A_o, A_{act}, and BI variables, but 2) no main effects due to repetition level were obtained. In relation to no effects of repetition, the authors wrote that this finding was entirely consistent with Krugman's (1972) notion that the content of most ads is acquired in one or two trials. This explanation is very plausible, since subjects are expected to process information in one or two exposures in case of high ad involvement. In addition, this finding is similar to Ray, Sawyer, and Strong's (1971) finding for the repetition effects of grabber ads. However, the reason for the present lack of repetition effects might be the extremely simple

information contained in the ads. This is a very reasonable explanation, yet is also a weakness of the research design of this study.

As discussed before, Berlyne's (1970) two factor theory has often been the basis for predicting repetition effects on persuasion. Stang (1975) extended Berlyne's positive habituation effect by proposing that learning about the stimulus by repetition would lead to an increase in liking. Based on these propositions, Cacioppo and Petty (1979) studied focusing on the relationship among attitudinal, association, and learning (cognitive) effects of message repetition. They hypothesized in this study that attitude change with repetition would follow an inverted-U relationship, and it would parallel the cognitive response. Two experiments were conducted to test these hypotheses. In Experiment 1, 133 subjects heard a proattitudinal or counterattitudinal message either zero (control), one, three, or five times in succession (a 2 x 4 factorial design). Then they rated their agreement with the advocacy, and listed the message arguments they could recall. Experiment 2 was similar to Experiment 1, but this time subjects were also asked to write down their thoughts (cognitive responses).

Major findings were: 1) agreement (favorable attitude formation) first increased, then decreased as exposure frequency increased; 2) favorable thoughts increased, then decreased, whereas counterarguments decreased, then

increased. This pattern of cognitive response was pretty consistent with that of agreement; 3) learning (measured by recall) increased with repetition (however, more message arguments were recalled when the advocacy was counterattitudinal than proattitudinal). But liking (agreement) was unrelated to learning (recall of the message arguments). In short, their findings supported Berlyne's (1970) two factor theory, but did not support Stang's (1975) proposition.

Cacioppo and Petty (1980) report another study of repetition effects, in which two experiments were conducted. The first experiment was similar to the experiment of the previous study (Cacioppo and Petty 1979). Using a 4 (exposure frequency) x 2 (issue) x 3 (communication with issue: two counterattitudinal arguments and one neutral information regarding the advocacy) between-subjects design, subjects' cognitive responses, attitude change (immediate and persisting), and recall were measured. Persisting attitude change and counterargumentation appeared to have a curvilinear relationship with exposure frequency as hypothesized. Immediate posttest measures of attitudes showed a curvilinear (but statistically not significant) relationship with exposure frequency. Learning was also affected by exposure frequency as expected. In short, the findings of Experiment 1 were quite similar to their previous finding (1979), thus supporting Berlyne's two-factor theory.

In the second experiment, they proposed that the nature of the message arguments would moderate the persuasive effects of message repetition. Using a 3 (exposure frequency: one, three, or five presentation) x 3(argument type: strong, weak, or novel) between-subjects factorial design, subjects' cognitive responses and message recall were measured immediately after having subjects hear the message. Then, from eight to fourteen days later, subjects' attitudes were measured. The analysis supported the original predictions that a strong message should become more persuasive; a weak message should become less persuasive; and a novel (but weak) message should become more, then less, persuasive with repetition. It was also found that as exposure frequency increases, message-argument recall increases, as in Experiment 1. But attitudes and cognitive responses were not perfectly parallel.

Calder and Sternthal (1980) hypothesized, following information processing prediction, that wearout can occur even when advertisers attempt to enhance attention by spacing exposures over time, by using multiple executions of the message, or by dominating the media environment. In their experiment, three independent variables for ads of two products were manipulated (product A: an unfamiliar product to participants, and product B: a familiar product): flight length (1, 3, or 6); pool size (1 or 3); environmental pool size (1 or 3). Flight length refers to the number of exposures, pool size refers to kinds of ads for one product,

and environmental pool size refers to kinds of ads for the other product. Two hundred and forty-three student subjects were at first told that the research task involved evaluating six television programs (low situation involvement / nonbrand set), and were subdivided into 12 groups. Each group was assigned to each of 12 cases (a 3 x 2 x 2 factorial design) for manipulation.

After being exposed to commercials embedded in television programs, subjects were asked to evaluate advertisements and products, and to enumerate their thoughts (cognitive responses). Major findings obtained from Analysis of Variance were:

1) As flight length increased, evaluation toward advertisements for product A became more negative, but no main effect for flight length was obtained for product B.

2) As flight length increased, evaluations toward both products increased slightly (from one to three) and then dropped (from three to six).

3) For product A, subjects had more thoughts (both positive and negative thoughts) after a flight length of six than after a flight length of three or one; however, for product B, there were no effects for total thoughts.

4) The content of cognitive responses toward product B became more positive (from one to three), then less positive (from three to six). This positive-negative processing index provided some support for the existence of wearout. However, there were no effects for the positive-negative processing index for product A. It was thought that this could be explained by the experimental procedure.

5) Increasing the pool size enhanced evaluation for the product commercial (for both product A and product B), and resulted in an increase in total thoughts (for product A only). However, increasing the pool

size did not enhance evaluation for the product (for both product A and product B).

In summary, the results of their study confirmed that wearout can occur in spite of advertising strategies designed to enhance attention. However, the study failed to show that the cognitive response pattern necessarily corresponds with evaluations.

While most other research was conducted with adult subjects, the purpose of Gorn and Goldberg's (1980) study was to assess whether child viewers respond like adults to varying degrees of repetition and to repetitive or varied sets of commercials for the same products. In their experiment, 18 to 40 boys were randomly assigned to each of six groups, representing varying levels of commercial exposure as follows: 1) one time exposure, 2) repeated three times, 3) three different commercials for the same brand, 4) repeated five times, 5) five different commercials for the same brand, and 6) a control group. The ads were for a brand of ice cream, and were embedded in a TV program. Dependent measures included relative preference (attitude toward the brand) and recollection of the stimulus materials. The data were analyzed with Analysis of Variance. The findings were as follows.

1) Those who viewed three different commercials expressed the greatest preferences, and five-varied-commercial group was second most favorable toward the brand.

2) While three exposures, either repetition or varied, improved recognition slightly, further exposure had little positive impact.

3) The difference in recognitions between those viewing three repeated commercials and those viewing three different commercials was not significant, nor was there a significant difference between those viewing five repeated commercials and five different commercials.

In addition, observation suggested that when children were exposed to the same commercial either three or five times they became annoyed by the repetition, supporting tedium effect. To summarize, it was found that varied-commercial was more effective than repetition of identical commercial in attitude formation; and an inverted-U relationship existed between exposure frequency and attitude.

Belch (1982) investigated the effects of television commercial repetition on cognitive response and message acceptance (measured by attitudes and purchase intentions) on the bases of Berlyne's (1970) two-factor theory and Cacioppo and Petty's (1979) two-stage attitude modification models. Three hypotheses were established as follows.

H1: The favorability of message acceptance and cognitive responses to a television commercial increases with moderate levels of exposure, then declines following high levels of exposure.

H2: The frequency of topic-irrelevant ideation increases as exposure to a television commercial increases.

H3: The strength of the relationship between cognitive response and message acceptance measures increases with moderate levels of exposure, then decreases at high levels of exposure.

In their experiment, 260 persons were divided into 3 subgroups for manipulating the level of repetition (one, three, or five exposures). The subjects were told they

would be asked questions about the commercials (high ad involvement) after being exposed to an embedded advertisement in a television program (hypothetical brand of toothpaste: Shield). Immediately after the program ended, the subjects were asked to list their thoughts (cognitive response) and to respond to measures of attitudes and purchase intentions. It was found that the message acceptance measure (attitude and purchase intention) did not show the positive-then-negative effects of repetition (H1). The cognitive response results also failed to support H1. In addition, Hypotheses 2 and 3 also were not supported. In summary, his finding did not follow Berlyne's (1970) two factor theory nor was consistent with Cacioppo and Petty's (1979) finding.

Schumann (1983) has conducted a study to assess how consumer involvement as well as variation of commercial moderate the repetition effects. In this study, 360 student subjects were exposed to 1, 4, or 8 ads for a fictitious new pen in the context of a simulated television program. The ads for the pen, either always identical or different (same arguments were presented in a different order, with slightly different wording, in a different print type, and with a different featured user of the pen), were viewed under conditions of either high or low situation involvement (manipulated). After viewing the 45-minute TV show, all subjects completed a questionnaire booklet which asked their

thoughts about the product, and measured recall of and attitude toward the ad and product.

Major findings obtained from Analysis of Variance were as follows. 1) Under high involvement, no significant Repetition x Variation interaction effects (for attitude toward ad) were obtained. Under low involvement, it appeared that subjects had similar attitudes toward the same and different ads under the one- and four- exposure conditions, but significantly different attitudes toward the ads under eight-exposure conditions. When the ads were different, attitudes toward the ad increased (i.e. more positive) from four to eight exposures, but when the ads were the same , attitudes decreased (i.e. more negative) from four to eight exposures. 2) Attitude toward the product showed a similar pattern. Under high involvement, a curvilinear pattern (increase-then-decrease) was observed in both same and varied ads cases. Under low involvement, the product attitude increased from one to eight exposures when the ads were varied, but showed a curvilinear pattern when the ads were the same.

In sum, these data provide some support for the view that tedium can be forestalled by varying execution of ads, particularly under low involvement conditions. Under high involvement, it was found, tedium can not be forestalled by varying execution of ads, since subjects are motivated to process the message at relatively low repetition levels.

This finding is consistent to some degree with Batra and Ray's (1986) finding.

Very recently, Batra and Ray (1986) have studied how situational variables such as motivation, ability, and opportunity to respond moderate the advertising effects. As reviewed before, it was found that the inverted-U curve pattern of attitudinal effects can be explained by the pattern of cognitive response (e.g., Cacioppo and Petty 1979). Therefore, it is expected that at a certain level of repetition, the recipients become antagonistic toward the message arguments, resulting in less favorable attitudes than attitudes occurring at lower levels of repetition. Past research found that high levels of motivation, knowledge, and response opportunity would increase cognitive response production. In this case, more exposures were not effective in gaining message acceptance. Hence Batra and Ray (1986) hypothesized that if the ads were evoking a low number of brand claim thoughts (cognitive responses), repetition would lead to gains in purchase intentions and attitudes (Hypothesis 1). In a similar way, it was hypothesized that repetition would lead to gains if the antecedent motivation/ability (H2) or opportunity (H3) is low. In contrast, if either the ads were evoking many thoughts or those antecedents were at high levels, no repetition effects were expected.

In their experiment, 131 subjects were divided into four subgroups, and each subject saw three TV commercials

either once, twice, or four times. The design used was a 2 x 2 x 3 factorial, with the first two factors (between subjects) being antecedent motivation/ability (high, low) and antecedent opportunity (high, low). The third factor was a within-subjects frequency treatment, resulting in a latin square design. Opportunity to respond to the ad was operationalized through the number of arguments in the ad execution (few arguments - low opportunity; many arguments - high opportunity).

Analysis of Variance showed that H1 and H2 were supported, but H3 was not supported (but direction appeared as expected). Specifically, in relation to H2, for high motivation/ability, while the gain in intentions and attitudes increased (from one exposure to two), then dropped (from two to four); for low motivation/ability, however, it showed almost no gain over control for one or two exposures but then increased dramatically for four. The authors suspected that H3 was not supported because of a less-strong manipulation or "affect-rational" confounding. This type of attempt to defend the original hypothesis is not desirable. Rather, the authors could doubt their own hypothesis or previous findings on which they based their hypothesis.

Summary

To summarize, there have been inconsistent findings for the effects of message repetition; some past studies have supported the positive then wearout effect of message

repetition on message acceptance, while some other studies have found an insignificant effect of message repetition on message acceptance. In addition, several studies have found that varied commercials are more effective than simple repetition of one commercial. The literature review in the area of message repetition effects will become the basis for establishing hypotheses in this dissertation.

Establishment of Hypotheses

The major purpose of this research is to expand the findings of past studies in the areas of information processing routes and brand attitudes formation in relation to ad repetition. It is hypothesized that involvement has a moderating influence in each aspect of advertising effects. Regarding the issues raised in Chapter One, three sets of hypotheses are established based on the literature review.

The first research issue was whether consumer involvement moderates information processing routes to the formation of brand attitudes. As reviewed, it was found that the cognitive information processing route is more likely to be followed by high involvement consumers than low involvement consumers, while the affective information processing route is more likely to be followed by low involvement consumers than high involvement consumers. If consumers' situational involvement would moderate the information processing routes for a single ad exposure, it

is likely that consumers' situational involvement would moderate the information processing route in the same way for multiple time exposures. The previous literature and reasoning lead to the following set of hypotheses, and the set of hypotheses can be expressed in Figure 1.

Hypotheses Set I

H I-1: For high involvement consumers, brand-related beliefs positively influence brand attitudes for any number of ad repetitions.
$(\text{Corr}_{\text{brb-ba}})_{\text{HI}} > 0$

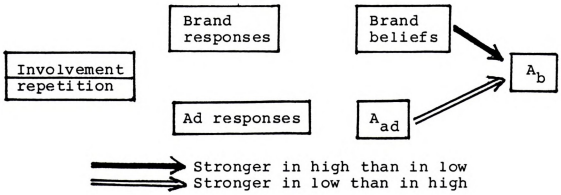
H I-2: For low involvement consumers, ad attitudes positively influence brand attitudes for any number of ad repetitions.
$(\text{Corr}_{\text{aa-ba}})_{\text{LO}} > 0$

H I-3: For any number of ad repetitions, brand-related beliefs have a greater effect on brand attitudes for high involvement consumers than for low involvement consumers.
$(\text{Corr}_{\text{brb-ba}})_{\text{HI}} > (\text{Corr}_{\text{brb-ba}})_{\text{LO}}$

H I-4: For any number of ad repetitions, ad attitudes have a greater effect on brand attitudes for low involvement consumers than for high involvement consumers.
$(\text{Corr}_{\text{aa-ba}})_{\text{LO}} > (\text{Corr}_{\text{aa-ba}})_{\text{HI}}$

Figure 1

Relationships of Constructs Investigated in Hypotheses Set I



The second research issue was whether consumer involvement moderates the formation of brand attitudes for differing numbers of ad repetitions. As reviewed, it was found that the effect of message repetition on message acceptance (formation of attitudes or purchase intentions) was higher in the case of low-price consumer goods ads or non-grabber ads than the case of high-price shopping goods ads or grabber ads (Ray, Sawyer, and Strong 1971). The reason for this difference in repetition effect may be found in that low-price consumer goods ads and non-grabber ads would attract relatively less initial attention than the other cases. When consumers' attention level is low, the ad repetition would be more effective for favorable brand attitudes formation than when consumers' attention level is high. It is because consumers would not process all of the information at the low levels of repetition if their attention level is low, while consumers would process information at the low levels of repetition and feel tedious at the higher levels of repetition if their attention level is high.

It was also reported that repetition effect was higher in case of ads evoking more cognitive responses than less cognitive responses (Batra and Ray 1986). It is believed that low involvement consumers would give less attention to the message and have less cognitive responses on the message than high involvement consumers. Therefore, in hypotheses set II, it can be hypothesized that involvement level

moderates the attitudinal effects of repetition. Figure 2 shows the relationships expressed in the second set of hypotheses.

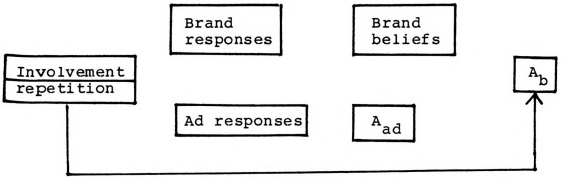
Hypotheses Set II

H II-1: Magnitude of repetition effect on brand attitudes is greater for low involvement consumers than for high involvement consumers.

H II-2: Wearout effect of repetition appears at a lower level of repetition for high involvement consumers than for low involvement consumers.

Figure 2

Relationships of Constructs Investigated in Hypotheses Set II



The last issue was whether the directional change in brand attitudes over different levels of repetitions can be better explained with comprehensive spontaneous responses. Regarding the moderating role of involvement in information processing routes, it has been theoretically proposed and partially supported that low involvement situations lead to a strong influence of ad attitudes on brand attitudes and high involvement situations lead to a strong influence of brand cognitions on brand attitudes (e.g., Gardner 1985,

cognitive and low involvement cases in Park and Young 1983, 1986, Petty, Cacioppo, and Schumann 1983).

Consumers' spontaneous responses may be classified into brand-related responses and ad-related responses as well as cognitive responses and affective responses. Therefore, it may be reasonable to say that ad attitudes are more likely to be mediated by ad-related responses, while brand cognitions are more likely to be mediated by brand-related responses. Therefore, it is expected that ad-related responses mediate brand attitudes through ad attitudes (ad-related responses - ad attitudes - brand attitudes), whereas brand related responses mediate brand attitudes through brand cognitions (brand-related responses - brand cognitions - brand attitudes). Previous findings and theoretical reasoning lead to the third set of hypotheses. The relationships of constructs investigated in this set of hypotheses are expressed in Figure 3.

Hypotheses Set III

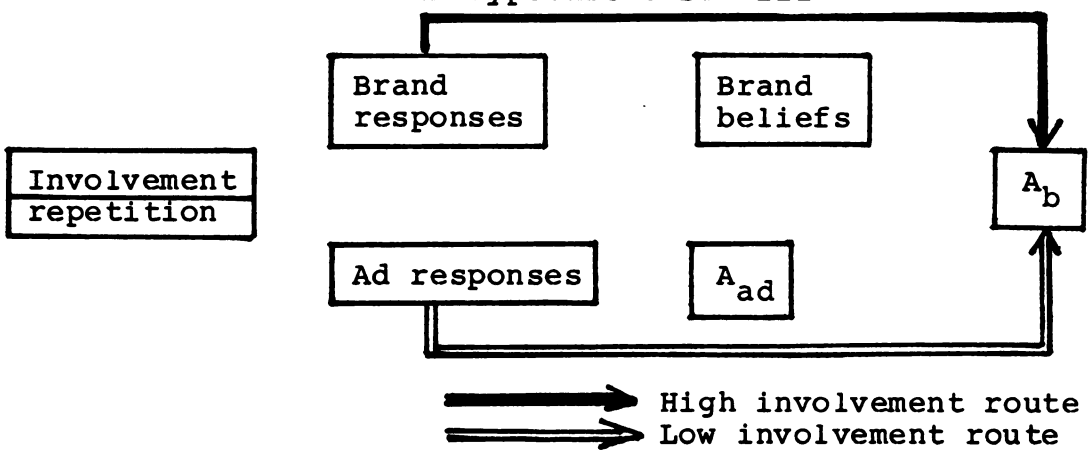
H III-1: For high involvement consumers, the directional change in brand attitudes is consistent with the directional change in brand-related responses across different levels of repetition, specifically:
- a. Changes in brand attitudes and brand-related responses from a low to a moderate level of repetition have the same direction.
- b. Changes in brand attitudes and brand-related responses from a moderate to a high level of repetition have the same direction.

H III-2: For low involvement consumers, the directional change in brand attitudes is consistent with the directional change in ad-related responses across different levels of repetition, specifically:

a. Changes in brand attitudes and ad-related responses from a low to a moderate level of repetition have the same direction.
b. Changes in brand attitudes and ad-related responses from a moderate to a high level of repetition have the same direction.

Figure 3

Relationships of Constructs Investigated in Hypotheses Set III



CHAPTER THREE

METHODOLOGY

This chapter describes the methodology used to test the hypotheses developed in this dissertation. It includes the definitions of constructs, the pretest result regarding the involvement manipulation, the experimental design, the measurement instrument construction, and the analytical methods.

Definitions of Constructs

The definitions of constructs employed in this dissertation are as follows:

Repetition: the presentation of the same commercial to subjects more than one time

Involvement: the amount of an individual's interest in the product class in the given situation

Attitude: the favorable or unfavorable predisposition toward an object, including an evaluative component and an affective component

Brand-related responses: any thoughts and feelings regarding support arguments and counterarguments on the advertised brand

Ad-related responses: any thoughts and feelings regarding ad execution and source, such as positive and negative feelings of ad execution, and derogation and bolstering of the advertising source

Brand-related beliefs: summation of beliefs toward the advertised brand along salient attributes of the product class, i.e., knowledge and understanding of the brand

Attitude toward the ad (A_{ad}): an individual's attitude toward the ad

Attitude toward the object (A_o): an individual's attitude toward the advertised brand

Attitude toward the act (A_{act}): an individual's attitude toward the purchase of the advertised brand

Pretest of Involvement Manipulation

The purpose of this dissertation is to investigate how consumers' involvement level moderates the information processing routes and message acceptance across differing numbers of ad repetitions. Therefore, it is important to clarify the operational definition of the involvement construct in this dissertation.

Chapter Two reviewed several definitions of involvement. Among others, Mitchell(1979) conceptualized involvement as a state variable and defined it as "the amount of arousal, interest or drive evoked by a stimulus or situation (p. 194)." Houston and Rothschild (1978) proposed three kinds of involvement. Among them, the situational involvement was conceptualized as "the ability of a situation to elicit from individuals' concern for their behavior in the given situation (p. 184)." According to this conceptualization, individuals' involvement for a product or a commercial would vary with the given situations. Following the conceptualizations of Mitchell

(1978) and Houston and Rothschild (1978), the involvement construct in this dissertation is conceptualized as a state and situation-specific variable.

Wright (1973) manipulated involvement levels by dividing subjects into two groups. He instructed one group of subjects to make a short-run decision about the product appearing in the impending advertisement (for high involvement), and no such instruction was given to the other group (for low involvement). The manipulation check satisfied the experimental validity. Petty, Cacioppo, and Schumann (1983) and Park and Young (1986) also successfully manipulated subjects' situational involvement in similar ways.

Using the manipulation approach from the previous studies, manipulation of involvement levels was pretested. One hundred forty-two subjects were randomly divided into two groups. Seventy two subjects were given the high involvement scenario, while seventy subjects were given the low involvement scenario as follows.

Scenario Descriptions

High involvement group:
"Assume the following situation. You are expected to graduate from college at the end of this term and you have found a good job. Even if you have a car now, it is too old and very often breaks down. So, you are seriously considering purchasing a new car. Since you are tired of used cars, which you have always owned, this time you want to buy a brand new car. Because of your budget limitations, you are considering a subcompact car, but you have not yet determined the brand."

Low involvement group:
"Assume the following situation. You are a junior student at MSU with more than one year left before graduation. You have a car now, and it works pretty well. Besides, you cannot afford a new one quite yet."

Subjects were then asked to assume to watch a TV program in which the commercial of a new subcompact car was embedded. Next, they were asked to answer to the following question?

"Which part of the TV communication did you concentrate on most?"

Most on the TV program	1	2	3	4	5	Most on the commercial
	___	___	___	___	___	

As expected, mean score of subjects in the high involvement group was significantly higher than that of subjects in the low involvement group as follows.

	High	Low
Subjects	72	70
Mean	3.04	2.40
s.d.	1.22	1.02

$t = 3.38$ p-value < .01

In conclusion, it appeared that the manipulation for involvement level worked well.

Experimental Design

Two independent variables were employed in this research: involvement and repetition. As described previously, the involvement level was manipulated into high and low levels. For ad repetition levels, three different repetition levels were considered: one, three, and five

Table 1

Experimental Design

	Number of Exposures		
Involvement	1	3	5
High	50	50	50
Low	50	50	50

Note: The number of each cell refers to cell sample size.

times. Therefore, a 2 x 3 between-subjects factorial design was used as shown in Table 1.

Stimuli

A 30-second television advertisement of Excel brand (Hyundai passenger car) was chosen as the stimulus. Since 1986, the Excel brand has been advertised and sold in some areas of the United States including the West Coast and the East Coast. Because the advertisement had not been aired in the Midwest, it was likely that subjects had not previously been exposed to the advertisement. Subjects all attended the same large Midwestern university. The experimental advertisement was professionally embedded in a television

Table 2

Sequence and Timing of Experimental Stimuli

One Repetition	Three Repetitions	Five Repetitions
Show (0:00)	Show (0:00)	Show (0:00)
	Ad (0:29)	Ad (0:29)
	Show (0:59)	Show (0:59)
		Ad (2:34)
		Show (3:04)
Ad (6:14)	Ad (6:44)	Ad (7:14)
Show (6:44)	Show (7:14)	Show (7:44)
		Ad (10:58)
		Show (11:28)
	Ad (14:03)	Ad (15:03)
	Show (14:33)	Show (15:33)
End (15:31)	End (16:31)	End (17:31)

program titled as "Animals in Action". Three different video cassette tapes (each for 1, 3, or 5 repetitions of advertisement) were edited. The placement of the experimental commercial(s) within the program is illustrated in Table 2.

Subjects

Three hundred forty six undergraduate students from several different courses and/or sections participated in the experiment. The experiment was conducted during the first class session in a new term. The number of participants for each experimental condition is shown in Table 3.

Table 3

Number of Participants in Each Condition

	Number of Exposures		
Involvement	1	3	5
High	60	59	55
Low	58	60	54

For the final analysis, the cell sizes were reduced to fifty by eliminating incomplete or incorrectly completed questionnaires first. Secondly, questionnaires were eliminated from subjects who tended to score poorly on confirmatory questions regarding the involvement manipulation.

Experimental procedure

Two types of questionnaires were used for the experiment: type "H" for high involvement subjects and type "L" for low involvement subjects. The questionnaires were different in only the scenario description, in which statements for high or low level of manipulating involvement were described (see Scenario Descriptions on page 66). The questionnaires of type "H" and type "L" were alternately stacked into one pile and subsequently handed out to all students. Thus, students seated side by side completed different forms.

Subjects were asked to read and fill out pages 1 to 3 before they were exposed to the TV program including the commercial(s). In these pages, they were asked to read their involvement scenario. In addition, they were asked to describe on paper in a few sentences the role they were supposed to play. This helped reinforce the role they were asked to play. In this way, subjects were expected to have a high or a low level of involvement with the situation of subcompact car purchase before they were exposed to the

subcompact car commercial(s). Then, the subjects were asked to watch the TV program in which the experimental commercial(s) was (were) embedded. Each subject was exposed to the commercial one, three, or five times. After they finished watching the TV program, they were asked to answer the rest of the questionnaire. When they finished, the subjects were debriefed and thanked for participating in the experiment. Each subject was also given their choice of a candy bar or a pack of orange juice for participating in the experiment.

Measurement of Dependent Variables

Dependent measures include spontaneous responses, cognitive structure measure (beliefs and evaluation), attitude toward the ad, attitude toward the brand, and attitude toward the act of purchasing the brand.

Manipulation Check

It is expected that as the subjects' situational involvement level with the purchase of a subcompact car increases, the subjects' attention to the commercial of a subcompact car increases. After the subjects were exposed to the advertisement(s), they were asked a question, "Which part of the TV communication did you concentrate on most, while you were watching the TV?" Then, they answered their relative attention level between TV show and the commercial(s) by marking on three 5-point bipolar scales

(most on the TV show - most on the commercial, most on messages about the animals - most on messages about the automobile, and most on learning about animal moving - most on characteristics of the automobile).

Spontaneous Responses

After being exposed to the experimental commercial(s), the subjects were asked to write down any and all thoughts and/or feelings they had while they were watching the commercial(s). Three judges coded the spontaneous responses into five categories based on the pre-established criteria: positive brand-related responses, negative brand-related responses, positive ad-related responses, negative ad-related responses, and other responses. Each type of responses included cognitive responses and affective responses (e.g., positive brand-related responses include positive brand-related cognitive responses and positive brand-related affective responses). Table 4 shows the criteria used to code the spontaneous responses in different categories.

The criteria used in this dissertation were different from those used by Wright (1973). He used four categories and adopted only cognitive responses. However, the spontaneous responses in this dissertation included not only cognitive responses but also affective responses. For example, while "simple statements of liking the brand" were not considered as support arguments in Wright's

Table 4

Coding Criteria of Spontaneous Responses

Positive brand-related responses:
Positive statements on brand evaluation (e.g., a nice looking car)
Positive statements on brand affect (e.g., maybe this is the car I wanted)
Negative brand-related responses:
Negative statements on brand evaluation (e.g., looks like the engine is not very strong)
Negative statements on brand affect (e.g., I didn't like the style of the car)
Positive ad-related responses:
Positive statements on ad evaluation (e.g., I think the ad is effective)
Positive statements on ad affect (e.g., the setting for the ad was pleasant)
Negative ad-related responses:
Negative statements on ad evaluation (e.g., the ad design was poor)
Negative statements on ad affect (e.g., I felt bored by too many repetitions)
Other responses:
Neutral statements (e.g., small luxurious car)
Curiosity statements (e.g., I want to know the price)
Unrelated statements (e.g., the show was interesting)

classification, those statements were adopted as positive brand-related responses for this research.

In the coding results, unanimous agreement among three judges were obtained on 87.0 percent of the coded responses. The responses on which an unanimous agreement was not initially made were adopted or discarded depending on agreement after discussion. Finally, 97.3 percent of responses were categorized with agreement. Each subject's brand-related response score was obtained by subtracting the number of negative brand-related responses from the number of positive brand-related responses. Similarly, each subject's ad-related response score was obtained by subtracting the number of negative ad-related responses from the number of positive ad-related responses.

Cognitive Structure Measure

The belief strengths (B_i) and attribute evaluations (e_i) were measured following Fishbein model (Fishbein and Ajzen 1975). Salient attributes subcompact car buyers consider were selected based on Chrysler Corporation's vast market research. Five attributes were identified as most important in choosing a subcompact car as shown in Table 5.

The measure of respondents' beliefs (B_i) about the Excel brand was based on how strongly they agreed or disagreed with the statements about the Excel brand in terms of those five attributes using a 7-point Likert type scale (1 - 7 scale, strongly disagree - strongly agree). Then the

Table 5

Most Important Attributes in Subcompact Cars

A well-made car	12.7 %
Value for the money	19.6 %
Gas mileage	12.7 %
Durability and reliability	20.4 %
Price or Deal offered	16.0 %
Others	18.6 %
Total	100.0%

Note: The percentage for each attribute refers to the percentage of subcompact car buyers who think that attribute is most important.

evaluation (e_i) of each attribute level was taken on a bipolar rating scale. The respondents were asked to mark how much satisfaction they would get from each desirable aspect of a subcompact car on a 7-point scale (1 - 7 scale, a little bit of satisfaction - a great amount of satisfaction). Each respondent's evaluation of each attribute level was multiplied by his or her belief score along all attributes to obtain the cognitive structure score following the Fishbein model (Fishbein and Ajzen 1975) as follows:

$$\text{Attitude} = \sum_{i=1}^{n} B_i e_i$$

where:
B_i = the ith belief about the object
e_i = the evaluation of the ith belief
n = the total number of beliefs

Attitude Toward the Ad

Following Mitchell and Olson (1981) and Gardner (1985), attitude toward the ad (A_{ad}) was measured by computing the mean of scores obtained from four seven-point (1 - 7) evaluative scales (very bad - very good, dislike very much - like very much, very irritating - not irritating at all, not interesting - very interesting).

Attitude Toward the Brand

Following Fishbein, attitude toward the brand was measured by attitude toward the Hyundai Excel itself (A_o), and attitude toward the act of purchasing Hyundai Excel (A_{act}). To measure A_o and A_{act}, the scales used by Mitchell and Olson (1981) were employed. The mean of four seven-point evaluative scales (very bad - very good, dislike very much - like very much, very poor quality - very high quality, and unpleasant - very pleasant) was used as a measure of attitude toward the brand itself (A_o) for each respondent. The mean of three seven-point evaluative scales (very bad - very good, very foolish - very wise, very harmful - very beneficial) was used as a measure of attitude toward the act of purchasing and using brand (A_{act}) for each respondent.

Analytical Methods

The constructs and analytical method used for each set of hypotheses are shown in Table 6.

Table 6

Constructs and Analytical Methods

Hypotheses set	Constructs	Method
H I	A_{ad}, $\Sigma B_i e_i$, A_o, A_{act}	Correlation
H II	A_o, A_{act}	ANOVA
H III	Responses, A_o, A_{act}	ANOVA

Summary

This chapter presented the methodology to test three sets of hypotheses. Definitions of constructs often vary from author to author, therefore, this chapter at first clarified the operational definition of each construct. The successful manipulation of involvement level is essential for this research. Therefore, a pretest was conducted to see if the manipulation would in fact work well. The result of the pretest showed that the manipulation of involvement in the experiment would indeed work well.

Next, the experimental design and dependent variables were explained. The experimental design was a 2 x 3 factorial design with two levels of involvement and three levels of ad repetition. The subject size of each cell in the design was fifty. A commercial of a passenger car "Hyundai Excel brand" was used as the stimulus. The commercial was embedded in a TV show, one, three, or five times to create three different kinds of stimuli. In the experiment, subjects were manipulated into a high or low level of involvement by reading a scenario for each type of involvement. After being exposed to the TV commercial(s), subjects were asked to record their cognitive responses during the commercial(s), and to respond to measurement scales for the other dependent variables including cognitive structure measure, A_{ad}, A_o, and A_{act}. Finally, this chapter described the statistical methods to analyze the data.

CHAPTER FOUR

RESULTS

This chapter presents the results of the statistical data analyses. Included are a reliability analysis of the multi-item scales for the dependent variables, a manipulation check, and the statistical tests for the three sets of hypotheses.

Reliability of Multi-item Scales for Dependent Variables

The best type of measurement is one which is error free. However, random errors are usually involved in any measurement. The degree to which measures are free from errors, and therefore yield consistent results over a variety of conditions is called reliability. Peter (1979) reviews three basic methods for assessing the reliability of a measurement scale: test-retest, internal consistency, and alternative form. In test-retest reliability, the same subjects are given the identical set of measures at two different times. The obtained scores from these two sets of measures are then correlated. In alternative form reliability, the same subjects are given two similar sets of items at two different times. The resulting scores from the two similar forms are then correlated. In internal

consistency reliability, a set of measures is applied to subjects at one time. The set of measures are then split, and the resulting scores are correlated. Coefficient alpha, which is an indicator of internal consistency, is the most frequently used reliability measure with multi-items.

The coefficient alpha for the measures of each construct is shown in Table 7. The coefficient alphas obtained in the present study were similar to those obtained in other studies in which same scales were used. Specifically, for the reliability of scales of A_{ad}, Mitchell and Olson (1981) obtained .87, and Gardner (1985) obtained .78 and .86 for each of two cases, using the same scales. For A_o and A_{act}, Mitchell and Olson (1981) obtained .88 and .85, respectively. Since the coefficient alphas achieved in the present research ranged between .8089 and .9258, the items used for each construct were considered to be appropriate for further analysis and none of the items were discarded.

Manipulation Check

As described in the previous chapter, the involvement construct was operationalized as situational involvement which was manipulated for the subjects. Since the objective of this study is to investigate moderating roles of involvement in the information processing routes and in brand attitudes formation, it is very important to properly manipulate the subjects' involvement levels. The mean and

Table 7

Coefficient Alphas of Scales

Scale	Coefficient Alpha
Manipulation check	.8760
Attitude toward the ad (A_{ad})	.8089
Attitude toward the object (A_o)	.8895
Attitude toward the purchase (A_{act})	.9258

standard deviation for subjects in each of the high and low groups were computed with each individual subject's mean score obtained from three items for manipulation check. The results are shown below.

	High Involvement	Low Involvement
Subjects	150	150
Mean	3.00	2.38
s.d.	.93	.91

Using a t-test for a statistically significant difference in means, it was found that subjects in the high involvement group gave relatively more attention to the advertisement than subjects in the low involvement group ($t = 5.80$, $p < .001$). This was the expected result based on the theoretical reasoning. In summary, it appeared that manipulation of situational involvement levels succeeded.

Tests of Hypotheses

Three research issues were raised in Chapter One, and three sets of hypotheses were presented based on the literature review. This section is devoted to discussing the results of the statistical tests of the hypotheses.

Hypotheses Set I

The first set of hypotheses stated that the effects of brand-related beliefs and ad attitudes on brand attitudes will vary with consumers' involvement level, for any number of ad repetitions. First, brand attitudes were measured by attitude toward the brand itself (A_o). To test this set of hypotheses, the correlation coefficients between constructs were computed. The correlation coefficients between brand-related beliefs and A_o for all six conditions are shown in Table 8. The correlations between brand-related beliefs and A_o for all levels of ad repetitions were significant for the high involvement subjects (.61, .58, .37 for each of 1, 3, and 5 repetitions respectively, $p < .01$ for all). These findings support H I-1. Additionally, the correlations between these constructs appeared to be significant for the low involvement subjects (.35, .35, .36 each for 1, 3, and 5 repetitions respectively, $p < .05$ for all). The finding in H I-1 is an extension of Gardner(1985)'s finding.

The correlations between ad attitudes (A_{ad}) and A_o for all six conditions are also shown in Table 8. The correlations between A_{ad} and A_o for all levels of ad

repetitions were significant for the low involvement subjects (.62, .43, .59 each for 1, 3, and 5 repetitions respectively, $p < .01$ for all). These findings supported H I-2. Additionally, the correlations between these constructs were significant for the high involvement subjects (.53, .47, .36 each for 1, 3, and 5 repetitions respectively, $p < .01$ for 1 and 3 exposures and $p < .05$ for 5 exposures). This finding in the repetition context is an extension of the findings of Lutz, MacKenzie, and Belch (1983) and Gardner (1985), in which A_{ad} is a stronger mediator of A_b in not only low involvement but also high involvement condition.

When the correlations between brand-related beliefs and A_o for the high and low involvement subjects were compared across all levels of repetitions, the correlations between these variables for the high involvement subjects were higher than the correlations for the low involvement subjects across all levels of repetition. This result was as predicted. When the correlations between A_{ad} and A_o for the high and low involvement subjects were compared across all levels of repetition, the correlations between these variables for the low involvement subjects were higher than the correlations for the high involvement subjects in the case of 1 and 5 repetition conditions, also as predicted. However, this relationship did not hold in the case of the 3 repetition condition. The results found in comparison of

two correlations are roughly consistent with and an extension of the findings of Gardner (1985).

The differences in these correlations were statistically tested using the following test statistic.

$$Z = \frac{{}^1/_2 \ln \frac{1 + Vm}{1 - Vm} - {}^1/_2 \ln \frac{1 + Vf}{1 - Vf}}{\sqrt{\frac{1}{Nm - 3} + \frac{1}{Nf - 3}}}$$

Note: Vm and Vf denote the correlation coefficient for each group an Nm and Nf denote the sample size of each group (Kleinbaum and Kupper 1978).

The Z-value for the difference in each pair of correlations is shown in Table 9. As can be seen in Table 9, in the case of the single exposure condition, the correlation between brand-related beliefs and A_o for the high involvement subjects was significantly higher than that for the low involvement subjects ($Z = -1.67$, $p < .05$). In the case of the three exposure condition, the correlation between those variables for the high involvement subjects was marginally higher than that for the low involvement subjects ($Z = -1.44$, $p < .10$). However, the difference in those correlations between the high and low involvement subjects did not appear to be significant in the case of the five exposure condition. These results partially supported H I-3. On the other hand, when the correlations between A_{ad} and A_o were compared across the three repetition levels, the

Table 8

Relationship of Brand Beliefs and A_{ad} to A_o by Exposure Level

	Single exposure		Three exposures		Five exposures	
	Brand beliefs	A_{ad}	Brand beliefs	A_{ad}	Brand beliefs	A_{ad}
Low	.35*	.62**	.35*	.43**	.36*	.59**
High	.61**	.53**	.58**	.47**	.37**	.36*

* p < .05
** p < .01

Table 9

Z-value for Difference in Correlations (A_o measure)

	1	3	5
Brand beliefs and A_o	-1.67**	-1.44*	-.06
A_{ad} and A_o	.65	-.24	1.46*

* p < .10 in a one-tail test
** P < .05 in a one-tail test

correlation for the low involvement subjects was marginally higher than the correlation for high involvement subjects only in the 5 exposure condition ($Z = 1.46$, $p < .10$). Therefore, H I-4 was also partially supported.

Brand attitudes were measured not only by A_o but also by A_{act}. The correlation coefficients between brand-related beliefs and A_{act}, and the correlation coefficients between A_{ad} and A_{act} are exhibited in Table 10. As shown in Table 10, H I-1 and H I-2 were also supported with the A_{act} measure. As discussed previously, when A_o was used for brand attitude measure, the correlations between brand-related beliefs and A_o, and the correlations between A_{ad} and A_o, were all significant for both high and low involvement subjects in all levels of exposure conditions. However, as can be seen in Table 10, the correlation between brand-related beliefs and A_{act} was insignificant for the low involvement subjects in the single exposure condition. In addition, the correlation between A_{ad} and A_{act} appeared insignificant for the high involvement subjects in the five exposure condition.

When the A_{act} measure was employed for brand attitudes, H I-3 was directionally supported for all exposure conditions and H I-4 was directionally supported for 3 and 5 exposure conditions. To test the differences in correlations across different exposure conditions, Z-values were computed across all levels of repetition as seen in Table 11. Only in the case of the 5 exposure condition, did

Table 10

Relationship of Brand Beliefs and A_{ad} to A_{act} by Exposure Level

	Single exposure		Three exposures		Five exposures	
	Brand beliefs	A_{ad}	Brand beliefs	A_{ad}	Brand beliefs	A_{ad}
Low	.20	.34*	.47**	.48**	.35*	.57**
High	.31*	.52**	.57**	.33*	.41**	.19

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

Table 11

Z-value for Difference in Correlations (A_{act} measure)

	1	3	5
Brand beliefs and A_{act}	-.57	-.67	-.34
A_{ad} and A_{act}	-1.07	.87	2.20**

** $P < .05$ in a one-tail test

the difference in correlations between A_{ad} and A_o appear to be significant ($Z = 2.20$, $p < .05$). Therefore, these results did not support H I-3, but partly supported H I-4.

Hypotheses Set II

The second set of hypotheses stated that the effect of repetition on the formation of favorable brand attitudes is greater for low involvement consumers than for high involvement consumers. Additionally, the wearout effect of ad repetition takes place at a lower level of repetition for high involvement consumers than for low involvement consumers. To test the second set of hypotheses, the data were analyzed with Analysis of Variance (one-way and two-way). First, the effects of ad repetition on brand attitudes measured by A_o score were analyzed. Table 12 shows the mean A_o scores of low and high involvement subjects for different levels of repetitions. It was found that as repetition level increased, the mean A_o scores of low involvement subjects increased ($F = 6.04$, $p < .01$, see Table 13 and Figure 4), but the mean A_o scores of high involvement subjects decreased ($F = 3.15$, $p < .05$, see Table 14 and Figure 4).

Tukey's studentized range (HSD) test was applied to check the significance in the differences between mean A_o scores for subjects in each level of involvement. The test results for low involvement subjects showed significant differences between the mean A_o score of subjects in the

Table 12

Mean A_o and A_{act} Score by Exposure Level

	Single exposure		Three exposure		Five exposure	
	A_o	A_{act}	A_o	A_{act}	A_o	A_{act}
Low	4.46	4.16	4.50	4.24	4.99	4.78
High	4.66	4.51	4.39	4:16	4.23	4.04

Table 13

Result of One-way ANOVA
(Low involvement subjects, Dep. = A_o)

Source	d.f.	SS	MS	F	PR > F
Repetition	2	8.71	4.35	6.04	.003
Error	147	106.04	.72		
Total	149	114.75			

Table 14

Result of One-way ANOVA
(High involvement subjects, Dep. = A_o)

Source	d.f.	SS	MS	F	PR > F
Repetition	2	4.72	2.36	3.15	.045
Error	147	110.09	.74		
Total	149	114.81			

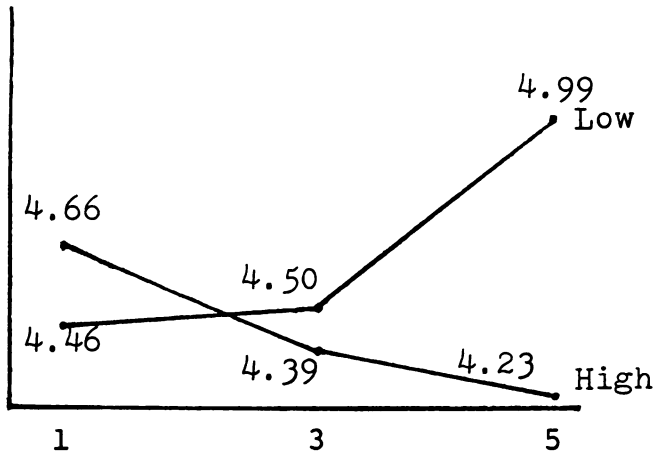
Table 15

Result of Two-way ANOVA
(Dep. = A_o)

Source	d.f.	SS	MS	F	PR > F
Repetition	2	1.43	.71	.97	.378
Involvement	1	3.74	3.74	5.09	.024
Rep x Inv	2	12.00	6.00	8.16	.000
Error	294	216.13	.73		
Total	299	233.30			

Figure 4

Mean A_o Score Over Different Levels of Repetition



single exposure condition and in the five exposure condition. The test results were also significant between the mean A_o score of subjects in the three exposure condition and in the five exposure condition ($p < .05$ for both cases). Finally, the test results for the high involvement subjects showed a significant difference in mean scores between subjects in the single exposure condition and subjects in the five exposure condition ($p < .05$). As shown in Table 15, an interaction effect was found between repetition level and involvement level ($F = 8.16$, $p < .01$). In summary, as repetition level increased from one to three to five, the brand attitudes (A_o) of low involvement subjects became more favorable, and the brand attitudes of high involvement subjects became more unfavorable. It was also found that a wearout effect of repetition appeared when high involvement subjects were exposed to the commercial

five times, while low involvement subjects' attitudes became more favorable when they were exposed five times. These results supported H II-1 and H II-2.

The effects of ad repetition on brand attitudes measured by A_{act} scores were then analyzed. Table 12 and Figure 5 show these results. It was found that as subjects were exposed to more ads, the low involvement subjects' A_{act} became more favorable ($F = 4.18$, $p < .05$, see Table 16 and Figure 5), but the high involvement subjects' A_{act} did not change significantly ($F = 2.06$, see Table 17 and Figure 5). Therefore, it can not be said that a significant wearout effect was found for high involvement subjects with A_{act} measure, even if the hypothesis was directionally supported. Tukey's studentized range (HSD) test was applied to check the significance in differences between mean A_{act} scores of low involvement subjects. A significant difference was found in mean A_{act} scores only between subjects of the single exposure condition and subjects of the five exposure condition ($p < .05$). Even though high involvement subjects' A_{act} did not change significantly across different levels of repetitions, an interaction effect was found between repetition level and involvement level in the analysis by two-way ANOVA ($F = 5.36$, $p < .01$). The result is shown in Table 18. In summary, when A_{act} was used for the measure of brand attitudes, it was found that as repetition level increased from one to five, the brand attitudes (A_{act}) of low involvement subjects became more favorable. However, it

Table 16

Result of One-way ANOVA
(Low involvement subjects, Dep. = A_{act})

Source	d.f.	SS	MS	F	PR > F
Repetition	2	11.27	5.63	4.18	.017
Error	147	198.14	1.34		
Total	149	209.41			

Table 17

Result of One-way ANOVA
(High involvement subjects, Dep. = A_{act})

Source	d.f.	SS	MS	F	PR > F
Repetition	2	5.92	2.96	2.06	.130
Error	147	211.21	1.43		
Total	149	217.13			

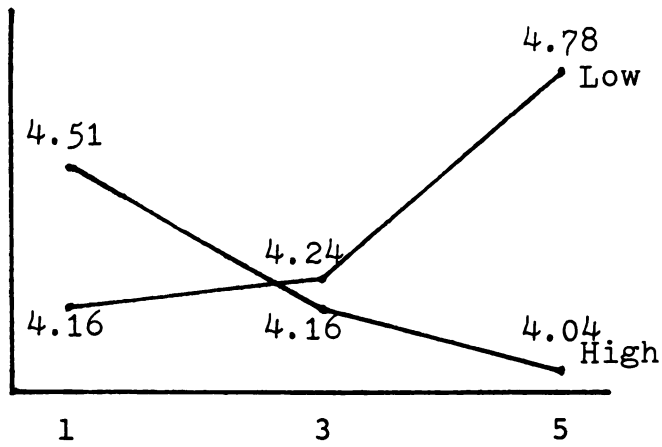
Table 18

Result of Two-way ANOVA
(Dep. = A_{act})

Source	d.f.	SS	MS	F	PR > F
Repetition	2	2.25	1.13	.81	.445
Involvement	1	1.81	1.81	1.30	.254
Rep x Inv	2	14.93	7.47	5.36	.005
Error	294	409.36	1.39		
Total	299	428.37			

Figure 5

Mean A_{act} Score Over Different Levels of Repetition



was not found that the brand attitudes (A_{act}) of high involvement subjects became significantly less favorable. These results supported H II-1, but did not support H II-2.

Hypotheses Set III

The third set of hypotheses stated that formation of brand attitudes are mediated by different types of spontaneous responses depending on the level of consumer involvement. In the analyses for Hypotheses Set II, it was found that as repetition level increases from one to five, the high involvement subjects' A_o became less favorable and the low involvement subjects' A_o became more favorable.

To support H III-1, the mean of high involvement subjects' brand-related responses (computed by subtracting the number of negative brand-related responses from the number of positive brand-related responses) of the five exposure condition has to be smaller than that of the single exposure condition. Table 19 shows the result of Analysis of Variance used to investigate the differences in the mean brand-related responses among different exposure conditions for the high involvement subjects. No significant differences were found among the three means ($F = .03$, see also Figure 6). Therefore, H III-1 was not supported when the A_o measure was used for brand attitudes.

To support H III-2, the mean of low involvement subjects' ad-related responses (computed by subtracting the number of negative ad-related responses from the number of

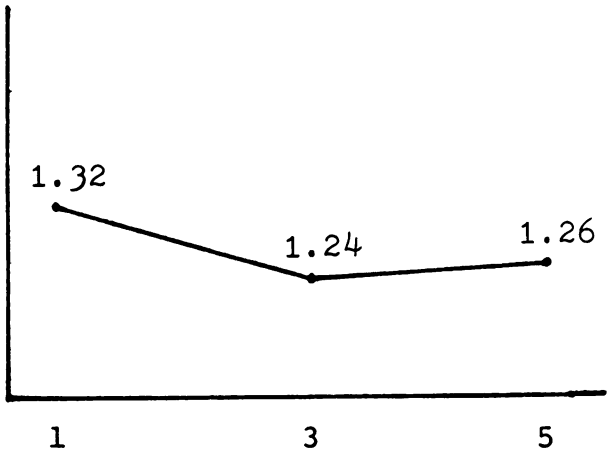
Table 19

Result of One-way ANOVA
(High invol. subjects, Dep. = Brand-related Responses)

Source	d.f.	SS	MS	F	PR > F
Repetition	2	.17	.08	.03	.968
Error	147	403.62	2.74		
Total	149	403.79			

Figure 6

Mean Brand-related Responses of High Involvement Subjects
Over Different Levels of Repetition



positive ad-related responses) of the five exposure condition has to be greater than that of the single exposure condition and that of the three exposure condition. Table 20 shows the result of Analysis of Variance to compare the three means for one, three, and five exposure conditions for the low involvement subjects. In this case, it was found that there are significant differences among means ($F = 5.07$, $p < .01$). Tukey's studentized range (HSD) test showed that for the low involvement subjects, the mean ad-related responses in the five exposure condition was greater than that in the single and three exposure conditions ($p < .05$ for both cases, see also Figure 7). These results supported H III-2, when A_o was used as a measure of brand attitudes.

Since A_{act} was another measure for brand attitudes, a similar analysis was conducted with A_{act}. In the results for Hypotheses Set II, it was reported that as repetition level increased from one to five, low involvement subjects' A_{act} became more favorable, but high involvement subjects' A_{act} did not change significantly. As described previously, there were insignificant differences among the three means of high involvement subjects' brand-related responses (see Table 19 and Figure 6). Since high involvement subjects' both brand-related responses and A_{act} did not change across different levels of repetition, it may be said that H III-1 was supported when A_{act} was used as a measure of brand attitudes. For the directional change of low involvement subjects' ad-related responses, it was found, as described

previously, that ad-related responses did not change from the single to the three exposure condition, but became abruptly favorable from the three to the five exposure condition (See Table 20 and Figure 7). This directional change was consistent with A_{act} change of low involvement subjects across different levels of repetition. Therefore,

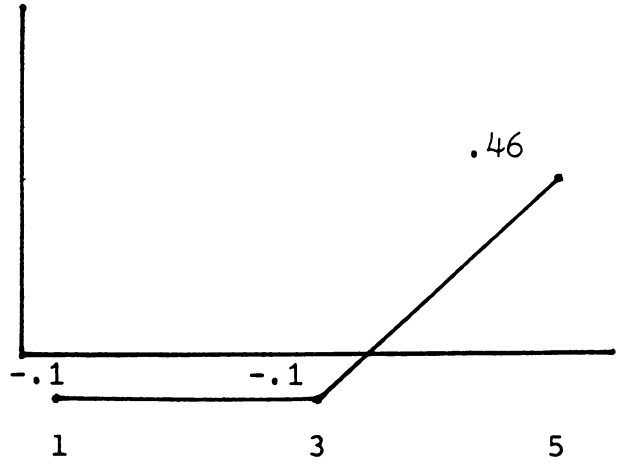
Table 20

Result of One-way ANOVA
(Low invol. subjects, Dep. = Ad-related Responses)

Source	d.f.	SS	MS	F	PR > F
Repetition	2	10.45	5.22	5.07	.007
Error	147	151.42	1.03		
Total	149	161.87			

Figure 7

Mean Ad-related Responses of Low Involvement Subjects Over Different Levels of Repetition



H III-2 was supported with the measure of A_{act} for brand attitudes.

Summary

In this chapter, the coefficient alphas were computed to check the reliability of scales used. The coefficient alphas were high enough for all cases to continue further analysis. The manipulation check for the manipulation of involvement also appeared to be successful. The data were then statistically analyzed for the three sets of hypotheses. Since brand attitudes were measured by two different but related variables (A_o and A_{act}), the data were analyzed separately for A_o and A_{act} for each set of hypotheses.

Hypotheses Set I concerned the moderating roles of involvement in the effects of brand-related beliefs and A_{ad} on brand attitudes. To analyze the data, correlation coefficients were computed between brand-related beliefs and brand attitudes (A_o or A_{act}) and also between A_{ad} and brand attitudes. When A_o was used as a measure of brand attitudes, H I-1 and H I-2 were well supported. For H I-3 and H I-4, a Z-test was used to compare the correlation coefficients between the low involvement case and the high involvement case for each repetition level. H I-3 and H I-4 were each partially supported. When A_{act} was used for a measure of brand attitudes, H I-1 and H I-2 were well

supported. Finally, H I-4 was partially supported and H I-3 was not supported.

Hypotheses Set II stated that the effect of repetition on the formation of brand attitudes is greater for low involvement consumers than for high involvement consumers. One-way and two-way Analysis of Variance and Tukey's studentized range (HSD) test were applied to analyze the data. It appeared that when A_o was used for a measure of brand attitudes, H II-1 and H II-2 were well supported. However, when A_{act} was used only H II-1 was supported.

Hypotheses Set III concerned the moderating roles of consumer involvement in the mediating effects of spontaneous responses on brand attitudes. Analysis of Variance and Tukey's studentized range (HSD) test were applied to analyze the data for spontaneous responses. The results were comparatively analyzed with the analytical results for Hypotheses Set II, which concerned the repetition effect on brand attitudes formation. The findings were that when A_o was used, H III-1 was not supported, while H III-2 was supported. When A_{act} was used, both H III-1 and H III-2 were supported.

CHAPTER FIVE

CONCLUSIONS

The preceding chapter discussed the results of the data analysis in relation to the three sets of hypotheses. This final chapter begins with discussion of the results. It is then followed by the limitations of the study. Next, the theoretical contributions and the managerial implications of the findings are discussed. Finally, a summary of the research is provided.

Discussion of Results

The first set of hypotheses was established to investigate the moderating roles of consumer involvement in the effect of brand-related beliefs and ad attitudes on brand attitudes in the context of ad repetitions. To summarize the results of the data analysis, H I-1 and H I-2 were well supported, and H I-3 and H I-4 were partially supported. More specifically, for H I-3 and H I-4, , ten out of twelve cases were directionally-supported (see Tables 9 and 11). Among these ten cases, significant differences were found in only two comparisons and marginal differences were found in another two comparisons. It is suspected that H I-3 and H I-4 were not well supported, because the number

of subjects in each cell may not have been large enough to detect significant differences between correlations with the Z-test. It is known that relatively large sample sizes are needed to detect differences in correlations with a Z-test. The findings in relation to the first set of hypotheses are not different from the findings of previous studies, where similar tests were conducted in a single exposure condition. The findings for the first set of hypotheses demonstrate that consumers' brand attitudes are mediated by ad attitudes as well as brand cognitions. A tendency was also found that cognitive information processing occurs with high involvement consumers more than with low involvement consumers. On the other hand, affective information processing tends to occur with low involvement consumers more than with high involvement consumers.

The second set of hypotheses was established to investigate whether repetition effects on brand attitude formation would vary with the consumers' involvement levels. When A_o was used for a measure of brand attitudes both H II-1 and H II-2 were well supported. However, when A_{act} was used as a measure of brand attitudes, H II-2 was not supported. This means that high involvement subjects' A_{act} were not significantly negatively influenced by more repetitions, while their A_o were significantly negatively influenced by more repetitions. It is therefore suspected that A_{act} might be less influenced by brand-related beliefs or ad attitudes than is A_o. For example, even if consumers

think an import product is good (A_o), they may think it is not a good idea to buy it because it is an import (A_{act}). This finding is similar with Wright's (1973) finding that "the more removed the acceptance measure is from that topic defined by message arguments, the less direct the mediating role of message-activated cues (p.57)."

The third set of hypotheses was established to investigate whether the major spontaneous responses mediating brand attitudes vary with consumers' involvement level. To summarize the results, H III-1 was supported with the A_{act} measure but not with the A_o measure, and H III-2 was supported with both A_{act} and A_o measures. Therefore, it can be said that ad-related responses were strong mediators for the low involvement consumers' brand attitude formation. In the previous studies, it was often found that the directional change of cognitive responses across different levels of repetition was not consistent with the directional change of brand attitudes across different levels of repetition. The findings in this study provide evidence supporting the notion that it is more reasonable to include thoughts and feelings (cognitive and affective responses) for the study of consumers' response rather than to include only thoughts (cognitive responses).

In sum, the findings in relation to Hypotheses Set I and III have provided some support for the view that high involvement consumers tend to more cognitively process information and low involvement consumers tend to more

affectively process information at any level of ad repetition. The findings for Hypotheses Set II imply that ad repetition is effective for low involvement consumers, but ineffective or negatively effective for high involvement consumers.

Limitations of the Study

Since this research was conducted in an experimental setting, it has a limitation in external validity like any other experimental study. Even though the true purpose of the experiment was not announced to the subjects, the subjects may have given more attention to the commercial in the experimental setting (even in the case of the low involvement subjects) than might be the case in the natural advertising setting. This limitation in external validity leads to the limitation in generalizability of the results. However, some attempts were made to improve the external validity. An advertisement of a real product was used. The ad had been aired previously but only in different parts of the country and not in the region where the experiment took place. In addition, the advertisement was professionally embedded in a real television program. In the case of multiple repetitions, the intervals between commercials were not much different from each other. But since the multiple commercials were embedded in a short television program, it was not totally realistic.

In addition, for all practical purposes, this research can be considered a test with an advertisement of a high-importance product with conveniently chosen subjects. In other words, the Hyundai Excel cannot be representative of all products. Similarly, the subjects cannot be representative of all potential buyers. These aspects also limit the generalizability of the findings in this study. Even though the weak external validity or generalizability is a limitation to an experimental study such as this, the natural research settings may not necessarily be better, since other intervening variables may complicate the situation. Realistically, it is impossible to control all potential intervening variables. Therefore, as long as internal validity exists, specification of the potential limits of the findings does not necessarily significantly diminish their value.

Another limitation in this study is that the advertising effects were measured immediately after the television program ended. Consumers' buying decisions are usually made at least a few days or weeks after exposure to the advertisements (particularly for an important product such as an automobile). If the buying decision is made later, the initial brand attitudes might change to some degree between exposure and actual buying decision. While the practicability of the findings in relation to brand attitudes may be reduced for this reason, they provide some

important insights for advancing the state of the art in this stream of research.

Some limitations also exist in the measures of constructs. For the measure of cognitive structure (brand-related beliefs), five attributes were chosen based on the results of Chrysler Corporation's research, as salient attributes considered by consumers for a subcompact car buying decision. Even if content validity can be obtained by using the results of an expert researcher in that product class, determinant attributes which determine actual behavior may vary with individual consumers. By providing only those salient attributes selected by the researcher, the subjects were forced to limit their evaluations to those attributes. This would have limited the construct validity, and might have reduced the correlations between brand-related beliefs and brand attitudes.

Finally, a limitation exists in relation to the coding method of the answers to the open-ended question for spontaneous responses. Coding of answers to open-ended questions, to some degree, depends on the subjective judgments of judges, even though coding criteria are pre-specified. If other judges were employed for coding the spontaneous responses, there might have been some differences in the results.

Theoretical Contributions and Managerial Implications

Theoretical contributions can be discussed from the findings in relation to the hypotheses. For Hypotheses Set I, it was found that regardless of the involvement level, brand attitudes are influenced by brand-related beliefs as well as ad attitudes at any level of repetition. This finding is supportive of findings of previous studies. However, the findings of the previous studies conducted in a single exposure condition were supported in multiple exposure conditions in this research. It was also found that in some repetition conditions, compared to high involvement individuals, low involvement individuals are more likely to be influenced by their ad attitudes in their brand attitude formation. On the other hand, it appeared that in some repetition conditions, compared to low involvement individuals, high involvement individuals are more likely to be influenced by their brand-related beliefs for their brand attitude formation. While no previous research was conducted on these issues in the context of ad repetitions, this research found these phenomena in the repetition context.

In relation to Hypotheses Set II, it was generally found that as ad repetition level increases, low involvement subjects' brand attitudes became more favorable while high involvement subjects' brand attitudes became less favorable or did not change significantly. This finding provides some support for the proposition that compared with low

involvement consumers, high involvement consumers give more attention to the commercial and, therefore, process the information at lower levels of repetition.

In relation to Hypotheses Set III, it was found that it may be reasonable to consider all aspects of the spontaneous responses rather than including only cognitive responses for the study of the mediating effects of spontaneous responses on brand attitudes over different levels of repetition. In this case, spontaneous responses may be classified into cognitive and affective responses or brand-related and ad-related responses.

To summarize the findings for Hypotheses Set I and III, high involvement consumers are more likely to cognitively process information while low involvement consumers are more likely to affectively process information. If this is indeed the case, marketers should use different types of advertisements (information-providing oriented ads versus emotion-appealing oriented ads) depending on the target audience's level of involvement with the product. If the target audience is high situationally involved consumers (those who are going to buy a brand in the specific product class), they may use information-providing oriented ads; whereas if the target audience is low situationally involved consumers (those who are not presently considering buying one in the specific product class), they may use emotion-appealing oriented ads to make the target audience be aware of and be interested in that brand.

The finding in relation to Hypotheses Set II implies that it may be useless to show identical commercials several times to high involvement consumers. However, for low involvement consumers, multiple exposures may be more effective than a single exposure. In reality, the proper repetition level for low involvement subjects should be determined based on a benefit (favorable brand attitudes obtained from repetitions) and cost (advertising budget required for repetitions) analysis.

Future Research Directions

In this study, it was found that the influence of individuals' ad attitudes on their brand attitudes is higher when they are in the low involvement situation than in the high involvement situation. The influence of individuals' brand beliefs on their brand attitudes tends to be higher when they are in the high involvement situation than in the low involvement situation. It may be proposed that if low involvement consumers are more likely to affectively process the information, ads yielding favorable ad affect may be very effective for low involvement consumers; similarly, if high involvement consumers are more likely to cognitively process the information, strong argument ads with a high level of informational content may be very effective for high involvement consumers. Future research should investigate an interaction effect between types of ads

(affect oriented ads versus information oriented ads) and levels of involvement.

This study investigated how spontaneous responses mediate brand attitude formation across different repetition levels. The spontaneous responses were divided into brand-related responses and ad-related responses. However, the spontaneous responses can also be divided into cognitive responses and affective responses. Then another possible research issue can be proposed as follows. If high involvement consumers' brand attitudes are more likely to be mediated by brand beliefs (cognitions) than ad attitudes, their brand beliefs may be mediated by cognitive responses more than affective responses. Similarly, if low involvement consumers' brand attitudes are more likely to be mediated by ad attitudes (affect) than brand beliefs, their ad attitudes may be mediated by affective responses more than cognitive responses. Future research may investigate whether high involvement consumers' brand attitude change pattern is consistent with the change pattern of their cognitive responses across different levels of repetitions, and whether low involvement consumers' brand attitude change pattern is consistent with the change pattern of their affective responses across different levels of repetitions.

Other research directions focus on the limitations of this study. In the experiment, a fifteen minute television program including only the experimental commercial was used. In reality, multiple repetitions are not likely to exist in

a short period television program. In addition, two or more different commercials are usually embedded in a program. To make it more realistic, a longer television program should be used and it should include not only the experimental commercial but also other commercials. It was pointed out that since advertising effects were measured immediately after the television program ended, the practicability of the findings in this study may be reduced. One way to increase the realism and usefulness of the research is to conduct a longitudinal study.

In relation to the cognitive structure measure, it was pointed out that by providing the salient attributes selected by the researcher, the subjects were forced to limit their evaluations to those attributes. One way to measure subjects' cognitive structure more correctly may be to present all possible attributes to the subjects and ask each subject to select a certain number of his own determinant attributes from the overall attribute set. Finally, a limitation was pointed out regarding the coding method of subjects' spontaneous responses. To reduce the problem arising from judges' subjective judgments, it is suggested to develop more objective and clear criteria to code the spontaneous responses, and to develop a method to assess inter-judge coding reliability.

Summary of the Dissertation

The objectives of this dissertation were: 1) to investigate how involvement level moderates the information processing routes across different levels of ad repetition, and 2) to investigate how involvement level moderates the message acceptance across different levels of ad repetition. Two sets of hypotheses (Hypotheses Set I and III) were developed for the first objective, and one set of hypotheses (Hypotheses Set II) was developed for the second objective. Hypotheses Set I stated that for any number of repetitions, 1) high involvement consumers' brand attitudes are influenced by their brand-related beliefs, 2) low involvement consumers' brand attitudes are influenced by their ad attitudes, 3) brand-related beliefs influence brand attitudes for high involvement consumers more than for low involvement consumers, and 4) ad attitudes influence brand attitudes for low involvement consumers more than for high involvement consumers. Hypotheses Set II stated that 1) the effect of ad repetition on brand attitudes will be greater than for low involvement consumers for high involvement consumers, 2) whereas wearout effect of repetition appears at lower levels of repetition for high involvement consumers than for low involvement consumers. Hypotheses Set III stated that across different levels of repetition, the directional change in high involvement consumers' brand attitudes is consistent with the directional change in their brand-related responses, and 2) the directional change in

low involvement consumers' brand attitudes is consistent with the directional change in their ad-related responses.

To test these hypotheses, a 2 x 3 factorial design was used (involvement level: high and low; and repetition level: one, three, and five). In a pretest of the involvement manipulation, two groups of subjects were given either a high or low involvement treatment scenario (72 and 70 subjects respectively). The scenario given to the high involvement subjects was the situation in which the subjects were going to buy a subcompact car soon, and the scenario given to the low involvement subjects was the situation in which the subjects were not going to buy a subcompact car. The pretest result showed that using the scenarios was successful in manipulating the involvement level.

An advertisement of a subcompact passenger car was chosen and professionally embedded in a TV show. Three video cassettes were then produced which each embedded the ad either once, three times, or five times. The experimental subjects consisted of three hundred forty eight undergraduate students. Subjects' involvement was first manipulated as high or low level with the same scenarios used for the pretest. Then, each high or low involvement subject was exposed to the advertisement one, three, or five times during the TV show. After the subjects watched the advertisement(s), they answered the scaled questions related to the dependent variables including spontaneous responses, cognitive structure (brand-related beliefs), ad attitudes,

and brand attitudes (A_o and A_{act}). After removing incomplete questionnaires and poorly manipulated subjects' questionnaires, fifty useful questionnaires were obtained in each cell for the data analysis.

In the analysis, it was found that all scales had high reliability and that the manipulation of involvement was successful. For Hypotheses Set I, correlation coefficients were computed between brand-related beliefs and brand attitudes, as well as between ad attitudes and brand attitudes. To compare the difference in each pair of correlations, a Z-test was applied. For hypotheses Set I, the first and second hypotheses were well supported, and the third and fourth hypotheses were partially supported depending on different cells. For Hypotheses Set II, Analysis of Variance and Tukey's studentized range (HSD) test were applied. Hypotheses 1 and 2 were well supported with the measure of A_o for brand attitudes, but only Hypothesis 1 was supported with the measure of A_{act}. For Hypotheses Set III, Analysis of Variance and Tukey's studentized range (HSD) test were applied. Hypotheses 1 and 2 were well supported with A_{act} measure, however only Hypothesis 2 was supported with the measure of A_o.

APPENDICES

APPENDIX A

Questionnaire Type: H

Questionnaire Type: H

Your answers to this questionnaire will help determine how different situations influence TV audiences' evaluations of TV shows and TV commercials. The answers will be very valuable to a project we are conducting at MSU. Your help is greatly appreciated.

Please complete pages 1 to 3, and then wait for further instructions. After pages 1 & 3 are finished, you will watch a TV program. After you watch the TV program, you will be asked to answer the questions on pages 4 to the end. Do not turn to page 4 until the TV program is over and you are told it is time to go to page 4. If you have any questions, please raise your hand.

It is very important that you answer every question.

We are going to ask you to watch a TV program as though you are in the following situation. No matter what is really happening in your life at this time, assume the role of the person described in the following paragraph. To the best of your ability, try to take on the characteristics of this person and play that role. While you are watching the commercial, be the person described in the paragraph.

Situation and Role

You are expected to graduate from college at the end of this term and you have found a good job. Even if you have a car now, it is too old and very often breaks down. So, you are seriously considering purchasing a new car. Since you are tired of used cars, which you have always owned, this time you want to buy a brand new car. Because of your budget limitations, you are considering a subcompact car, but you have not yet determined the brand.

Role Check

Now in your own words describe the role you are asked to play in this situation. Without looking back, in a few sentences simply describe the character you are assuming while you watch the TV program.

IT IS VERY IMPORTANT TO PLAY THE ROLE OF THE PERSON YOU DESCRIBED ALL THE WHILE YOU ARE WATCHING THE TV PROGRAM.

Below are items people look at when comparing subcompact cars. Please indicate how much satisfaction you would get from each aspect of a subcompact car without respect to any particular brand.

Example: Suppose that if a subcompact car's style is more unique than other subcompact cars' style, you would get a great amount of satisfaction from its style. Then mark as follows.

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Value for the money

If a subcompact car is more valuable for the money than other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Gas mileage

If a subcompact car has higher gas mileage than other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Reliability (Low maintenance)

If a subcompact car is more reliable than other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Price

If a subcompact car's price is cheaper then other subcompact cars' prices, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

A well-made car (Quality construction)

If a subcompact car is better-made then other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

(Please do not go to next page until you are told to do so.)

In a few sentences, write down any and all thoughts and/or feelings (relevant to the product or to the commercial) you had while you were watching the TV COMMERCIAL(S). You don't have to be concerned about spelling, punctuation, and grammar.

(Go on to next page when finished.)

Please answer the following question.

"Which part of the TV communication did you concentrate on most, while you were watching the TV?"

Most on the TV show	1 ___	2 ___	3 ___	4 ___	5 ___	Most on the commercial
Most on messages about the animal	1 ___	2 ___	3 ___	4 ___	5 ___	Most on messages about the automobile
Most on learning about animal moving	1 ___	2 ___	3 ___	4 ___	5 ___	Most on characteristics of the automobile

The following are statements concerning the advertised brand (HYUNDAI EXCEL) in the commercial compared to other brands of subcompact cars, in terms of each attribute. Mark how much do you agree or disagree the statement about HYUNDAI EXCEL in terms of each attribute.

	Strongly Disagree						Strongly Agree
Example: Style EXCEL's style is more unique than other subcompact cars' style	1	2	3	4	5	6	7
Value for the money EXCEL is more valuable for the money than other subcompact cars	1	2	3	4	5	6	7
Gas mileage EXCEL has higher gas mileage than other subcompact cars	1	2	3	4	5	6	7
Reliability (Low maintenance) EXCEL is more reliable than other subcompact cars	1	2	3	4	5	6	7
Price offered EXCEL's price is cheaper than other subcompact cars' prices	1	2	3	4	5	6	7
A well-made car (Quality construction) EXCEL is better-made than other subcompact cars	1	2	3	4	5	6	7

Attitude Toward the ADVERTISEMENT

Mark the blank that best indicates how accurately each item describes or fits the ADVERTISEMENT.

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Dislike very much	___	___	___	___	___	___	___	Like very much
Very irritating	___	___	___	___	___	___	___	Not irritating at all
Not interesting	___	___	___	___	___	___	___	Very interesting

Attitude Toward the SHOW (ANIMALS IN ACTION)

Mark the blank that best indicates how accurately each item describes or fits the SHOW "ANIMALS IN ACTION."

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Dislike very much	___	___	___	___	___	___	___	Like very much
Very irritating	___	___	___	___	___	___	___	Not irritating at all
Not interesting at all	___	___	___	___	___	___	___	Very interesting

Attitude Toward the HYUNDAI EXCEL

Mark the blank that best indicates how accurately each item describes or fits the HYUNDAI EXCEL.

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Dislike very much	___	___	___	___	___	___	___	Like very much
Very poor quality	___	___	___	___	___	___	___	Very high quality
Unpleasant	___	___	___	___	___	___	___	Very pleasant

Attitude Toward the Act of Purchasing HYUNDAI EXCEL

If you buy the HYUNDAI EXCEL, how would you feel about buying the car?

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Very foolish	___	___	___	___	___	___	___	Very wise
Very harmful	___	___	___	___	___	___	___	Very beneficial

Have you heard the brand name "HYUNDAI EXCEL" previously? Mark in the proper blank.

_____	_____	_____	_____	_____
never	one or two times	a few times	several times	many times

Finally, please mark in the proper blank.

Your sex _____ male _____female

Your actual class level _____freshman _____sophomore
_____junior _____senior
_____graduate

APPENDIX B

Questionnaire Type: L

Questionnaire Type: L

Your answers to this questionnaire will help determine how different situations influence TV audiences' evaluations of TV shows and TV commercials. The answers will be very valuable to a project we are conducting at MSU. Your help is greatly appreciated.

Please complete pages 1 to 3, and then wait for further instructions. After pages 1 & 3 are finished, you will watch a TV program. After you watch the TV program, you will be asked to answer the questions on pages 4 to the end. Do not turn to page 4 until the TV program is over and you are told it is time to go to page 4. If you have any questions, please raise your hand.

It is very important that you answer every question.

We are going to ask you to watch a TV program as though you are in the following situation. No matter what is really happening in your life at this time, assume the role of the person described in the following paragraph. To the best of your ability, try to take on the characteristics of this person and play that role. While you are watching the commercial, be the person described in the paragraph.

Situation and Role

You are a junior student at MSU with more than one year left before graduation. You have a car now, and it works pretty well. Besides, you cannot afford a new one quite yet.

Role Check

Now in your own words describe the role you are asked to play in this situation. Without looking back, in a few sentences simply describe the character you are assuming while you watch the TV program.

IT IS VERY IMPORTANT TO PLAY THE ROLE OF THE PERSON YOU DESCRIBED ALL THE WHILE YOU ARE WATCHING THE TV PROGRAM.

Below are items people look at when comparing subcompact cars. Please indicate how much satisfaction you would get from each aspect of a subcompact car without respect to any particular brand.

Example: Suppose that if a subcompact car's style is more unique than other subcompact cars' style, you would get a great amount of satisfaction from its style. Then mark as follows.

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Value for the money
If a subcompact car is more valuable for the money than other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Gas mileage
If a subcompact car has higher gas mileage than other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Reliability (Low maintenance)
If a subcompact car is more reliable than other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

Price
If a subcompact car's price is cheaper then other subcompact cars' prices, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

A well-made car (Quality construction)
If a subcompact car is better-made then other subcompact cars, then

	1	2	3	4	5	6	7	
A little bit of satisfaction	__	__	__	__	__	__	__	A great amount of satisfaction

(Please do not go to next page until you are told to do so.)

In a few sentences, write down any and all thoughts and/or feelings (relevant to the product or to the commercial) you had while you were watching the TV COMMERCIAL(S). You don't have to be concerned about spelling, punctuation, and grammar.

(Go on to next page when finished.)

Please answer the following question.

"Which part of the TV communication did you concentrate on most, while you were watching the TV?"

Most on the TV show	1 ___	2 ___	3 ___	4 ___	5 ___	Most on the commercial
Most on messages about the animal	1 ___	2 ___	3 ___	4 ___	5 ___	Most on messages about the automobile
Most on learning about animal moving	1 ___	2 ___	3 ___	4 ___	5 ___	Most on characteristics of the automobile

The following are statements concerning the advertised brand (HYUNDAI EXCEL) in the commercial compared to other brands of subcompact cars, in terms of each attribute. Mark how much do you agree or disagree the statement about HYUNDAI EXCEL in terms of each attribute.

	Strongly Disagree						Strongly Agree
Example: Style EXCEL's style is more unique than other subcompact cars' style	1	2	3	4	5	6	7
Value for the money EXCEL is more valuable for the money than other subcompact cars	1	2	3	4	5	6	7
Gas mileage EXCEL has higher gas mileage than other subcompact cars	1	2	3	4	5	6	7
Reliability (Low maintenance) EXCEL is more reliable than other subcompact cars	1	2	3	4	5	6	7
Price offered EXCEL's price is cheaper than other subcompact cars' prices	1	2	3	4	5	6	7
A well-made car (Quality construction) EXCEL is better-made than other subcompact cars	1	2	3	4	5	6	7

Attitude Toward the ADVERTISEMENT

Mark the blank that best indicates how accurately each item describes or fits the ADVERTISEMENT.

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Dislike very much	___	___	___	___	___	___	___	Like very much
Very irritating	___	___	___	___	___	___	___	Not irritating at all
Not interesting	___	___	___	___	___	___	___	Very interesting

Attitude Toward the SHOW (ANIMALS IN ACTION)

Mark the blank that best indicates how accurately each item describes or fits the SHOW "ANIMALS IN ACTION."

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Dislike very much	___	___	___	___	___	___	___	Like very much
Very irritating	___	___	___	___	___	___	___	Not irritating at all
Not interesting at all	___	___	___	___	___	___	___	Very interesting

Attitude Toward the HYUNDAI EXCEL

Mark the blank that best indicates how accurately each item describes or fits the HYUNDAI EXCEL.

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Dislike very much	___	___	___	___	___	___	___	Like very much
Very poor quality	___	___	___	___	___	___	___	Very high quality
Unpleasant	___	___	___	___	___	___	___	Very pleasant

Attitude Toward the Act of Purchasing HYUNDAI EXCEL

If you buy the HYUNDAI EXCEL, how would you feel about buying the car?

	1	2	3	4	5	6	7	
Very bad	___	___	___	___	___	___	___	Very good
Very foolish	___	___	___	___	___	___	___	Very wise
Very harmful	___	___	___	___	___	___	___	Very beneficial

Have you heard the brand name "HYUNDAI EXCEL" previously? Mark in the proper blank.

_____	_____	_____	_____	_____
never	one or two times	a few times	several times	many times

Finally, please mark in the proper blank.

Your sex _____ male _____female

Your actual class level _____freshman _____sophomore
_____junior _____senior
_____graduate

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