

FROM THE PERIPHERY TO THE CENTER: AN EMOTIONAL PERSPECTIVE OF
THE ELABORATION LIKELIHOOD MODEL

By

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Most theories of attitude change and persuasion are concerned with taking a cognitive route to long-term persuasion and a longer-lasting attitude change. The Elaboration Likelihood Model is one such theory. This theory emphasizes that cognition is the central factor in the route to attitude change and shows that emotion is an aspect, albeit a less important one, in the process of attitude change. This study tries to establish emotion at the center of the attitude change process by examining spontaneous reactions to two car advertisements and then linking these reactions to purchase intentions to make its case for emotion.

The results of this study show that emotion is an important factor in the process of attitude change and that it may play a more central role in this process than has been previously shown.

CHAPTER 1 INTRODUCTION

The Elaboration Likelihood Model developed by Petty and Cacioppo (1986) proposed that there were two routes to attitude change:

1. Central
2. Peripheral

If an individual processed a message through the central route and this resulted in a change of attitude--predisposition towards an object, idea, etc.--this attitude change was likely to be longer lasting than an attitude change that took place through the peripheral route.

The central route emphasized high-relevance of the message to the individual. The more the relevance and the more the interest that the individual showed in the message, the higher were the chances that he/she would think or elaborate on the message. It was this elaboration that would lead to a change in attitude. Another aspect of the Central Route was that it dealt with the message content--text, words, written material used in the message--as opposed to the Peripheral Route that dealt with the message cues--colors used, people/lifestyles depicted, visuals, etc. (Petty and Cacioppo, 1986).

The Peripheral Route was taken when the message had little or no relevance to its receiver (Petty et al., 1994). In this case, the individual would concentrate on heuristic cues like attractive expert sources and number rather than content of arguments employed by the message to process the message. If these cues produced an attitude change, this change was likely to be shorter-lasting and unpredictable of that individual's behavior

(Petty and Cacioppo, 1986). Hence, the cognitive (central) aspect of the ELM overshadowed its emotional (peripheral) aspect and the underlying suggestion of this model was that an attitude change was mostly through cognition as opposed to emotion. Both these routes--central and peripheral--can be thought of as occurring on a continuum that has emotion on one end and cognition on the other. As an individual proceeded from the emotional end of this continuum to its cognitive end, the individual also made a journey from the peripheral to the central route and, in essence, from the presence of emotion to its complete absence in the realm of cognition (Petty and Cacioppo, 1986).

This thesis will attempt to show that the emotional aspect is as important as the cognitive aspect. The basis for this conclusion is that even as an individual processes a message cognitively, that cognition has an emotional core. Also, there is a possibility that content-processing (elaboration) probably gives rise to emotions and that this leads to a longer lasting change in attitudes.

Given that man cannot live by thought alone, it may seem instinctive that a combination of thoughts and emotions leads to an attitude change. There is scientific support for the fact that the brain circuitry of cognition and emotion is not separate (Davidson, 2000). Also, it seems that emotions “provide the bridge between rational and nonrational processes.” (Damasio, 1994). What is not clear is which of the two predominates in leading to a longer-lasting attitude change. This thesis may help to shed some light on this matter and supports the view that affect is likely to be the central cause of a longer lasting change in attitude and that it is helped, to a certain degree, in this endeavor by cognition.

Need for the Study

Advertising, an extremely pervasive form of visual and/or verbal communication, rests on the fundamental belief that a consumer can be persuaded to purchase a given product (Edens and McCormick, 2000). Thus, it is directly connected to the socio-scientific field of persuasion research. The Elaboration Likelihood Model (ELM) is a theory of persuasion that is widely used in a disparate array of disciplines to explain persuasion as a result of cognition. According to the theory, cognition takes precedence over emotion in issues of high relevance and importance and, therefore, exerts a stronger persuasive force than an emotion would (Petty and Cacioppo, 1986). The ELM could be considered a microcosm of the till-now prevalent belief that an emotion is in some manner inferior to cognition and that the higher process of cognition did not require the help of the physiologically-based (hence, lowly) emotions (Davidson, 2000).

Now, as research on emotion takes center-stage in the field of neuroscience and a number of scientific experiments are being conducted to understand the role of emotion in shaping human progress (Damasio, 1994, 1999 and Ledoux, 1995), it is important to review the role that emotions play in persuading a person to commit to action. The primacy of emotion v/s cognition has been discussed at length (Zajonc, 1984 and Lazarus, 1984) and scientific support for the primacy and indispensability of emotions can be found in the work(s) of Joseph Ledoux (1995) and Antonio Damasio (1994). Ledoux, through his work on fear--a basic emotion, and Damasio, through his work with patients with prefrontal lobe damage, have reached the same conclusion: that emotion plays a far more significant role in determining behavior than was previously understood. Their findings have helped in understanding the process of emotion and emotional reaction and have also challenged the traditional view that emotion and cognition, like oil

and water, never mix together and that a rational process may have no affective base whatsoever (Damasio, 1994).

A review of the current research on emotion and its role in persuading an individual suggests that not only is emotion a vital driving force in the iterative processes of persuasion and decision-making, it may also be intricately linked with, or even more important than, cognition in these processes (Roskos-Ewoldson et al., 2002 and Shiv and Fedorikhin, 2002). This finding brings up the intriguing possibility of the lack of a clear central or peripheral route and emphasizes the need for a study that tries to understand the role that emotion plays in the Elaboration Likelihood Model.

As the importance of emotion becomes clearer to neuroscientists, social scientists have been involved in the endeavor of understanding the importance of emotion in persuading a person and guiding behavior. This thesis is an attempt to shed some light on this controversial issue and add to the growing theoretical base in this fledgling area of research.

Purpose of the Study

That the ELM has a cognitive base is clear from a review of the model (Petty and Cacioppo, 1986). What is also clear is that the model dispenses off affect as “a simple peripheral cue” that causes a less persistent change in attitude and concentrates on promoting cognition as the main force behind a longer-lasting change in attitude (Petty and Cacioppo, 1986). This treatment of affect gives this study a two-fold purpose: to examine the Elaboration Likelihood Model from an emotional standpoint and to determine whether emotions are the driving force in the central route to persuasion thus showing that a change in attitude and the resultant behavior is due to emotional as well as cognitive drives. This purpose was further strengthened by recent research findings that

seemed to indicate that emotion is a variable whose importance increased in proportion to the research conducted on it (Davidson, 2000). Having been put on the research back burner for a number of years, emotion has re-emerged as a vital force that guides human intelligence, is indispensable in social interaction and, in the case of this study, also influences decision-making via persuasive routes. Given these research findings, it seemed imperative to explore the role of emotion vis-à-vis the ELM.

This task was accomplished with the help of data analysis of respondent answers to questionnaires based on car advertisements. For the purpose of this study, the respondents were split into two groups:

- 1) Emotional and 2) Cognitive

The two groups were formed on the basis of the participants' spontaneous reactions to car advertisements. If the spontaneous reaction contained a reference to a peripheral cue like the executional elements/setting of the product, the reaction was considered emotional. Likewise, any reference to the product and its features would result in that reaction being considered cognitive. The datasets obtained from these two groups were analyzed to determine whether cognition or emotion dictated the future purchasing behavior (intention) of the respondents. This, in turn, helped to determine whether it was justified to keep emotion at the periphery of the attitude-change process as defined by the ELM or give it a more central role.

Research Questions

The questions addressed by the study were:

1. Would the cognitive group display any emotion? And if it did, would this amount of emotion be significant when compared to the emotional group?
2. Does emotion play a more central role in the attitude-change process outlined by the ELM?

3. What has a greater effect on the purchase intention (and hence, ultimate behavior) of a consumer: cognition or emotion?

Overview

The literature review in Chapter 2 is divided into two distinct yet inter-connected parts that clarify the need to re-examine the importance of emotion and its effect on attitude changes. The first part of the review discusses a brief history of emotions as symbolized by western thought. This is followed by a discussion of neuroscientific research findings that show the indispensability of the emotion concept in cognitive studies. A review of AdSAM: a non-verbal measure of emotion concludes the first part of the review.

The second part of the review discusses persuasion theory, the importance of the attitude concept and its relation to affect/emotion. The ELM is then discussed in detail with a special emphasis on its relation to the concept of emotion to give an idea of how emotions have been dealt within the ELM.

The methodology and findings of this study are detailed in Chapters 3 and 4 respectively. A discussion of the research implications in Chapter 5 concludes this study.

CHAPTER 2 LITERATURE REVIEW

Development of Research on Emotion

The Western tradition of research on emotion was, until a few decades ago, based on the idea that in order to understand emotions one must think of them as kinds of thought or cognitive processes that affect a human being strongly (Jenkins and Oatley, 1998).

The three modern founding fathers of emotions--Charles Darwin, William James and Sigmund Freud--each contributed to the understanding of emotions and were greatly influential in shaping the direction for future emotional research. Darwin showed that emotions connect us to our past (Darwin, 1872), James that they are involved in physiological monitoring (James, 1884) and Freud, that they need to be discussed in order to be understood (Freud & Breuer, 1895).

However, given its physiological origins, the field of emotion remained in the shadow of the more thoughtful and superior process of cognition. The role of emotion was largely ignored till the 1970s and there was a prevailing opinion that emotions for the most part “disrupt and disorganize behavior and are primarily a source of human problems.”(Izard,1991). Naturally, there were scientists who opposed the prevailing view regarding emotions and were of the opinion that emotions played a central role in behavioral changes that were said to represent learning (Mowrer, 1960). Despite this support for its importance, for the most part emotion remained an absent entity in the

classic works of cognitive science and cognitive neuroscience that helped define the field (Neisser, 1967).

However, the concept of emotion could not be ignored for long and as the wave of emotional research gathered momentum, several basic or “global” emotions were identified based on a list of “primary” emotions as suggested by Tomkins (1962/1963). These basic emotions were: happiness, fear, anger, surprise, sadness, disgust, contempt, shame, shyness and guilt (Izard & Malatesta, 1987). This identification of the “basic” emotions spurred affective neuroscientists who then started to research the origins of these emotions (Davidson & Irwin, 1999; Davidson & Sutton, 1995).

The subsequent research conducted in the field of affective neuroscience elevated emotions from the status of mere physiological responses and placed it in the regions of the brain, specifically, in the amygdala, ventromedial prefrontal, brain-stem nuclei, hypothalamus and basal forebrain--thus identifying the areas responsible for processing different emotions to varying degrees (Damasio, 1999). Most of these regions are sub-cortical, i.e., they are located below the cerebral cortex--an area that is of primary importance to cognitive neuroscientists.

The limbic or primitive/sub-cortical brain system was supposed to be the seat of emotion and the cortex or the higher brain, the seat of cognition. However, neuroscientific experiments disproved this theory (Davidson, 2000). Certain sub-cortical structures that were previously thought to regulate only emotion have now been shown to be intimately connected to cognition too (e.g., hippocampus for memory). On the other hand, certain cortical structures that were exclusively the province of cognition (e.g., the

prefrontal cortex) have been shown to be involved in emotional processing (Nauta, 1971; Damasio, 1989; Davidson, 2000).

Neuroscientists have also been attempting to solve one of the most enduring controversies of social science--the primacy hypothesis--a hypothesis that attempts to identify the primacy of affect over cognition or vice-versa. Joseph Ledoux's experiments support the primacy of affect hypothesis as expounded by Zajonc (1984). A pioneering affective neuroscientist, Ledoux's experiments involving fear conditioning in rats conclusively showed that fear--one of the basic emotions--is processed in an almond-shaped, sub-cortical structure of the brain--the amygdala. Not only does the amygdala process the emotion of fear, it does so without the aid of conscious thought (Ledoux, 1995).

Antonio Damasio is another pioneer in the field of affective neuroscience. His work with patients with deranged emotions as a result of frontal lobe damage showed that though individuals may have complete control over their thought/logical processes, if they don't have the same control over their emotions, their very survival is endangered (Damasio, 1994). Also, Damasio experimentally proved that reasoning and decision-making cannot exist without the accompaniment of emotion. In studies of patients who were entirely rational till the time that neurological damage affected areas of the brain that were involved in emotional processing, it was seen that not only did these individuals lose a certain class of emotions, they also lost the ability to make rational decisions (Damasio, 1999).

Affective neuroscience, at the turn of the millennium, has firmly entrenched itself in the brain. Drawing from the findings of pioneers such as Damasio and Ledoux,

researchers have established the fact that the brain circuitry of emotion and cognition is not separate (Davidson, 2000). Data have shown that there are no parts of the brain that are dedicated exclusively to cognition and/or emotion. Emotion evolved to facilitate an organism's adaptation to complex challenges that it faced during its past (Tooby and Cosmides, 1990) and is hard-wired in the brain (Ledoux, 1995). It has been conclusively shown that the architecture of the brain does not honor the age-old concept of segregation of cognition and emotion. Most compellingly, cognition has been proved to be rudderless without emotion and studies in cognitive neuro- and behavioral sciences cannot be conducted without taking emotion into account (Davidson, 2000).

Measuring Emotion

Though emotion has been defined comprehensively, its measurement has traditionally posed a problem because of the complexity of the emotion concept and also the fact that most advertising testing systems are more suited to evaluating rational appeals and are particularly weak in their capabilities to assess emotional commercials (Plummer and Leckenby, 1985). To simplify the process of measuring emotions certain bipolar theories have proposed that emotions are structurally related and that all emotions originate from a relatively small number of basic emotions (Mehrabian and Russell, 1977; Osgood, Suci and Tannenbaum, 1957). These theories have been supported by research evidence that emotional states have certain similarities that enable them to vary along three basic bi-polar dimensions (Mehrabian and Russell, 1977 and Osgood, Suci and Tannenbaum, 1957). These three dimensions are: pleasure-displeasure, aroused-calm and dominance-powerlessness. These dimensions form the core of the PAD--Pleasure, Arousal, Dominance--model (Mehrabian and Russell, 1974) and have gained widespread attention in advertising research (Havlena and Holbrook, 1986).

The PAD Model

This model considers all emotions as originating from the three basic emotions of pleasure, arousal and dominance. Various combinations of the three basic emotions result in all other emotions (Mehrabian and Russell, 1974). For example, anger and anxiety, considered as independent emotions by many theorists are actually a combination of the PAD bi-polar continuous dimensions. Both anger and anxiety involve levels of displeasure and arousal, but anger involves feelings of dominance whereas anxiety, feelings of submissiveness.

Further support for Mehrabian and Russell's PAD theory (1977) was found in tests that had been designed to determine whether the PAD dimensions were both necessary and sufficient to define emotional states.

Verbal Measures of Emotional Response

Most measures of emotions developed and used in consumer research tend to be verbal, i.e. they use semantic differential scales or adjective checklists. These measures, however, contain certain inherent problems. Firstly, verbal measures are cognitively oriented. Since affective reactions are automatic and instantaneous (Zajonc, 1980), it is difficult to have them reported verbally (Hammond, 1987). Secondly, there is evidence that reaction times for pleasant-unpleasant ratings are faster for pictures than words (Pavio, 1978). Also, there is the issue that verbal measures of emotion are susceptible to interpretation problems by subjects (Russell, 1989). Lastly, research on emotional response that uses these measures tends to conceptualize the emotional response as a one-dimensional phenomenon (Stout and Leckenby, 1986). As a result, these verbal measures have been unable to encompass or comprehend a person's complete emotional reaction.

Lang's SAM: A Non-Verbal Measure of Emotion

The issues faced by verbal measures seem to have been solved by using the Self-Assessment Manikin (SAM) that was developed by Lang (1980) on the basis of Mehrabian and Russell's PAD (1977). The SAM is a visual measure that incorporates the bi-polar dimensions of PAD into a graphic figure (see appendix C) that is easily understood by children as well as adults (Lang, 1980) across cultures (Morris, Bradley and Wei, 1994). It was originally developed to assist clinical psychologists in evaluating the emotional responses of their patients who found verbal measures too difficult to complete (Lang, 1980).

Morris et al. (1992) examined the effectiveness of SAM in evaluating advertising messages by comparing SAM to a verbal PAD scale in an advertising environment. SAM ratings were compared to Holbrook and Batra's (1988) three factor – pleasure, arousal and dominance – scores standardized from semantic differential ratings for the same set of television commercials. The correlations for the three dimensions were shown to be significant.

SAM is now used in advertising research in a number of ways to measure consumers' emotional responses. The AdSAM utilizes the SAM to measure emotional response to marketing communications stimuli. The AdSAM employs a database of 232 emotional adjectives, scored with SAM, to gain insight into and understand the relationships among attitude, affect, cognition and purchase intention (Morris et al., 2002).

Persuasion Research

The roots of persuasion are embedded deep in the human psyche as well as human history. It was approximately 2,400 years ago that Aristotle (Rhetoric) clearly identified the three main aspects of the persuasion situation:

1. Source
2. Audience
3. Message Content

Given this proof of that the process of persuasion has been around for so long, it could be considered surprising that it was only 60 years ago that any sort of systematic research attention was bestowed on the omnipresence of persuasion. Carl Hovland, a Yale psychologist, has been attributed to an extent as having begun “the modern experimental study of persuasion” (Petty and Cacioppo, 1996). However, systematic persuasion research can be attributed to media effects research that began with Walter Lippmann (1922) and Harold Lasswell (1927).

The problem with this research was that it was based on anecdotal evidence and not empirical research (Petty and Priester, 1994). Then, in the 1940’s and ‘50’s, there was a shift in researchers’ thinking and evidence increasingly pointed to an indirect effects model of persuasion. Hyman and Sheatsely (1947) suggested that a mere increase in message flow could not achieve persuasion and that effective message dissemination requires consideration of specific psychological barriers. This led to the idea of a “two-step” flow of communication as suggested by Katz And Lazarsfeld (1955) who argued that media tend to influence opinion leaders who in turn influence the public.

The persuasion debate was then pushed up to another level by the research of Hovland, Lumsdaine and Sheffield (1949). These researchers investigated the social-psychological variables responsible for military morale and completed a number of

studies that documented the importance of different factors in persuading people. Their findings indicated a significant number of moderating variables that contributed to the persuasive power of military films (Hovland, Lumsdaine and Sheffield, 1949).

Subsequent research on persuasion has focused on the moderating variables uncovered by Hovland, et al., to develop contemporary models of persuasion.

And, as is with any important human process, the presence of both emotion as well as cognition can be felt permeating the research on persuasion. And also, as usual, the role of emotion was not clearly understood and hence it was sidelined in the persuasion process until recent neuroscientific advances. Though persuasion researchers are split into the camps of cognition and emotion, they all agree that “the most distinctive and indispensable concept in contemporary social psychology” (Allport, 1935) is that of a variable called attitude.

Attitude

“I like apples.”

“I thought that movie was really good because.....”

Attitude. One of the central concerns of persuasion research, this variable can be considered as a “posture of the mind” (Oskamp, 1977). The importance of the attitude concept stems from the fact that it is believed to be a mediating variable for knowledge acquisition as well as behavioral change (Petty and Priester, 1994).

Given the importance of attitudes and attitude change, many social psychologists and sociologists have tried to define the term attitude. As a result, there is a multitude of definitions of this term (Kiesler et al., 1969; Petty and Cacioppo, 1996). An attitude has been variously defined as:

“A mental and neural state of readiness,” (Allport, 1935).

“Our affinities for and our aversions to situations, objects, persons, groups.”
(Bem, 1970).

“A learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object.” (Fishbein and Ajzen, 1975).

However, social psychologists reached a sort of consensus that the term attitude should be used to refer to “a general and enduring positive or negative feeling about some person, object or issue” (Insko and Schopler, 1972; Oskamp, 1977; Petty and Cacioppo, 1996) and the study of attitude change has become a source of great debate and assumed primary focus for persuasion researchers.

The three basic components of an attitude were identified as (Oskamp, 1977):

Cognitive: These are the ideas and beliefs that are held by the attitude-holder toward the attitude object. E.g. “George Bush will be elected the President of the USA.”

Affective: These are feelings and emotions that one holds towards an attitude object. E.g. “I would like to see George Bush become the President of the USA.”

Conative: The action tendencies held toward an attitude object. E.g. “I am going to go vote for George Bush in the Presidential elections.”

And, according to Katz (1960), there are four functions that attitudes might serve for a person:

Ego-defensive function: these help people to protect themselves from unpleasant truths about themselves and people they consider important.

Value-expressive function: these allow people to express an important value.

Knowledge function: these allow people to get a better idea of people and events around them.

Utilitarian function: these allow people to avoid punishments and gain rewards.

The pre-eminence and attention to the concept of attitude emerged because of the “presumed ability of attitudes to direct (and thus allow prediction of) behaviors” (Petty and Cacioppo, 1996).

Attitude and a change (negative or positive) in attitude as a result of persuasion is thought to be linked to behavior and behavioral changes. There were a number of studies that showed that attitudes may be unable to predict behaviors (Corey, 1937). And, in fact, the mid-1970s were filled with disillusionment towards the attitude concept. As a result, in that period, there was a sharp decline in the study of attitudes by social psychologists (Lambert, 1980). However, Fishbein and Ajzen (1974, 1975; Ajzen and Fishbein, 1977, 1980) were able to conclude, with confidence, that attitudes and behaviors were strongly linked.

Attitude, Affect and Behavior

According to Fishbein and Ajzen, what distinguished attitude from other concepts was its strongly affective nature and that “affect is the most essential part of the attitude concept” (Fishbein and Ajzen, 1975). Keeping in line with this thinking, Edwards (1990) and von Hippel (1995) provided evidence that affect-based attitudes are held with greater confidence than cognition-based attitudes. This may be due to the fact that:

a) affective responses often chronologically precede cognitive responses in attitude formation and b) affective responses are more closely linked to the self as compared to cognitive responses (Edwards & von Hippel, 1995). Also, given affect’s stronger link to the self, it could be hypothesized that in case of an affective-cognitive ambivalence, individuals will rely more on their emotions in determining their overall attitudes and attitude-relevant behavior. Not only was this hypothesis supported, it was also shown that

“affect was more generally predictive of behavior than was cognition among respondents with ambivalent affective-cognitive structures” (Lavine et al., 1998). Also, in a study that spanned over 23,000 responses to 240 advertising messages, Morris et al. (2002) proved that affect, rather than cognition, was a better predictor of conative attitude and action as compared to cognition. A strong link between attitudes and subsequent behavior had already been examined, albeit cognitively, by Petty and Cacioppo in their Elaboration Likelihood Model (1986).

Attitude Change Theories and the Elaboration Likelihood Model

Since the 1950's a great deal of research has been conducted to understand, describe and predict consumers' attitudinal responses to advertising (Cohen, 1990). According to Petty and Cacioppo (1996), most of these theories of attitude change that have been developed as a result of research in the 1950's can be grouped into seven major approaches, each of which focuses on different basic processes in order to explain how attitude changes. Also, though these seven approaches utilized different variables and different processes, “they really seem to indicate that there are only two fundamentally different “routes” to changing a person's attitudes.” (Petty and Cacioppo, 1996). And these two routes--Central and Peripheral--form the basis of the ELM, which according to its authors was an attempt to outline a framework that “takes one step toward a general theory of attitude change” (Petty and Cacioppo, 1996).

Developed by Richard E. Petty and John T. Cacioppo, the ELM belongs to the family of models described as the 'Response Hierarchy' models. These models attempted to depict/describe the changes that a consumer underwent when he/she moved from a state of relative unawareness about a certain brand or product to relative awareness and then, finally, to purchase intentions/behavior (Belch and Belch, 1998).

One of the first (and perhaps the best known) 'Response Hierarchy' models was the 'Hierarchy of Effects' (HOE) model (Lavidge and Steiner, 1961). This HOE model was an attempt to trace the footprints (or in this case, a mindprint) of a consumer that eventually led to a purchase decision. According to Lavidge and Steiner (1961), there were six steps followed by consumers before actual purchasing:

1) Awareness, 2) Knowledge, 3) Liking, 4) Preference, 5) Conviction and 6) Purchase

The formulation of these six steps then laid the basis for further models and a plethora of research studies on how advertising works; e.g., Krugman (1965), Ray et al. (1973), Houston and Rothschild (1978), Vaughn (1979), Petty et al. (1983), and so on.

These 'Hierarchy' models have proved to be conceptually useful in addition to being approved and accepted by many advertising academicians and practitioners (Preston, 1982). Amongst the many models that the 'Response Hierarchy' spawned, the ELM received special attention because of its cognitive base and widespread usage in a variety of disciplines.

Although a number of cognitive theories of attitude change have developed over the years, the one that provided the foundation for the ELM was the communication/persuasion matrix model of influence elaborated by McGuire (1985, 1989).

The McGuire model contained a few drawbacks (Petty, Baker and Gleicher, 1991; Petty and Priester, 1994) that were addressed by the cognitive response theory developed by Greenwald (1968) and Petty, Ostrom and Brock (1981b).

The cognitive response theory, too, had its share of drawbacks. The major one being: it focused only on individuals who processed messages actively and failed to take into account individuals who did not think actively about the information they received (Petty and Priester, 1994).

The ELM filled this gap in the cognitive response theory by suggesting that there were two routes to persuasion: 1) The route taken by individuals who did think actively about information in a message--central route and 2) The route taken by individuals who did not think actively about the informational content of a message--peripheral route.

Inside the ELM

According to Petty and Cacioppo (1986), research on attitudes and persuasion was “a central concern of social psychology.” Hence, the ELM at its core is concerned with two intangibles, persuasion and attitudes. The model attempted to explain how a change in attitude occurs as a result of persuasion and, specifically, the two routes this change could occur through: the central route and the peripheral route.

Central Route

This is the main route to attitude change. It emphasizes cognitive/effortful thinking and minimal emotional involvement in processing messages. When an individual indulges in “a private dialogue” in order to evaluate the merit/demerit of arguments presented in a message, that individual is considered to be embarking on the central route to persuasion. This path to persuasion involves “paying careful attention to the relevant information in the message and relating that information to previous knowledge stored in memory and generating new implications of the information” (Petty and Cacioppo, 1994). This process of cognitive responses (thoughts) to a message can be considered the likelihood that an individual will elaborate on a particular message.

This route, however, demands that a message has high relevance to a particular individual and this individual should have the motivation and ability to process the arguments present in the message. Given the innumerable messages that an individual faces on a daily basis, there are only a small number of messages that an individual can process through this route. As a result, any attitude formation or changes that occur through this route have the following properties: a) the attitude is relatively easy to recall, b) it is relatively persistent and stable, c) it is resistant to challenges from competing messages and, most importantly, d) it can help in predicting an individual's attitude-relevant behavior (Petty and Cacioppo, 1994).

What happens to the rest of the (persuasive) messages that an individual receives daily? As it is next to impossible to devote effortful thought to each and every message, an individual processes largely irrelevant messages through the simpler, less effortful and more emotional route to persuasion known as the peripheral route.

Peripheral Route

This route is almost the exact opposite of the central route to persuasion. Individuals who travel this route are referred to as “cognitive misers” (Taylor, 1981) and process messages based on simple (peripheral) affective cues such as source attractiveness and message length. The individual takes this route in a low involvement/low motivation situation and processes the message at a very basic (heuristic) level by observing the audio-visual cues present in the message and without thinking too much of the arguments present therein. Hence, the peripheral route was characterized by “an absence of effortful message elaboration” and the attitude formations and changes engendered by this route were “less accessible, persistent, resistant and predictive of

behavior” as compared to attitudes developed by the central route (Petty and Cacioppo, 1994).

ELM and Emotion

Basically a model of cognitive (thoughtful) responses, the ELM also tried to account for the presence of emotion in the process of attitude formation and change by keeping it on the periphery of that process. The model was developed at a time when the role of emotions was not clearly understood by social scientists. The resurgence of interest in emotions gave rise to new research and provided eye-opening results of the role that emotions play in an individual’s life. Hence, it becomes necessary to re-examine the ELM in the light of these findings and wonder whether emotions should be kept at the periphery of such a widely used model of attitude formation and change.

Current research has indicated that emotional reactions influenced both central (systematic) and peripheral (heuristic) processing. It has been shown that positive emotions influence peripheral information processing while negative emotions influence central processing (Batra and Staynman, 1990; Kuykendall and Keating, 1990; Bohner and Apostolidou, 1994; Bohner et al., 1994). Researchers have then gone a step forward and claimed that, in fact, there may be no central or peripheral cues and that the two routes to persuasion can interact with each other with one route dominating in the face of contradictory information and both routes occurring concurrently when the persuasive information provided does not contradict the attitude structure of an individual (Chaiken and Maheswaran, 1994).

Subsequent research supported this line of thought and while investigating the influence of print advertisements on the affective and cognitive responses of adolescents, Edens and McCormick (2000) discovered that “many adolescents were unable to detect

the explicit claim of an advertisement yet maintained that the ad “made sense,” which suggests that peripheral visual information becomes the central message.” Such research, therefore, provides a strong case for placing affect at the center of the ELM.

Summary of Literature Review

Primarily a cognitive model of attitude change, the ELM relegated emotions to a peripheral role in the attitude change process. The literature review attempted to show the importance of the concept of emotion and its relation to persuasion research. In addition, the review also examined current findings in affective neuroscience to suggest a re-examination of the neglected emotional aspect of the ELM.

This study examined respondents’ answers to questionnaires regarding car advertisements with the help of data analysis. This is done to establish: 1) The importance of the concept of emotion in a persuasive message (in this case, an advertisement) and 2) The level of emotion present in a cognitive response to certain advertisements.

Hypotheses

Two hypotheses were developed on the basis of the research findings:

H1. The emotional response (ER) of the Cog group as measured by PAD will be equivalent to or significantly greater than that of the Emo group. Thus, $\text{CogER} > \text{EmoER}$

H2. ER and Purchase Intent (PI) are directly related to each other. Thus, the more emotional the group, the higher the purchase intent of that group.

These hypotheses were based on research findings that showed that cognition could not exist in a vacuum. Indeed, the research suggests that the central route to persuasion must incorporate a great degree of emotion in order to function effectively. Also, since emotion is such an important aspect of human psychology, an intention that is a result of

a persuasive message, including purchase intention – a key indicator of actual behavior, must involve a substantial investment of emotion (Morris et al., 2002).

CHAPTER 3 METHODOLOGY

Research Design

To evaluate the effectiveness of a mini-campaign of two car advertisements (see appendix A) that depicted a mid-size luxury sedan, mall intercepts were conducted from January 13th to January 25th, 1996, in the cities of Atlanta, Chicago, Cleveland, Dallas, Los Angeles, Melbourne, Minneapolis, New York, Orlando, Philadelphia, Phoenix and San Francisco. The participants were paid to watch a series of advertisements and then to respond to questions about the advertisements.

The copy testing of the sedan commercials intended to measure the performance of each commercial on the basis of four key dimensions:

- Impact/ brand name registration
- Comprehension
- Evaluation
- Response

The participants were exposed to a clutter of 7 commercials and the sedan commercial was placed in the center of the clutter. The idea was to test:

- Recall through clutter
- Main ideas through clutter

An isolated re-exposure to the sedan commercial(s) was then conducted to test a number of variables (see appendix B) amongst which was the variable:

- Spontaneous reactions (thoughts and feelings)

The data sets that were generated as a result of this testing were then examined with special emphasis on the variable of spontaneous reactions (SR). The question that helped

isolate this variable for analysis was: What went through your mind as you watched this commercial? What were your thoughts as you watched it? In the given data sets, the reactions to this question were isolated and recoded as SR.

An Advertising Self-Assessment Manikin (AdSAM)--a non-verbal measure that assesses emotional response--had been conducted on the commercials in order to gauge the emotional reactions of the participants on three dimensions:

- Pleasure
- Arousal
- Dominance

The emotional responses to the sedan commercial(s) generated by the AdSAM were then used in the analysis of the recoded data.

Coding Procedure

Three coders (two males and a female) independently coded the SR variable in accordance with a set of rules:

- If the SR of a participant was related to the product and its features, that reaction would be considered a central response and the participant would be placed in a group labeled cognitive.
- If the SR of a participant was related to the execution/setting of the product it would then be considered an peripheral response and the participant would be placed in a group labeled emotional.

These rules were based on the Elaboration Likelihood Model and its concepts of Cognition, Central Route, Emotions and Peripheral Route. The researcher was the primary coder and trained two other coders to code the data to establish reliability.

Intercoder reliability was calculated using Holsti's formula (1969) for reliability amongst coders: $\text{Reliability} = \frac{3M}{N1+N2+N3}$

The letter M represents the number of coding decisions the coders agree on, whereas N1, N2 and N3 represent the total number of coding decisions made by each of

the three coders. The three coders compared the results of their coding for the sample on the SR variable. The inter-coder reliability was found to be 99.9%

Research Sample

The research sample was obtained from a large marketing communications firm and was part of a comprehensive copy test. A total of 255 participants (50% males and 50% females) in major U.S. cities participated in the test of the sedan advertisements. They were screened on the basis of qualifications that ensured that the sample was highly involved in the research. These qualifications were:

- Age 35 – 54 (50% 35 – 44, 50% 45 – 54)
- \$50, 000+ household income
- Minimum of some college education
- Must be principal driver and primary/shared decision-maker of a 1992 or newer vehicle, bought new (not a van or sport utility).
- Intends to purchase a new, not used vehicle from a qualifying vehicle set within the next two years.
- Must consider both domestics and imports.
- Must qualify on a key psychographic battery.

Instrumentation

SAM--The Self-Assessment Manikin

The non-verbal measure of emotional response, SAM, which has a continuous nine-point scale to measure the dimensions of Pleasure, Arousal and Dominance (PAD), was used in this study. The PAD bipolar dimensions consist of:

P--pleasure/displeasure

A--arousal/non-arousal

D--dominance/submissiveness.

These dimensions adequately describe the full spectrum of human emotions. They have been reliably measured and are sufficient to define all emotional states (Mehrabian and Russell, 1977). PAD has gained popularity due to its simplicity and the ability to cover the full range of human emotions (Havlena and Holbrook, 1986).

The use of the non-verbal SAM (Lang, 1980) as an instrument helped to overcome problems associated with cumbersome and time-consuming verbal self-report measures. SAM was developed to adequately represent Russell and Mehrabian's PAD. It uses a graphic character that eliminates much of the biases associated with verbal and other non-verbal measures (Morris and Waine, 1994). The graphic character is easily understood and identifiable by both adults and children (Lang, 1980). Also, SAM reduces respondent wearout and is not limited by age, gender, culture or language differences (Morris and Waine, 1994). SAM has also proved to be an effective and efficient instrument to determine emotional responses to advertisements (Morris, Bradley, Lang and Waine, 1992) and, most importantly, it accurately measures the respondents' feelings to an advertisement.

In these tests of a mini-campaign of two car advertisements, SAM was placed near the beginning of the questionnaire. After respondents was asked a series of three recall questions, they were then asked to identify there feelings associated with the test commercial. The AdSAM question asked them how the commercial made them feel, and general took from 15 to 30 seconds to answer.

Statistical Analysis

Data Analysis

Data were inputted and calculated using the Statistical Package for the Social Sciences (SPSS release 9.0). An analysis of variance (ANOVA) was run to determine the

statistical significance of the relationships between the two groups--"cognitive" and "emotional".

Analysis of Hypotheses

Hypothesis 1: To see if the Emotional Response (ER) of the "cognitive" group would be equivalent to or significantly greater than that of the "emotional" group, an ANOVA was run on both groups and the results compared and evaluated.

Hypothesis 2: To seal the argument for emotional response and subsequent behavior, the hypothesis that was advanced was that purchase intent (PI) would be closely related to emotions and the group displaying more emotions would also be the group with the higher PI. An ANOVA was run again on the "emotional" and "cognitive" groups to test the PI variable.

CHAPTER 4
RESULTS

Descriptive Statistics

The results from the comparison of the two groups--“cognitive” and “emotional”-- were obtained by examining for significant differences between the groups. The descriptive statistics are shown in Table 1.

Table 1: Descriptive Statistics

		CarP	CarA	CarD
Cognitive SR	Mean	7.20	6.21	6.18
	N	113	114	113
	Std. Deviation	1.61	2.10	1.92
Emotional SR	Mean	6.42	5.80	5.68
	N	140	141	141
	Std. Deviation	1.95	2.48	2.31
Total	Mean	6.77	5.98	5.91
	N	253	255	254
	Std. Deviation	1.84	2.32	2.16

The descriptive statistics in table 1 provide an interesting insight into the variable of spontaneous reaction (SR) and show that the emotional reactions as analyzed by AdSAM’s PAD score are consistently higher for the “cognitive” group as compared to the “emotional” group. On all the three major bi-polar emotional dimensions: pleasure, arousal and dominance, the “cognitive” group has a higher mean score than the “emotional” group. The mean scores were measured on a nine-unit bi-polar scale ranging from 1 to 9.

Tests of Hypotheses

Hypothesis 1: To test the hypothesis that the emotional response of the “cognitive” group would be equivalent to or significantly greater than that of the “emotional” group, an ANOVA was conducted. As per the analysis (see Table 2), the “cognitive” group shows a significantly higher level of pleasure ($p < .05$) than the “emotion” group and although not significantly different the means scores on arousal and dominance were higher for the “cognitive group” than for the “emotional” group.

Table 2: PAD Results Between and Within Groups*

			Sum of Squares	df	Mean Square	F	Sig.
Car P * C_E	Between Groups	(Combined)	37.55	253	37.55	11.48	0.00
	Within Groups		820.60	113	3.26		
Car A * C_E	Between Groups	(Combined)	11.00	255	11.00	2.04	0.15
	Within Groups		1363.95	114	5.39		
Car D * C_E	Between Groups	(Combined)	15.55	254	15.55	3.36	0.06
	Within Groups		1165.36	113	4.62		

* $P < .05$ indicates a significant difference between the “cognitive” and “emotional” groups. Means have been obtained from ANOVAs conducted between the two groups. (CAR= vehicle being tested, P = Pleasure, A= Arousal, D= Dominance, C= Cognitive, E= Emotional)

These results confirmed the hypothesis that the “cognitive” group did indeed show a significant level of emotion.

Hypothesis 2: This hypothesis suggested that the more emotional group would be the one with the higher PI (Purchase Intent) variable. An ANOVA was run on both groups to verify this hypothesis. The results are given in Table 3 and 4.

Table 3: Likely to Contact a Dealer*

	Mean
Cognitive	2.52
Emotional	2.08
Total	2.30

* measured on a 5 point scale where 1 is the lowest and 5 is the highest score.

Table 4: Statistical Significance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Combined)	25.42	253	25.42	23.39	0.00

According to the analysis (see Table 3), the “cognitive” group (2.52) would be more likely to contact a dealer than the “emotional” group (2.08). This result was shown to be of statistical significance by the ANOVA in Table 4 where $p < .05$. Hence, this hypothesis was supported because the “cognitive” group, which showed a higher emotional response to the commercial, also showed a higher PI. Thus, the finding was significant as it showed the “cognitive” group to be more likely to contact a dealer than the “emotional” group. Both the hypotheses were supported and the belief that emotion response rather than cognition is the central route to persuasion was strengthened.

CHAPTER 5 DISCUSSIONS AND CONCLUSIONS

This study intended to show that emotions are more than just a peripheral occurrence in the process of persuasion as described in the Elaboration Likelihood Model. The results of the data analysis give some insight into the role of emotions in the process of persuasion. The three hypotheses attempted to show that even though an individual may be processing information cognitively, that cognition has an emotional core. The results concur with the hypotheses. The “cognitive” group shows either significantly more emotion or a not significant difference in the amount of emotion when compared to the “emotional” group. A higher purchase intent accompanies and embellishes this display of emotion. These results give an insight into the importance of the emotion concept with regard to persuasion and the Elaboration Likelihood Model.

Hypothesis One

The ANOVA conducted between the two groups reveals a significant presence of emotion in the “cognitive” group. This shows that even though information is being processed cognitively, the process is not being conducted in an emotional vacuum. In fact, the “cognitive” group shows a significantly higher emotional response in terms of the emotional variable of pleasure. These traces of emotion in cognitive processing provide support for the necessity of re-examining the role of emotion in the ELM.

Though the ANOVA reveals a significant difference in only one emotional variable--Pleasure, the other two emotional variables, Arousal and Dominance, are not

significantly different between the groups. This finding is interesting as it suggests that even in a “cognitive” group, there is a certain amount of emotional reaction and that this reaction is not significantly different from the reactions of the so called “emotional” group. In fact, in some cases, the emotional response of the “cognitive” group may exceed a similar response of the “emotional” group.

Hypothesis Two

The results from the ANOVA regarding the variable of PI in terms of emotional response seal the case for emotion. The “cognitive” group has a significantly higher emotional level in one variable and is not significantly different from the “emotional” group in the other two AdSAM variables. As the “cognitive” group shows a higher level of emotional response in the pleasure variable as compared to its emotional counterpart and a less than significant yet higher response on the other two emotional variables, the emotional response of the “cognitive” group can be considered higher than the “emotional” group. This would then support the hypothesis that purchase intent is related to emotional response and the higher the emotional response, the stronger the purchase intent.

Conclusion for Hypotheses One and Two

The hypotheses were based on research that gave evidence regarding the importance of the emotion concept and as a result, it was extrapolated that this concept could not be kept on the periphery of the ELM. The data analysis seems to support this theory by providing significant proof of the existence of emotion in the cognitive sphere. Also, by linking purchase intent with emotion, support is also provided for an attitude change via an emotional route that could be at the center of the Elaboration Likelihood Model. This is further support that it is the emotional response that is the stronger driver

of the intent. To establish this fact firmly, more research is required. Obtaining significant results for emotional response between the two groups over a series of commercials would confirm these findings.

It is important to determine the emotional response as accurately as possible and the AdSAM™ is an excellent tool for measuring viewer's responses. The SAM is a quick and precise method of testing and it does so without the problem of subjective meaning differences or other biases. An excellent tool for dissecting emotional responses, the SAM provided invaluable insight that helped to highlight the role of emotion in a persuasive setting.

Limitations

Several limitations of the study need to be highlighted. The sample used for the study was restricted to a certain demographic and a certain class of product. This restricts generalization of the results of this study.

Also, the data was recoded on the basis of simple rules specially devised for the purpose of the study. These rules may need to be modified in order to conduct a more in-depth analysis of the participant responses.

Furthermore, the number of coders involved limited the coding procedure. The perception of the diverse responses may differ from coder to coder.

The purchase intent variable, too, can be considered a limitation as there is no actual proof that a respondent from the "emotional" group actually did go through with the purchase.

Suggestions for future research

Future research may attempt to include different demographic groups as well as different types of media, such as print and radio, and also different types of products and

campaigns within this framework. There are a multitude of products and product classes available that could be considered for research purposes. Also, a more rigorous statistical analysis can be employed to reveal even more significant results between “cognitive” and “emotional” groups.

It would be interesting to conduct a study on other highly priced consumer goods that would require as considerable pre-purchase cognition on part of the consumer and identify the amount of emotion involved in the purchase. To make this study even more intriguing, it could be worthwhile to ask a consumer the thoughts that went through his/her mind immediately prior to and after the high price purchase. These responses could then be examined for their emotional content and this could help in identifying whether emotion or cognition was the main driving force behind the purchase.

Conclusion

The Elaboration Likelihood Model is widely used in a number of disciplines and has increased in popularity ever since its inception because of its largely cognitive base that attempts to explain the persuasive power of a message in terms of thought elaboration. Thus, the ELM seems to be emphasizing cognition over emotion in the process of persuasion. This study has attempted to show that the basic tenet that the ELM proposes may be incorrect and that emotion needs to be given a much more significant role and not be kept on the periphery of the ELM.

Research in neuro-scientific spheres has re-affirmed the importance of emotion and the results of this study seem to support this research. It is hoped that this study will add further insight to the role that emotion plays in a persuasive process.

APPENDIX A
DESCRIPTION OF CAR ADVERTISEMENTS

Commercial 1: **“Listen to This.”** This commercial compares the sedan to a BMW by letting the owner of the BMW test drive the sedan on a mountain road. The extensive branding of the make and model throughout the execution emphasize the name of the sedan. The performance of the sedan thoroughly impresses the BMW owner and the commercial focuses on the low price of the sedan by communicating it as a “whisper” between friends. The overall effect of the commercial is to provide a perception of affordability without offering a sticker price.

Commercial 2: **“Side of the Road.”** This commercial communicates a more focused message of performance and handling of the sedan. By using emotional descriptions of the sedan’s engine and creating an exciting imagery of performance coupled with upbeat music, the commercial attempts to communicate the superiority of the sedan as compared to its European counterparts. The commercial concentrates on the facets of a comfortable, safe and secure ride and various useful features to make its case for the sedan. Affordability is indicated too, but not to the extent that it was in the first commercial. The overall effect of the commercial is to generate overall positive imagery for the sedan.

APPENDIX B
VARIABLES TESTED IN ISOLATED RE-EXPOSURE TO CAR ADS

- Main ideas
- Spontaneous reactions (thoughts and feelings)
- Elements found and confusing
- Elements found hard to believe
- Likes/dislikes
- Commercial profile--a battery of attributes designed to get at the tonality of the commercials
- Overall commercial rating
- Uniqueness of message
- Overall sedan rating
- Image scan--a battery of attributes designed to determine whether explicit and implicit objectives are being communicated
- Increased interest rating
- Visitation intent
- Driver profile
- Slogan/tagline evaluation
- Character evaluation
- Music evaluation
- Overall profile battery
- AdSAM
- Vehicle ownership

APPENDIX C
ADSAM GRAPHIC

AdSAM: a visual measure that incorporates the bi-polar dimensions of PAD into a graphic figure: The first row depicts pleasure-displeasure, the second, arousal-boredom and the third, powerlessness-dominance.

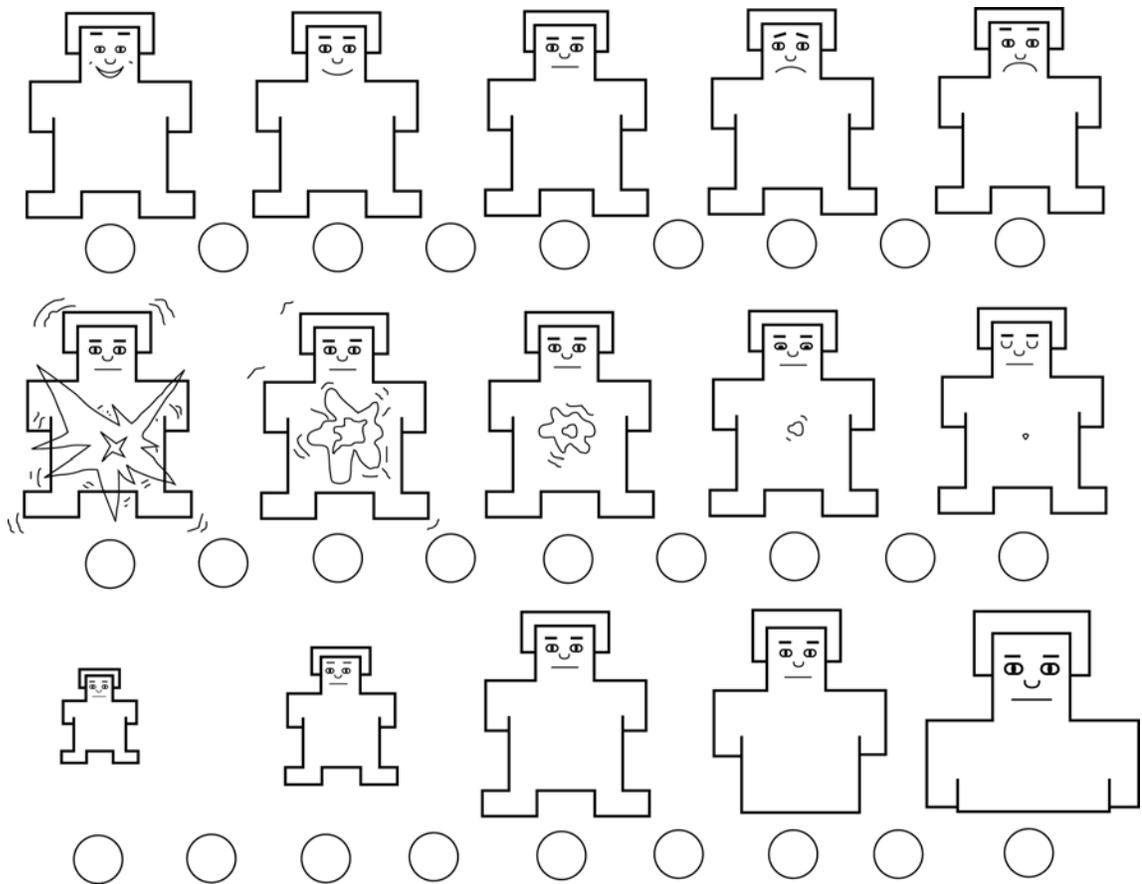


Figure 1: AdSAM

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